Sunset Advisory Commission

Staff Report

Public Utility Commission of Texas

Electric Reliability Council of Texas

Office of Public Utility Counsel

2022-23
88th Legislature

Sunset Advisory Commission

Cover photo: The Texas State Capitol was completed in 1888. With the Goddess of Liberty atop the dome, the Texas State Capitol Building is 19 feet taller than the U.S. Capitol Building in Washington, D.C. The photo shows the south facade of the Capitol. Photo Credit: Janet Wood

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How to Read Sunset Reports

For each agency that undergoes a Sunset review, the Sunset Advisory Commission publishes three versions of its staff report on the agency. These three versions of the staff report result from the three stages of the Sunset process, explained in more detail at sunset.texas.gov/how-sunset-works. The current version of the Sunset staff report on this agency is noted below and can be found on the Sunset website at sunset.texas.gov.

CURRENT VERSION: Sunset Staff Report

The first version of the report, the Sunset Staff Report, contains Sunset staff's recommendations to the Sunset Commission on the need for, performance of, and improvements to the agency under review.

Sunset Staff Report with Commission Decisions

The second version of the report, the Sunset Staff Report with Commission Decisions, contains the original staff report as well as the commission's decisions on which statutory recommendations to propose to the Legislature and which management recommendations the agency should implement.

Sunset Staff Report with Final Results

The third and final version of the report, the Sunset Staff Report with Final Results, contains the original staff report, the Sunset Commission's decisions, and the Legislature's final actions on the proposed statutory recommendations.

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Summary of Sunset Staff Report

In February 2021, Winter Storm Uri exposed unacceptable vulnerabilities in the state's electric grid. Critical electric and water utilities failed, almost 11 million Texas homes and businesses lost power or water for days, and tragically, more than 200 people died. The impact of the storm on the Public Utility Commission of Texas (PUC) and the Electric Reliability Council of Texas (ERCOT) cannot be overstated. In response to the disaster, the Legislature took swift action, completely overhauling PUC's and ERCOT's governance structures and making numerous changes to the electric industry and market designed to prepare for, prevent, and respond to extreme weather and generally enhance the electric grid's reliability. To keep a close watch on the implementation of these significant changes and identify other needed changes to their operations, the Legislature also moved up the Sunset date for these entities, as well as the Office of Public Utility Counsel (OPUC), two years to 2023. Ultimately, evaluating the final outcomes and benefits of ongoing changes — and others sure to come in the upcoming 88th Legislative Session — is a task for the future.

> PUC is woefully under-resourced given its critical responsibilities and work that still lies ahead.

Public Utility Commission of Texas

Following deregulation of major portions of the electric market in 1999 up until Winter Storm Uri, Texas' "energy-only" electric market was operating as designed, with lucrative competition keeping electricity prices low. The various market participants — generation companies, utilities, retail electric providers, and others — knew how to navigate the dynamics of the competitive market environment and, to a large extent, PUC and the state relied on them and ERCOT to make sure the grid and market were functioning well. In 2011, an unusually strong winter storm that resulted in blackouts signaled potential underlying problems, but state electric policy remained largely unchanged and business as usual continued. With others generally managing the grid, PUC never had cause to take a step back and consider how things were working, how it might improve operations, or what funding and staff may be needed to do so. In fact, PUC was dealing with budget cuts during this time like most other state agencies.

In 2021, Winter Storm Uri completely changed this dynamic. Needing to respond quickly to this disaster, the Legislature not only overhauled PUC's governance structure but made it clear the agency would be a more active overseer of ERCOT and the market participants, who would no longer be left to their own devices. However, PUC was ill-prepared for the task. Having been under-resourced for more than a decade and struggling to retain institutional knowledge, the agency was now responsible for implementing significant changes to improve the grid's reliability while simultaneously adapting to its new commission structure, navigating a new relationship with ERCOT (that

was also undergoing significant changes discussed below), and managing multiple legal battles. All of this while still conducting its day-to-day regulatory operations for more than just electric utilities.

To say this environment made Sunset staff's review challenging is an understatement. When Sunset staff began its work just 11 months after the legislative reforms, everything was still in flux — PUC's Wholesale Electric Market Design effort was still underway; the agency had just established a new division to focus on its numerous rulemakings, many in various stages of adoption; and agency staff was still figuring out how to adjust its processes to account for four new, very engaged full-time commissioners. PUC did not even have all five commissioners until halfway through Sunset's review.

The multitude of changes resulted in a lot of questions and uncertainty among members of the electric industry and general public, which translated into a lot of input to Sunset staff. However, Sunset staff could not evaluate the outcomes of many of these changes with so much still in progress. Because of the review's timing, complexities of the industries PUC oversees, and the Legislature's stated desire to weigh in further on what is and is not working so far, Sunset staff did not evaluate the electric market's design, whether Texas' utility infrastructure is adequately prepared for another extreme weather event, or otherwise get into the technical aspects of managing the electric grid and market. Additionally, the review did not attempt to make changes to PUC's ratemaking functions, which are highly complex and nuanced. Instead, the review took a holistic approach to evaluating PUC's operational needs and focused on preparing the agency for an uncertain future. Most importantly, the review found PUC is woefully under-resourced given its critical responsibilities and the work that still lies ahead. Sunset staff observed the considerable challenges associated with having fewer than 200 employees to oversee utility industries vital to the wellbeing of Texans, including a lack of needed expertise, cumbersome regulatory processes that can drive up costs to consumers, and a general inability to be more strategic and proactive, particularly in communications and data management.

Although most of the attention on PUC has rightfully been focused on the electric industry since Winter Storm Uri, another focus for Sunset staff was PUC's regulation of water and wastewater utilities because this was the first Sunset review since the Legislature transferred the regulation of rates and services from the Texas Commission on Environmental Quality (TCEQ) in 2013. Sunset staff ultimately concluded another transfer would be unnecessarily disruptive to PUC, water and wastewater utilities, and TCEQ, but identified the need for regulatory improvements.

With a new commission that has indicated the agency's business as usual approach is no longer acceptable, PUC has an opportunity to continue thinking about new, more efficient and effective ways of operating and overseeing the electric, water and wastewater, and telecommunications industries.

Electric Reliability Council of Texas

Before Winter Storm Uri, most Texans had little to no idea what ERCOT was or what functions it performed. Despite considerable attention since the storm, the review found many people still do not fully understand ERCOT's role in the electric industry, which is unsurprising given the complexity of the subject matter. ERCOT is essentially a large, sophisticated IT organization that manages the flow of electricity through the "ERCOT grid," delivering power to more than 26 million Texas customers, representing about 90 percent of the electricity consumed in the state. Like an air traffic controller, ERCOT instructs generation companies, through specialized electronic systems, to produce only enough electricity to meet current consumer demand. But even this description fails to capture the nuance that the ERCOT grid does not cover the entire state or that ERCOT does not own any power generation assets or transmission infrastructure.

Sunset staff found these complexities pose challenges for ERCOT's communications efforts with the general public, but ultimately the public is not ERCOT's primary audience, nor should it be. ERCOT's focus is, and should be, on the technical aspects of managing the grid and communicating with the electric industry. Like PUC, the Legislature made numerous changes to ERCOT's structure and procedures following Winter Storm Uri, including removing all market participants from its board of directors and requiring PUC to approve its protocols. Despite the ongoing changes, the review found ERCOT generally has the resources and processes in place to carry out its responsibilities effectively. Also, many of Sunset's standard review criteria do not apply to ERCOT — it is not subject to state contracting standards, the Open Meetings Act, Administrative Procedure Act, or other requirements traditional state agencies must meet. As such, the review focused on ERCOT's evolving relationship with PUC and ensuring ERCOT provides clear and comprehensive information to PUC and the Legislature necessary to evaluate its performance and future needs of the ERCOT grid.

Sunset staff did identify several issues at ERCOT, including questions and litigation surrounding ERCOT's status as a state agency, whether it should be entitled to sovereign immunity, and whether the Legislature's structural changes to ERCOT's board create any conflicts. While Sunset staff does not generally weigh in on such significant policy decisions or items in active litigation, the Legislature should consider these important issues as they could have significant repercussions for the electric industry and eventually consumers.

Office of Public Utility Counsel

The Office of Public Utility Counsel (OPUC) represents the interests of residential and small commercial consumers in electric and water utility proceedings at PUC. Though not impacted by Winter Storm Uri to the same degree as PUC and ERCOT, OPUC's role following the storm is particularly important to help raise concerns when market decisions have a detrimental effect on residential and small commercial consumers. The review found the state has a continuing interest in advocating for these consumers in utility proceedings, and even though OPUC is a small agency, no substantial benefits would result from transferring its functions to another agency.

The following material highlights Sunset staff's key recommendations for the Public Utility Commission of Texas, the Electric Reliability Council of Texas, and the Office of Public Utility Counsel.

Sunset Staff Issues and Recommendations

Issue 1

Without Additional Resources and Clear Decision-Making Processes in Place, PUC Cannot Truly Fulfill Expectations for Ensuring a Reliable Electric Grid.

PUC regulates the electric industry and oversees ERCOT and, since Winter Storm Uri, has been making numerous changes to improve the reliability of the ERCOT grid. However, several factors limit PUC's ability to make fully informed decisions to effectively oversee the industry, including a lack of resources to conduct independent analysis of industry data, undefined metrics for market participants and ERCOT, and disjointed reporting requirements that fail to provide a complete picture of the grid's ability to meet the state's evolving needs. Additionally, PUC's use of informal methods to instruct ERCOT means the agency does not always adhere to best practices for openness, inclusiveness, and transparency. Establishing

robust decision-making structures and processes would ensure PUC considers all input, independently analyzes its options, and clearly articulates decisions that affect the entire electric industry and millions of Texans.

Key Recommendations

- The House Appropriations and Senate Finance committees should consider appropriating PUC its exceptional item requests for funding a data analytics team and additional engineering expertise.
- Authorize PUC to issue directives to ERCOT outside formal rulemaking and contested cases and authorize stakeholders to formally weigh in on these directives.
- Authorize ERCOT to restrict commissioners' presence at executive sessions.
- Direct PUC to develop, in rule, a state reliability definition.

Issue 2

To Restore Trust, PUC Needs to Further Improve Its Public Communication Efforts.

As the state's regulator of utilities vital to serving Texas' increasing population and growing economy, PUC has a duty to communicate well with the public. However, continuing confusion over PUC's jurisdiction and responsibilities compared to other state and federal entities, insufficient information on its antiquated website, and a lack of strategic communications planning prevents the agency from adequately educating and informing consumers. Moreover, as ERCOT's overseer, PUC is responsible for ensuring both entities provide clear, consistent, and easily understandable information the public needs. Though PUC and ERCOT have improved their public communications since Winter Storm Uri, additional coordination would further strengthen the clarity and usefulness of both entities' communications and help restore the public's trust.

Key Recommendations

- Require PUC to develop and regularly update a strategic communications plan.
- Direct PUC and ERCOT to create a guidance document to better coordinate public communications.
- Direct PUC to provide up-to-date, easily accessible information as part of its current website redesign efforts.

Issue 3

PUC Needs Additional Resources and Attention Focused on Its Water and Wastewater Regulation to Avoid Overburdening Utilities and Their Customers.

Following the transfer from TCEQ in 2013, the review concluded PUC remains the appropriate agency to regulate water and wastewater utility rates and services. However, PUC lacks the resources to do so efficiently since the agency spends a disproportionate amount of its time on water and wastewater regulation compared to the funding it receives for this core responsibility. To maximize its already limited

resources and ensure it best serves water and wastewater utilities, PUC also needs to improve its data management and analysis, regulatory rules and processes, and guidance to these utilities. Additionally, PUC and TCEQ share responsibility over the appointment of temporary managers for troubled water utilities, but the agencies' differing interpretations of appointment terms cause inefficiencies that further strain PUC's resources.

Key Recommendations

- The House Appropriations and Senate Finance committees should consider increasing PUC's appropriation to ensure it can recover its costs to regulate water and wastewater utilities efficiently.
- Direct PUC to comprehensively review its water and wastewater rules, processes, and guidance documents to identify and address areas for improvement.
- Amend statute to extend the length of an emergency temporary manager appointment.

Issue 4

PUC's Poor Data Practices and Lack of Policies and Procedures Limit Its Ability to Best Allocate Resources and Serve the Regulated Community.

One of PUC's primary responsibilities is processing cases, which are matters requiring the agency's review and decision, such as approving a utility's requested rate change. PUC relies on unwieldy and outdated data management tools that prevent it from collecting adequate data related to this function, like how long various types of rate cases take to complete. Without access to and analysis of the data, PUC cannot gain a full understanding of problem areas and inefficiencies in its regulatory processes and thus cannot make needed improvements. Developing and implementing a plan to improve its data collection and use would help PUC develop long-term strategies related to its case processing functions and create efficiencies by allowing the agency to identify, document, and correct procedural bottlenecks. Additionally, PUC needs to develop comprehensive policies and procedures for certain core divisions to minimize the effects of turnover and ensure staff have the necessary information to carry out their duties consistently.

Key Recommendations

- Direct PUC to develop a plan to prioritize improving its case data collection and analysis.
- Direct PUC's Legal Division and Office of Policy and Docket Management to develop comprehensive policies and procedures.
- Direct PUC to create and maintain a precedent manual, prioritizing rulings related to water and wastewater regulation.

Issue 5

Texas Has a Continuing Need for PUC.

Electricity, water and wastewater, and basic telecommunications services are vital to Texans' everyday lives, and the state has a continuing interest in overseeing these important industries. While PUC has

made progress implementing legislative reforms following Winter Storm Uri, the agency's efforts are still in progress, and it is too soon to fully evaluate the ultimate outcomes and benefits of these and other changes, necessitating a shorter continue date. Additionally, PUC would benefit from a more meaningful process for updating its rules every four years and having several of its statutory reports be eliminated or consolidated.

Key Recommendations

- Continue PUC for six years and remove the Sunset date of the agency's enabling statute.
- Abolish two and modify four of PUC's reporting requirements.
- Direct PUC to update its policy guiding the agency's rule review process to ensure identified deficiencies in the rules are addressed

Issue 6

The State Has a Continuing Need for OPUC, but the Agency Should Strengthen Its Processes for Contracting With Legal Expert Witnesses.

Texas has a continuing interest in representing residential and small commercial consumers in utility proceedings and OPUC's independence allows it, as an advocate, to focus exclusively on the needs of the consumers it represents. However, the agency could benefit from formalizing its expert witness contracting processes by analyzing the need to use outside experts, using a formal contract solicitation, requiring conflict of interest disclosures from experts, and evaluating experts' performance.

Key Recommendations

- Continue OPUC for six years and remove the Sunset date of the agency's enabling statute.
- Direct OPUC to formalize and document certain contracting processes for legal expert witnesses.

Fiscal Implication Summary

The recommendations in this report would have a fiscal impact to the state, but the exact costs cannot be estimated at this time. In Issues 1 and 3, the recommendations for the House Appropriations and Senate Finance committees to consider increasing PUC's appropriation aim to improve the agency's oversight of the electric and water industries and cover the costs of regulation. However, the Legislature must determine the level of funding needed and available to implement improvements. Some other PUC recommendations, such as directing the agency to develop a plan to improve its case data collection and analysis, should increase efficiency in the long term by allowing the agency to identify and eliminate procedural bottlenecks and better allocate staff resources. However, given the agency's resource constraints, additional funding recommended in this report may not cover the costs associated with implementing the recommendations. Recommendations related to ERCOT and OPUC would require staff time to complete but could be implemented with existing resources.

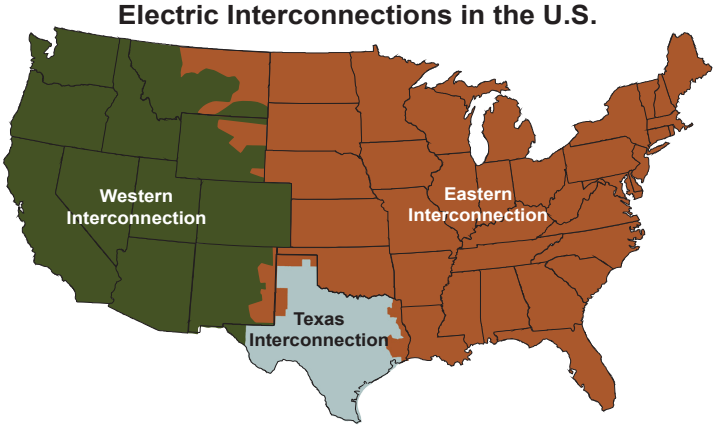
Introduction | Texas Electricity Primer

Two concepts are key to understanding electricity in Texas — the *electric grid* and the *electric market*. This primer provides an overview of these concepts and the complex federal and state regulatory systems surrounding them.

The Texas Electric Grid

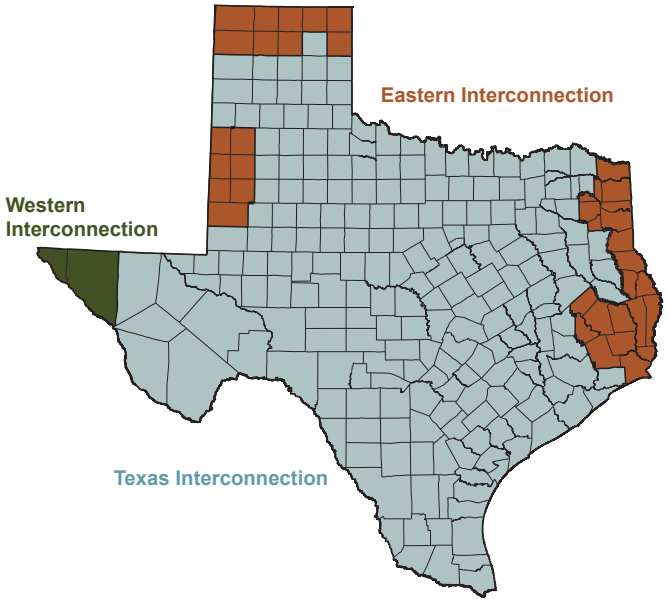
The bulk power system in the United States (U.S.) includes several interconnected networks of power lines and equipment that move electric power from generation companies to consumers through the Eastern, Western, and Texas Interconnections, as shown in the map, *Electric Interconnections in the U.S.*[1] Each electric interconnection includes a transmission grid, carrying large amounts of high voltage electricity over long distances, to which several distribution systems are connected, delivering smaller amounts of lower voltage electricity to homes and businesses.

Electric Interconnections in the U.S.



The transmission grid within the Texas Interconnection is named for the transmission organization responsible for operating it, the Electric Reliability Council of Texas (ERCOT). The textbox on the following page, *Understanding ERCOT*, explains the various ways the term "ERCOT" is used when describing electricity in Texas. The ERCOT grid does not cover the entire state. The Western Interconnection covers a portion of West Texas and the Eastern Interconnection covers portions of East Texas and the Panhandle, as shown in the *Electric Interconnections in Texas* map.[2] The electric utilities in Texas operating in the Western or Eastern Interconnections include multi-state utilities that also provide service outside of Texas and are subject to federal regulation. The ERCOT grid is largely physically separate from the other

Electric Interconnections in Texas



interconnections. Since Texas does not have a single, unified electric grid, references to the Texas electric grid usually refer to the ERCOT grid.

Understanding ERCOT

ERCOT, Inc.
A Texas nonprofit corporation responsible for operating the transmission grid.

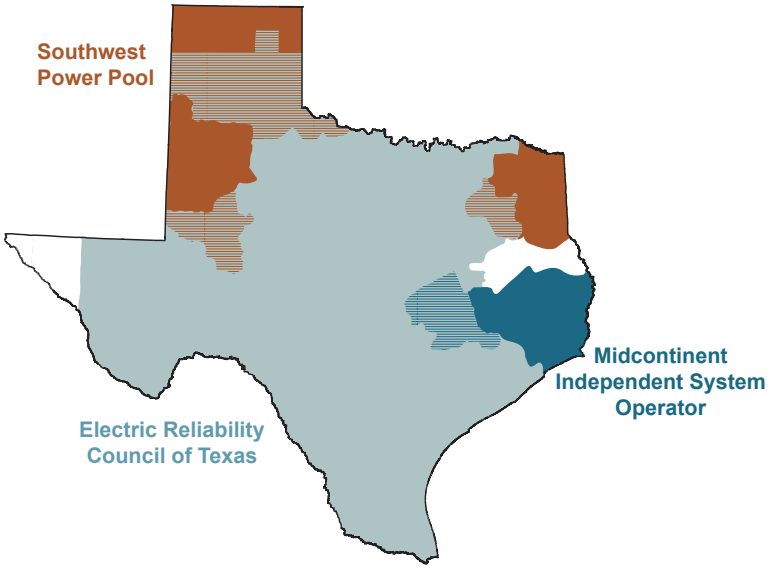
ERCOT grid
The transmission grid operated by ERCOT, Inc. that is largely physically separated from the rest of the country.

ERCOT region
The geographic footprint of the transmission grid operated by ERCOT, Inc.

ERCOT as Grid Manager

Currently, nine transmission organizations exist in the U.S. and Canada whose job is to manage and ensure open access to their respective transmission grids.[3] ERCOT, Inc. is one of these organizations, responsible for reliably operating the transmission grid in the ERCOT region.[4] ERCOT, Inc. acts like an air traffic controller within the ERCOT region, dispatching, or instructing, generation companies to produce precisely enough electricity to match consumer demand in real time, while monitoring the ERCOT grid and taking action to ensure the safety and reliability of the grid.

Transmission Organizations in Texas



Outside of the ERCOT region, the Southwest Power Pool (SPP) and the Midcontinent Independent System Operator (MISO) perform similar functions in the Panhandle and East Texas, as shown in the *Transmission Organizations in Texas* map.[5] The overlap shown in the map is due to the power lines of the organizations' respective transmission grids weaving in and out of the same area. While transmission organizations, including ERCOT, Inc., manage their transmission grids, they do not own any generation assets like natural gas plants or wind turbines, or transmission infrastructure like power lines or transformers.[6] As discussed more fully below, private companies, municipalities, and others own these assets and infrastructure and operate them as directed by their respective transmission organization. The white areas on the map do not have a transmission organization, meaning owners in those areas must coordinate generation dispatch and transmission operation among themselves.

No centralized coordinator controls the distribution systems in Texas. Instead, municipalities and other owners of distribution infrastructure manage their local distribution system. However, within the ERCOT region, owners of those systems must follow instructions from ERCOT, Inc. when given, such as shutting off power in an emergency.[7]

The Texas Electric Market

Electricity is a consumable resource that can be bought, sold, and traded in a marketplace. The electric market for the ERCOT region includes a wholesale and a retail market, both of which are open to

competition, as discussed below. The wholesale electric market refers to the buying and selling of electricity between companies that generate the electricity and those that ultimately sell it to retail customers, as well as by power marketers who do not generate or consume electricity. The retail electric market refers to the ability of companies to sell and coordinate delivery of electricity to customers. Wholesale buyers and sellers in the areas outside of the ERCOT region may participate in markets in other states (interstate markets), such as in SPP and MISO, which are subject to federal regulation. By contrast, the electric market for the ERCOT region involve intrastate sales that are not subject to federal regulation. Since the state does not have a single wholesale or retail market that reaches all market participants in the state, references to the Texas electric market usually refer to the competitive wholesale and retail electric markets within the ERCOT region.

Market Participants and Their Role

In the late 1990s, the Texas Legislature restructured the wholesale and retail electric markets within the ERCOT region.[8] Before this restructuring, commonly known as deregulation, electric utilities in Texas operated as monopolies with rates and services set and fully regulated by the state. These electric utilities were vertically integrated, meaning they owned and operated all aspects of electricity production, including generating electricity, delivering electricity through transmission grids and distribution systems, and providing retail electric service to customers within their service areas.

To introduce competition to the state's electric market, the Legislature required most electric utilities in the ERCOT region to separate their business functions into three types of businesses — a generation company, a transmission and distribution utility, or a retail electric provider.[9]

- **Power generation companies** generate electricity to sell. These companies own and operate their own electric generation assets, which they use to generate wholesale electricity.[10] For example, a generation company may own a natural gas or coal-fired power plant, a nuclear power plant, or a solar or wind farm.

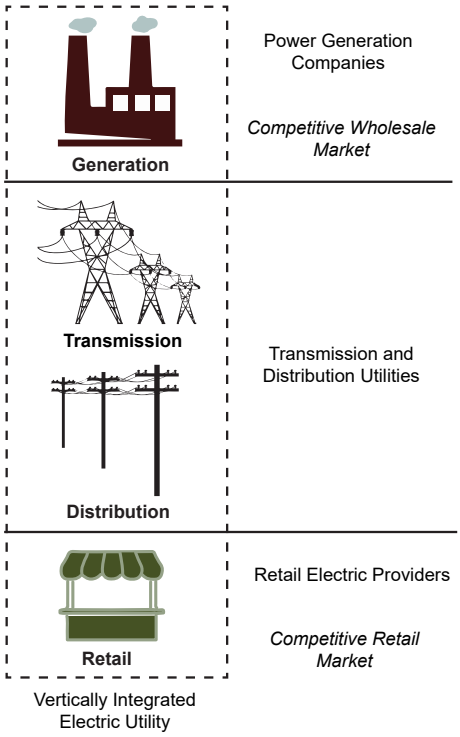
- **Transmission and distribution utilities** deliver electricity through power lines. Broadly, these companies own and operate infrastructure to deliver electricity in the state.[11] This infrastructure includes power lines carrying 60 kilovolts (kV) or more, which are considered transmission lines in Texas, and distribution lines carrying less than 60 kV.[12] Power lines carrying 100 kV or more may be subject to federal reliability standards.[13]

- **Retail electric providers** sell electricity to retail customers. These companies buy electricity from generation companies and sell it to residential, business, and industrial customers who are the end-users that ultimately consume the electricity.[14] Retail electric providers also purchase delivery service from transmission and distribution utilities, using the utilities' power lines to move electricity from generation assets to retail customers.[15]

However, the Legislature allowed electric utilities outside the ERCOT region to continue owning generation assets and infrastructure and provide all three services using the legacy vertically integrated structure.[16] Additionally, the Legislature exempted municipalities and some other electric utilities inside the ERCOT region from the competitive retail market, meaning they also retain the legacy vertically integrated structure.[17] These various carve outs have resulted in two broad electric utility structures in the state, depicted in the *Electric Utility Structures in Texas* figure on the following page: a competitive service structure that exists within the ERCOT region and a vertically integrated structure that exists within and outside the ERCOT region.

Today, four types of electric utilities operate in Texas, as explained below and summarized in the *Types of Electric Utilities in Texas* table.[18]

Electric Utility Structures in Texas



- A **transmission and distribution utility (TDU)** is a private, for-profit electric utility owned by investors that operates within the ERCOT region, providing only transmission service, distribution service, or both.[19] The map on Page 14, *Major Electric Service Areas in Texa*s, depicts the five TDU service areas owned by four TDUs within the ERCOT region.[20]

- An **investor-owned utility (IOU)** is a private, for-profit electric utility owned by investors that operates outside the ERCOT region. IOUs provide all three services — generation, transmission and distribution, and retail electric service.[21] The map on Page 14, *Major Electric Service Areas in Texas*, depicts the four IOU service areas outside the ERCOT region.

- A **municipally owned utility (MOU)** is a nonprofit electric utility owned and operated by the municipality it serves.[22] MOUs provide all three services but may opt in to retail competition.[23] The city of Lubbock is the only MOU to opt in to retail competition. If an MOU opts in, it connects to the ERCOT grid (if not already connected) and acts similarly to a TDU, providing competitive retail electric providers with access to the utility's power lines to deliver electricity to customers in the MOU's service area. The map on Page 15 depicts the locations of *Municipally Owned Utilities in Texas* both within and outside the ERCOT region.[24]

Types of Electric Utilities in Texas

Utility type	Number of utilities	Number of customer accounts	Percentage of customers served
TDUs inside ERCOT	4*	7.5 million	56.4%
IOUs outside ERCOT	4	1.2 million	9.0%
MOUs	73	2.1 million	15.8%
Co-ops	73	2.5 million	18.8%

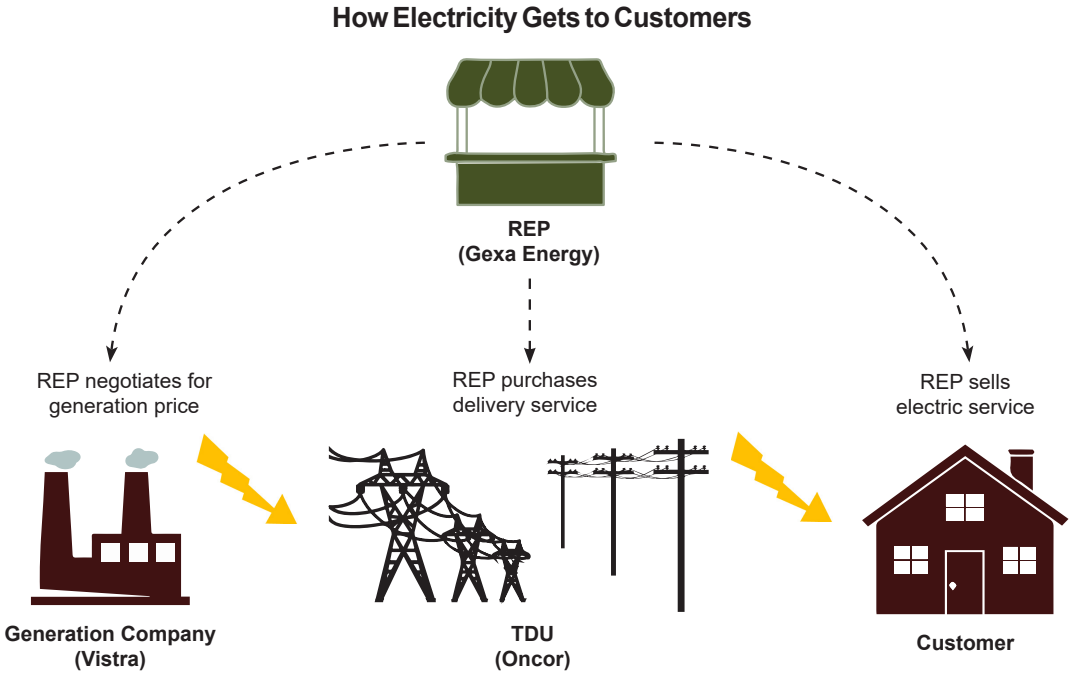
* Does not include the six transmission-only TDUs within the ERCOT region.

- An **electric cooperative (co-op)** is a private, nonprofit electric utility owned and operated by the customers it serves.[25] Co-ops provide all three services and, like MOUs, may opt in to retail competition.[26] Nueces Electric Cooperative is the only co-op to opt in to retail competition. Co-ops are located throughout the state, typically serving rural areas. The map on Page 16 depicts the locations of *Electric Cooperatives in Texas* both within and outside the ERCOT region.[27]

Even though statute generally defines "electric utility" very narrowly, this report uses the term broadly to include TDUs, IOUs, MOUs, and co-ops.[28] With the exception of IOUs and TDUs, all of the various market participants, including generation companies, retail electric providers, MOUs, co-ops, and others not specifically discussed in this primer, participate in the state's competitive wholesale or retail electric

markets. As a result of this complex structure, despite almost 90 percent of the state's population residing within the ERCOT region, only 56.4 percent of customers reside in competitive retail areas where they have the ability to choose their retail electric provider.[29]

An example of how this plays out in practice in a competitive retail area is shown in the accompanying figure, which generally describes how market participants work together to bring electricity to customers. ERCOT's role is not depicted. Generation companies compete for wholesale buyers, such as a retail electric provider like Gexa Energy, and they negotiate for an agreed upon price. Gexa Energy purchases delivery service provided by a TDU in the ERCOT region, such as Oncor, to carry electricity to a customer's home. By contrast, an electric utility that has not opted in to retail competition, like Austin Energy, may generate some of its own electricity and deliver it over its own power lines directly to the customer's home.



ERCOT as Market Administrator

ERCOT, Inc. administers a centralized wholesale market using a number of electronic systems, which include specialty hardware and software ERCOT's control room uses to send instructions and receive data and information from generation assets and TDUs in real time. ERCOT uses these systems to schedule electricity production to ensure supply meets consumer demand. Wholesale electricity buyers, like retail electric providers, negotiate with generation companies to purchase a certain amount of electricity for a particular price but may also buy electricity in the wholesale market to meet any sudden increases in demand. ERCOT is the market's accountant, tracking electricity sales, billing market participants who owe payment, and crediting those who should receive payment. ERCOT's role in the retail market is limited to coordinating customer transfers between retail electric providers in competitive retail areas.[30]

Grid and Market Regulation and Oversight

Various entities at both the federal and state levels regulate the electric grid and electric market in Texas. Historically, the ERCOT grid has been largely physically disconnected from other U.S. grids, preventing electricity generated within the ERCOT region from entering other states (interstate commerce) and avoiding federal regulation. State policy continues to ensure that the majority of electricity generated in ERCOT is sold and consumed within ERCOT borders, and any electricity traveling over ERCOT borders is explicitly carved out of federal jurisdiction to minimize federal regulation in Texas.[31]

- The **Public Utility Commission of Texas (PUC)** is the state agency that regulates transmission and distribution services of TDUs and IOUs, and enforces state reliability, market, and customer protection standards for companies participating in Texas electric market.[32]

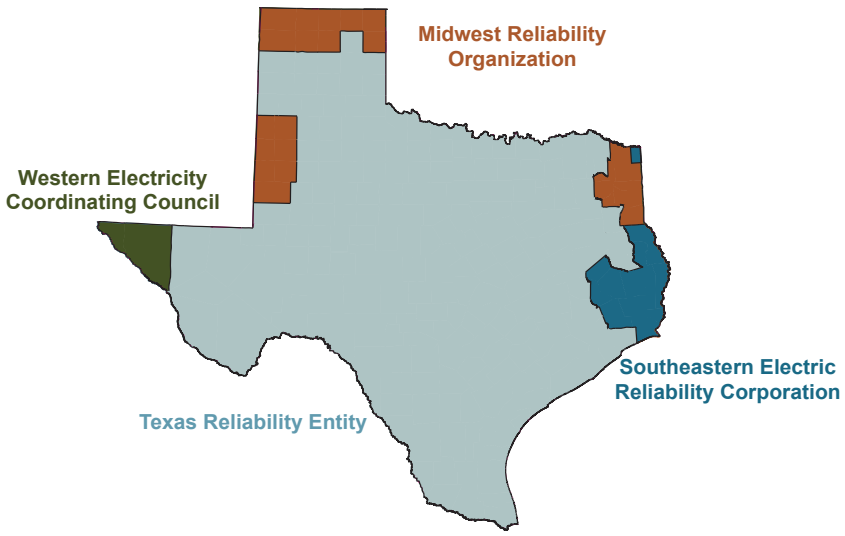
  The Independent Market Monitor (IMM) is an independent organization with authority from PUC to monitor and detect market manipulation, market rule violations, and market power abuses in the wholesale electric market.[33] The IMM reports potential violations by buyers and sellers of wholesale electricity to PUC, which has enforcement authority.

- The **Federal Energy Regulatory Commission (FERC)** is the independent federal agency that regulates, among other things, transmission of electricity into other states (interstate transmission), sales of wholesale electricity in interstate commerce, and oversees federal reliability standards for operating a transmission grid, which does not include local distribution systems.[34]

  The North American Electric Reliability Corporation (NERC) is an international nonprofit corporation with authority delegated from FERC to develop and enforce federal reliability standards.[35] The nine transmission organizations are members of NERC, located in Canada and the U.S.

  – The *Texas Reliability Entity (TRE)* is a state nonprofit corporation with authority delegated from NERC to monitor and enforce compliance with federal reliability standards for generation companies and their assets and electric utilities in the ERCOT region.[36] TRE is one of six regional entities responsible for monitoring their respective geographical portions of the bulk power system in the U.S. As shown in the *Regional Entities in Texas* map, three other regional entities monitor their respective grids in portions of Texas.[37]

Regional Entities in Texas



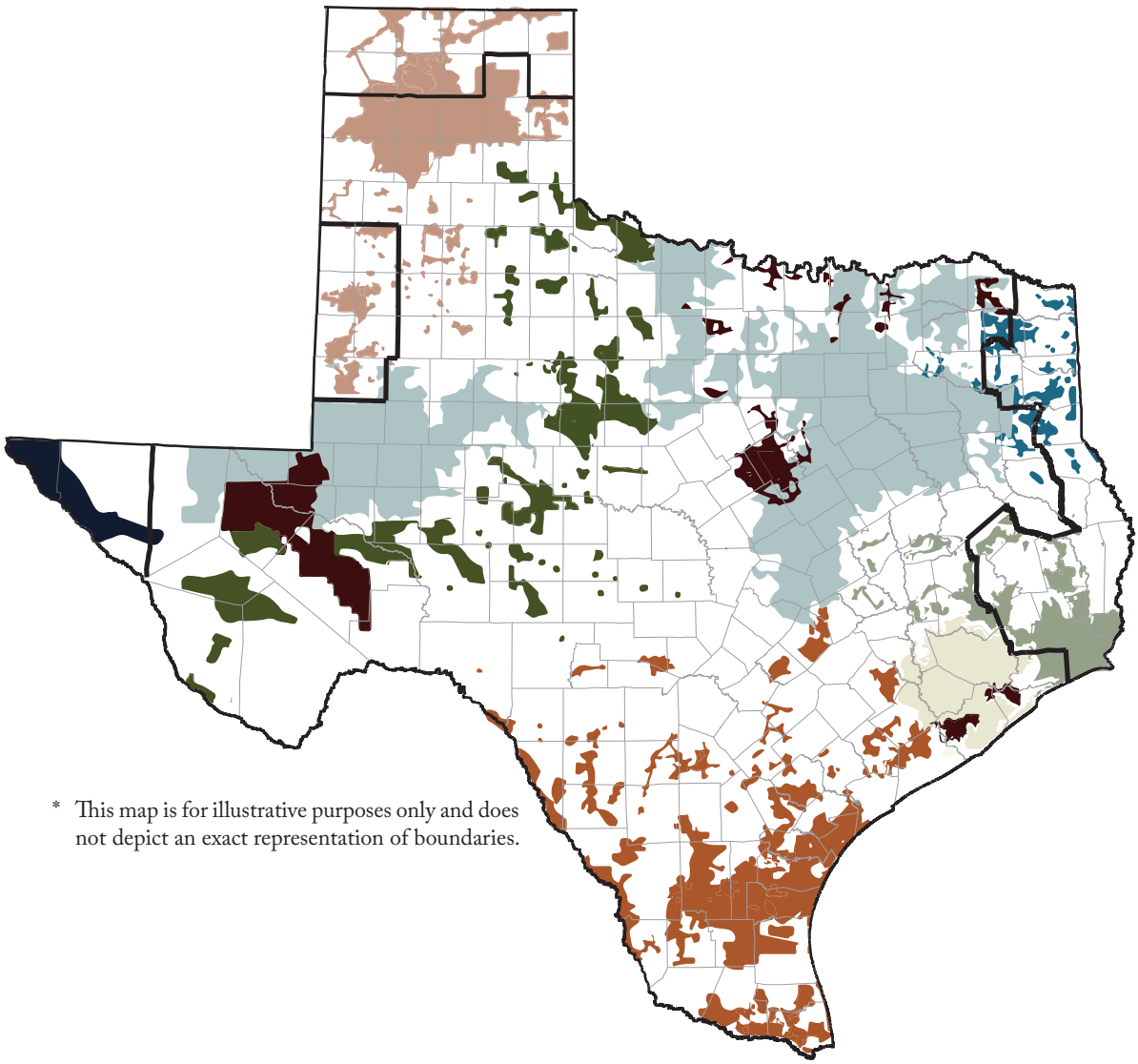
By law, all generation companies, retail electric providers, and electric utilities in Texas must meet applicable state reliability, market, and customer protection standards, which PUC enforces.[38] All generation companies and electric utilities in Texas and ERCOT, Inc. itself must also meet applicable federal reliability standards enforced by the respective regional entities, with NERC's delegated authority.[39]

Rate regulation of transmission and distribution services provided by Texas utilities is shared between PUC and FERC. As noted in the table below, PUC sets the wholesale transmission and distribution rate for TDUs in the ERCOT region, and sets the wholesale transmission rate for MOUs and co-ops that provide wholesale transmission service within the ERCOT region. FERC sets the wholesale transmission rates for IOUs, MOUs, and co-ops outside the ERCOT region.[40] While MOUs and co-ops set the overall retail rate that end-use customers pay for their electricity, the transmission and distribution rates are included in the retail rate as a pass-through charge to customers. PUC retains traditional ratemaking authority to set retail rates for IOUs outside the ERCOT region that end-use customers pay.[41]

Rate Regulation of Electric Utilities in Texas

Utility	Inside ERCOT region	Outside ERCOT region
TDUs inside ERCOT region	• PUC sets wholesale transmission and distribution service rates	• N/A
IOUs outside ERCOT region	• N/A	• FERC sets wholesale transmission service rate • PUC sets retail rate
MOUs	• PUC sets wholesale transmission service rate • MOU sets retail rate	• FERC sets wholesale transmission service rate • MOU sets retail rate
Co-ops	• PUC sets wholesale transmission service rate • Co-op sets retail rate	• FERC sets wholesale transmission service rate • Co-op sets retail rate

Major Electric Service Areas in Texas*



* This map is for illustrative purposes only and does not depict an exact representation of boundaries.

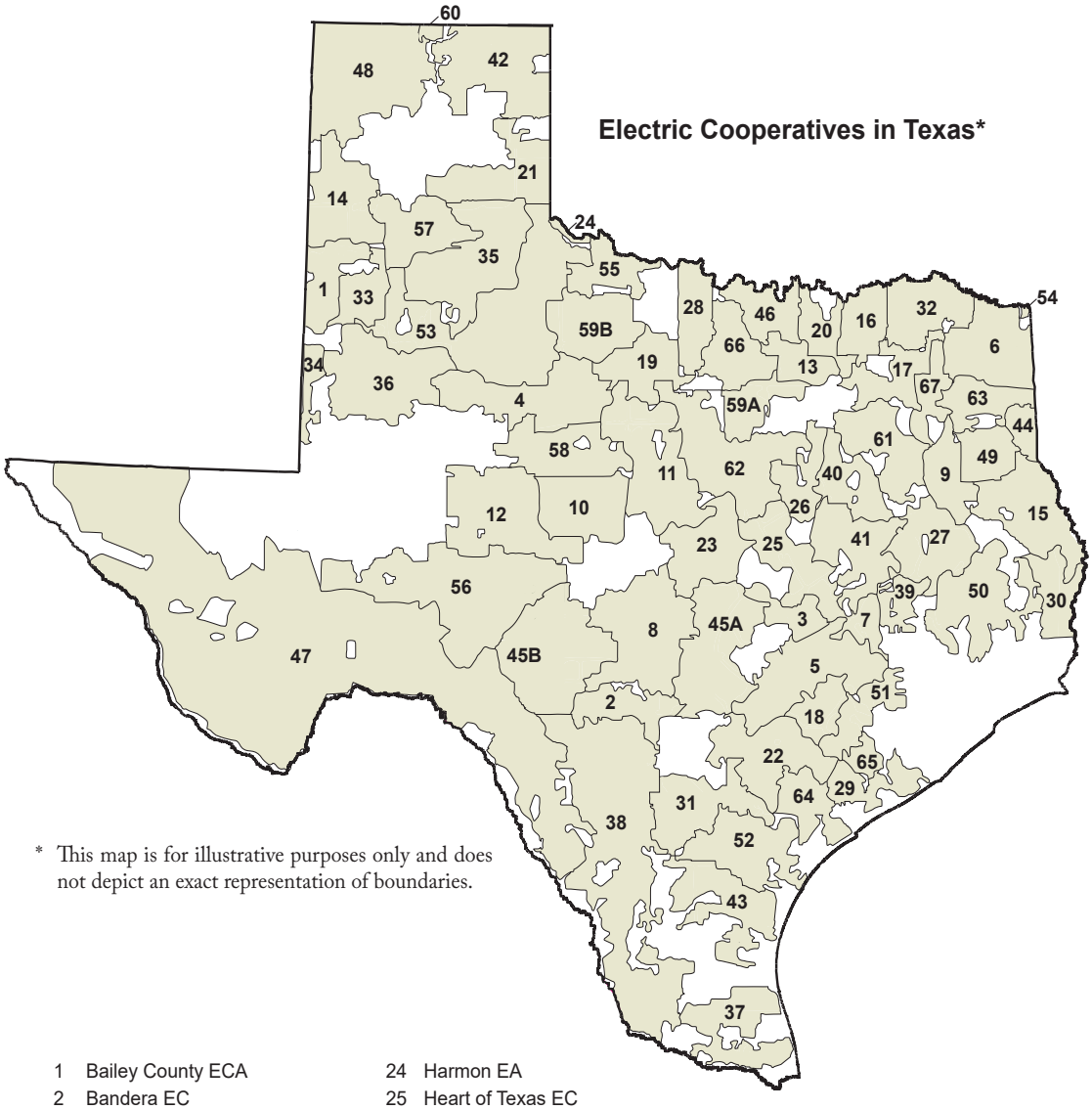
Inside ERCOT

- AEP Texas Central Company
- AEP Texas North Company
- Centerpoint
- Oncor
- Texas-New Mexico Power Company

Outside ERCOT

- Energy Gulf States, Inc.
- El Paso Electric Company
- AEP Southwestern Electric Power Company
- Xcel Energy
- ERCOT boundary


Municipally Owned
Utilities in Texas
Tulia
Floydada
Electra
Lubbock
Seymour
Bowie
Whitesboro
Brownfield
Bridgeport
Sanger
Denton
Farmersville
Greensville
Garland
Weatherford
Granbury
Goldsmith
Timpson
Coleman
San Augustine
Hemphill
Goldthwaite
Jasper
Brady
San Saba
Lampasas
Newton
Hearne
Livingston
Bartlett
Bryan
Kirbyville
Mason
Llano
Burnet
Georgetown
College Station
Caldwell
Lexington
Fredericksburg
Austin
Giddings
Brenham
Bastrop
Hempstead
Liberty
Kerrville
San Marcos
Lockhart
Smithville
Bellville
Boerne
Waelder
La Grange
New Braunfels
Weimar
Castroville
Seguin
Luling
Schulenburg
Hondo
Gonzales
Flatonia
San Antonio
Moulton
Floresville
Cuero
Hallettsville
Shiner
Yoakum
Robstown
Brownsville



* This map is for illustrative purposes only and does not depict an exact representation of boundaries.

1 Bailey County ECA
2 Bandera EC
3 Bartlett EC
4 Big Country EC
5 Bluebonnet EC
6 Bowie-Cass EC
7 Bryan Texas Utilities
8 Central Texas EC
9 Cherokee County ECA
10 Coleman County EC
11 Comanche EC
12 Concho Valley EC
13 CoServ Electric
14 Deaf Smith EC
15 Deep East Texas EC
16 Fannin County EC
17 Farmers EC
18 Fayette EC
19 Fort Belknap EC
20 Grayson-Collin EC
21 Greenbelt EC
22 Guadalupe Valley EC
23 Hamilton County ECA
24 Harmon EA
25 Heart of Texas EC
26 HILCO EC
27 Houston County EC
28 J-A-C EC
29 Jackson EC
30 Jasper-Newton EC
31 Karnes EC
32 Lamar County ECA
33 Lamb County EC
34 Lea County EC
35 Lighthouse EC
36 Lyntegar EC
37 Magic Valley EC
38 Medina EC
39 Mid-South EC
40 Navarro County EC
41 Navasota Valley EC
42 North Plains EC
43 Nueces EC
44 Panola-Harrison EC
45 A, B Pedernales EC
46 PenTex Energy
47 Rio Grande EC
48 Rita Blanca EC
49 Rusk County EC
50 Sam Houston EC
51 San Bernard EC
52 San Patricio EC
53 South Plains EC
54 Southwest Arkansas
55 Southwest Rural EA
56 Southwest Texas EC
57 Swisher EC
58 Taylor EC
59 A, B Tri-County EC
60 Tri-County EC, OK
61 Trinity Valley EC
62 United Cooperative Services
63 Upshur Rural EC
64 Victoria EC
65 Wharton County EC
66 Wise EC
67 Wood County EC

[1] Electric Reliability Council of Texas (ERCOT), "Maps," *NERC Interconnections Map*, accessed online October 17, 2022, https://www.ercot.com/news/mediakit/maps.

[2] Ibid.

[3] 16 U.S. Code Sections 796(27), 796(28), and 824o(a)(6). A transmission organization includes a regional transmission organization and an independent system operator approved by the Federal Energy Regulatory Commission (FERC) to operate transmission infrastructure.

[4] All citations to Texas statutes are as they appear on http://www.statutes.legis.texas.gov/. Sections 31.002(9) and 39.151(a), Texas Utilities Code.

[5] ISO/RTO Council, "Our Members," 2022, accessed online October 17, 2022, https://isorto.org/#member-section.

[6] Section 39.151(b), Texas Utilities Code.

[7] Section 38.076, Texas Utilities Code; ERCOT, *Nodal Operating Guide*, Section 4.5.3.4 (Load Shed Obligation).

[8] Section 39.001(a), Texas Utilities Code.

[9] Sections 31.002(10), 31.002(17), 31.002(19), and 39.051, Texas Utilities Code.

[10] Section 31.002(10), Texas Utilities Code.

[11] Section 31.002(19), Texas Utilities Code.

[12] 16 Texas Administrative Code, Title 16, Part 2, Chapter 25, Subchapter A, Sections 25.5(31) and 25.5(138) (Public Utility Commission of Texas, *Definitions*).

[13] North American Electric Reliability Corporation (NERC), *Glossary of Terms Used in NERC Reliability Standards*, Bulk Electric System definition, accessed online October 17, 2022, https://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary_of_Terms.pdf.

[14] Sections 31.002(16) and 31.002(17), Texas Utilities Code.

[15] Section 39.203, Texas Utilities Code.

[16] Sections 31.002(6), 39.401, 39.402, 39.451, 39.452, 39.501, 39.503, 39.551, and 39.553, Texas Utilities Code.

17 Sections 39.002, 39.102, and 40.001(b), Texas Utilities Code.

18 United States Energy Information Administration, *Texas Electricity Profile 2020*, Table 9, "Retail electricity sales statistics," Number of customers, November 4, 2021, accessed online October 17, 2022, https://www.eia.gov/electricity/state/texas/; Public Utility Commission of Texas (PUC), *Biennial Agency Report*, January 2021, p. 14, accessed online October 17, 2022, https://www.puc.texas.gov/agency/resources/reports/leg/2021_Biennial_Agency_Report.pdf.

19 Section 31.002(19), Texas Utilities Code.

20 PUC, "Electric Service Area Boundaries Viewer", accessed online November 1, 2022, https://puctx.maps.arcgis.com/apps/View/index.html?appid=37d99526468c444c81bceb400e738a4b; Frontier Energy, *Energy Efficiency Accomplishments of Texas Investor-Owned Utilities Calendar Year 2020*, Texas Energy Efficiency, accessed online November 1, 2022, http://www.texasefficiency.com/images/documents/Publications/Reports/EnergyEfficiencyAccomplishments/EEPR2020.pdf. The four transmission and distribution utilities are AEP Texas, CenterPoint Energy, Oncor Electric, and Texas-New Mexico Power Company. The six transmission-only TDUs are Cross Texas Transmission, Electric Transmission Texas, LCRA Transmission Services Corporation, Lone Star Transmission, Sharyland Utilities, and Wind Energy Transmission Texas.

21 Section 31.002(6), Texas Utilities Code.

22 Section 11.003(11), Texas Utilities Code.

23 Section 40.051(b), Texas Utilities Code.

24 Texas Public Power Association, "TPPA Member Utilities," 2022, accessed online October 17, 2022, https://tppa.com/members/.

25 Section 11.003(9), Texas Utilities Code.

26 Section 41.051(b), Texas Utilities Code.

27 Texas Electric Cooperatives, "Member Directory," 2022, accessed online October 17, 2022, https://texas-ec.org/about/member-directory/. The map does not depict six generation and transmission co-ops, which are Brazos EC, East Texas EC, Golden Spread EC, Northeast Texas EC, Rayburn Country EC, and South Texas EC.

28 Section 31.002(6), Texas Utilities Code.

29 United States Energy Information Administration, *Texas Electricity Profile 2020*, Table 9, "Retail electricity sales statistics," Number of customers, November 4, 2021, accessed online October 17, 2022, https://www.eia.gov/electricity/state/texas/; PUC, *Biennial Agency Report*, January 2021, p. 14, accessed online October 17, 2022, https://www.puc.texas.gov/agency/resources/reports/leg/2021_Biennial_Agency_Report.pdf.

30 Section 39.151(a)(3), Texas Utilities Code.

31 16 U.S. Code Sections 824i, 824j, and 824k. The ERCOT grid has two direct current (DC) ties to the Mexican Interconnection, and two DC ties to the Eastern Interconnection.

32 Chapters 17, 36, 37, 38, and 39, Texas Utilities Code.

33 Section 39.1515, Texas Utilities Code; 16 T.A.C., Part 2, Chapter 25, Subchapter O, Division 2, Section 25.365 (Public Utility Commission of Texas, *Independent Market Monitor*).

34 16 U.S. Code Section 791a et seq.; 42 U.S. Code Sections 7171 and 7172; FERC, "What FERC Does," March 30, 2022, accessed online October 17, 2022, https://www.ferc.gov/what-ferc-does.

35 16 U.S. Code Section 824o; 18 Code of Federal Regulations, Part 39; NERC, "About NERC," 2022, accessed online October 17, 2022, https://www.nerc.com/AboutNERC/Pages/default.aspx.

36 16 U.S. Code Section 824o(e)(4).

37 NERC, *Regions Map*, accessed online August 6, 2022, https://www.nerc.com/AboutNERC/keyplayers/PublishingImages/Regions%20Map.jpg.

38 Chapters 17, 36, 37, 38, and 39, Texas Utilities Code.

39 16 U.S. Code Section 824o(b)(1); 18 Code of Federal Regulations, Sections 40.1 and 40.2.

40 16 U.S. Code Section 824t(a); FERC, "Formula Rates in Electric Transmission Proceedings: Key Concepts and How to Participate," July 5, 2022, accessed online November 2, 2022, https://www.ferc.gov/formula-rates-electric-transmission-proceedings-key-concepts-and-how-participate.

41 Sections 33.001, 35.004(d), 39.401, 39.402, 39.451, 39.452, 39.501, 39.502, 39.551, 39.552, 40.055, 41.055, and Chapter 36, Texas

PUC at a Glance

The Public Utility Commission of Texas (PUC) oversees electric, water and wastewater, and telecommunications utilities in the state. The Legislature created PUC in 1975 to regulate rates and services of monopoly utilities as a substitute for competition. Since then, the Legislature has restructured and deregulated major portions of the electric and telecommunications markets, shifting PUC's focus to include fostering competition among service providers. PUC's oversight of competitive markets provides minimum standards of service quality, customer service, and fair business practices to ensure high-quality service to customers and fair access to the marketplace. In 2013, the Legislature transferred portions of the regulation of water and wastewater rates and services from the Texas Commission on Environmental Quality (TCEQ) to PUC.[1]

To fulfill its mission to protect customers, foster competition, and promote high-quality infrastructure, the agency performs the following key activities:

- Oversees the electric grid operator — Electric Reliability Council of Texas (ERCOT) — and the competitive wholesale and retail electric markets within the ERCOT region.
- Conducts rate cases for certain electric, water and wastewater, and telecommunications utilities to ensure the prices they charge customers are just and reasonable based on their relevant expenses.
- Licenses, registers, certifies, and permits certain participants and functions in the electric, water and wastewater, and telecommunications industries.
- Investigates violations of the agency's statutes and rules and takes enforcement actions against violators.
- Investigates customer complaints through informal processes and formal legal proceedings.
- Oversees administration of the Texas Universal Service Fund, which helps support companies that provide basic landline telephone service in high-cost rural areas of the state.

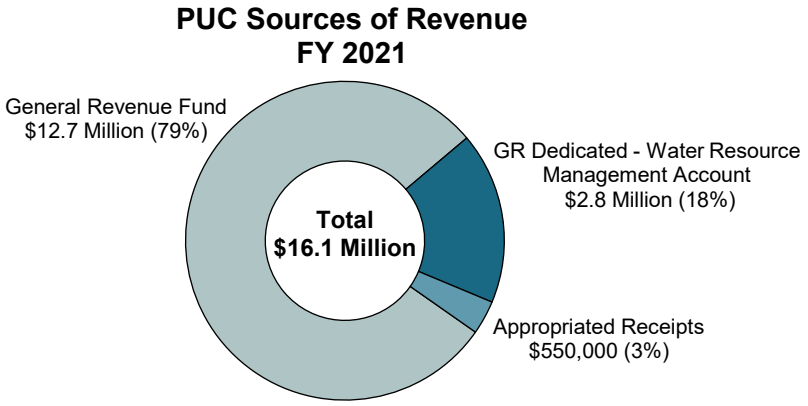
Appendix A, summarizes PUC's regulatory oversight by industry and type of entity.

Key Facts

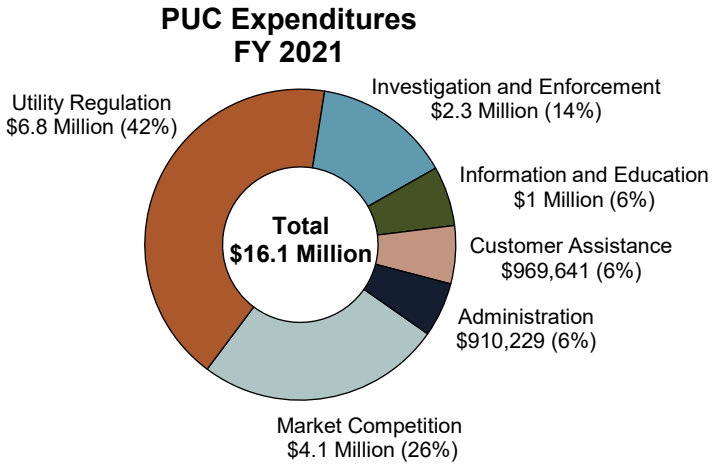
- **Governance.** In 2021, the Legislature expanded the commission that governs PUC from three to five full-time members who are appointed by the governor with the advice and consent of the Senate.[2] Commissioners serve staggered, six-year terms and the governor designates the chair.[3]

  Statute requires a commissioner be a qualified voter and citizen of the United States, a resident of Texas, a competent and experienced administrator, and have at least five years of experience in either business or government administration, or as a practicing attorney, public accountant, or engineer.[4] At least two commissioners must be well-informed and qualified in the field of public utilities and utility regulation.[5] Statute also contains strict conflict of interest provisions to mitigate any potential conflicts with the utility industries.[6]

- **Funding.** In fiscal year 2021, PUC operated on a budget of $16.1 million. As shown in the *PUC Sources of Revenue* chart on the following page, nearly 80 percent of the agency's funding came from general revenue. As detailed in the *PUC Expenditures* chart on the following page, the agency spent nearly 70 percent of its budget regulating utilities, primarily by conducting rate cases, and overseeing



market competition through contested cases and rulemakings. Appendix B describes PUC's use of historically underutilized businesses in purchasing goods and services for fiscal years 2019 to 2021.



- **Staffing.** Although authorized to employ 209 staff, in fiscal year 2021 PUC employed 166, all of whom work in Austin. PUC generally organizes its staff by function rather than by industry. For example, its Division of Compliance and Enforcement handles all enforcement cases for the electric, water and wastewater, and telecommunications industries. Across the agency, most staff work on utility regulation functions — through rate and other contested cases — and customer protection and assistance. Appendix C compares the percentage of minorities and women in PUC's workforce to the statewide civilian labor force for the past three fiscal years.

- **Electric industry oversight.** The *Texas Electricity Primer* provides more detailed information on Texas' electric industry, the wholesale and retail electric markets, and the roles and responsibilities of the various market participants and oversight entities.

  PUC's regulatory role. Inside the ERCOT region, PUC sets rates for wholesale transmission and some distribution services. In areas outside the ERCOT region, PUC provides full regulation for retail rates of investor-owned utilities. Municipalities and electric cooperatives set their own retail rates. In fiscal year 2021, PUC conducted 69 electric rate cases.[7] PUC also licenses and registers businesses operating in the electric industry, including generation companies, electric utilities, and retail electric providers.

  ERCOT oversight. PUC has complete authority to oversee ERCOT's operations and approves its budget. The PUC chair is a non-voting member on ERCOT's Board of Directors. PUC also reviews and approves ERCOT's protocols, which are the procedures and processes governing how to operate the grid and electric markets.[8] The *ERCOT at a Glance* section of this report provides additional information about ERCOT.

  Texas Energy Reliability Council. After Winter Storm Uri, the Legislature restructured and formalized the Texas Energy Reliability Council in statute to improve the Texas energy sector's

readiness for energy crises and ensure it is prepared to meet Texas' needs.[9] The 25-member council includes the heads of PUC, ERCOT, the Railroad Commission of Texas, the Texas Commission on Environmental Quality, the Texas Department of Transportation, and the Texas Division of Emergency Management, as well as participants from the natural gas supply chain, electric, energy, and industrial sectors.[10] The council's purpose is to enhance coordination and communication among state agencies and stakeholders in the energy and electric industries, and ensure these industries meet high priority human needs and address critical infrastructure concerns.[11] The chief of the Division of Emergency Management serves as the council's chair.[12]

Texas Electricity Supply Chain Security and Mapping Committee. Also, in response to Winter Storm Uri, the Legislature established the Electricity Supply Chain Security and Mapping Committee. The committee includes executives of PUC, ERCOT, the Railroad Commission of Texas, and the Texas Division of Emergency Management.[13] The committee is an interagency effort to map the state's critical electricity supply infrastructure, identify key vulnerabilities, and establish best practices to prepare facilities to maintain service in an extreme weather event. Committee members also provide recommendations relating to communications systems between responsible agencies.[14] PUC's executive director chairs the committee, which completed its first map in April 2022.[15]

- **Water and wastewater industry oversight.** PUC conducts the economic regulation of retail public water and wastewater utilities by ensuring their rates, operations, and services are just and reasonable. PUC approves certificates of convenience and necessity (CCN) that grant the holder the exclusive right to provide retail water or wastewater utility service. The CCN defines the area the utility must serve and ensures the utility has the financial, managerial, and technical capabilities to provide continuous and adequate service within that area. PUC performed 69 rate cases and approved or amended 79 CCNs in fiscal year 2021.[16]

  PUC also approves sales, transfers, and mergers of utilities when ownership changes and works with TCEQ to appoint temporary managers and receivers for troubled utilities. The agency approved 63 sales, transfers, and mergers in fiscal year 2021 and currently helps oversee 43 water systems and utilities under temporary management or receivership. PUC also provides information and technical assistance to small water utilities to help them remain in compliance with statute and agency rules. PUC responded to about 3,600 calls from water and wastewater utilities in fiscal year 2021.[17]

- **Telecommunications industry oversight.** PUC has varying degrees of regulatory responsibility over local telephone lines operated by incumbent local exchange carriers that existed before deregulation, such as AT&T and Verizon, and competitive local exchange carriers that compete with the incumbents, such as Grande Communications. In fiscal year 2021, PUC conducted two telephone rate cases.[18] PUC also provides some oversight of other telecommunications services and providers, including automatic dial announcing devices, pay phones, and long-distance providers. PUC has no jurisdiction over mobile wireless and broadband carriers, which the Federal Communications Commission regulates.

  PUC administers the Texas Universal Service Fund as part of its role in regulating telecommunications. The fund ensures all Texans have access to basic landline phone service at reasonable rates by supporting the companies that provide service in high-cost rural areas of the state.[19] The fund also pays for social service programs like LifeLine, which helps certain low-income customers reduce their monthly rates. To pay for these supports and services, every telecommunications provider with access to the fund's customer base pays a surcharge on the voice service component of its taxable receipts. In July 2022, PUC raised the surcharge from 3.3 percent to 24 percent in response to a court ruling.[20]

- **Customer protection and education.** PUC processes customer complaints and educates the public about electricity, water and wastewater, and local telephone services. Most complaints PUC handles across all three industries relate to billing, such as someone contacting PUC about a retail electric provider promoting one rate and charging the customer another. PUC received an unusually high number of complaints in fiscal year 2021 due to Winter Storm Uri — over 3,000 more than it did the year before. The agency took approximately 28 days on average to resolve each complaint and the *Informal Complaints* table provides additional detail about complaints in fiscal year 2021.

  PUC also administers the Power to Choose website. This tool allows residential electric customers in competitive areas of the state to compare retail electric providers by displaying information about plans and prices, the complaint history of providers choosing to advertise on the site, and other information.[21]

Informal Complaints - FY 2021

Total Number of Complaints	12,224
Electric Complaints	*9,661*
Water and Wastewater Complaints	*2,033*
Telecommunications Complaints	*530*
Percentage of Complaints Resulting in Refunds	11%
Amount Refunded to Customers	$ 1.5 million

- **Enforcement.** PUC takes formal enforcement action against utilities and companies that violate statute and rules, such as not maintaining continuous and adequate electric or water service and operating without the proper registration. The agency may issue warnings, impose administrative penalties, or suspend or revoke a license for serious violations. The *PUC Enforcement* table summarizes PUC's enforcement activity in fiscal year 2021.

- **Emergency response.** PUC assists the Texas Division of Emergency Management on critical infrastructure matters involving electric, water and wastewater, and telecommunications utilities. PUC also has an emergency management response team that tracks outages and coordinates service restoration after extreme weather events, such as Winter Storm Uri and Hurricane Harvey.

PUC Enforcement - FY 2021

Investigations Concluded	60
Electric Investigations	*39*
Water and Wastewater Investigations	*12*
Telecommunications Investigations	*4*
*Other Investigations**	*5*
Investigations Concluded Resulting in Warnings	14
Investigations Concluded Resulting in Penalties	6
Investigations Concluded Resulting in Revocations	1
Total Administrative Penalties	$ 682,000

* Includes investigations of apartment complexes and other entities registered with PUC that submeter water.

[1] All citations to Texas statutes are as they appear on http://www.statutes.legis.texas.gov/. Section 13.004, Texas Water Code; Texas Sunset Advisory Commission, *Public Utility Commission - Final Report with Legislative Action*, 2013, p. 32g, accessed online on October 1, 2022, https://www.sunset.texas.gov/public/uploads/files/reports/Public%20Utility%20Commission%20Staff%20Report%202013%2083rd%20Leg.pdf.

[2] Section 2(a), Chapter 1052 (SB 2154), Acts of the 87th Texas Legislature, Regular Session, 2021.

[3] Sections 12.051(c) and 12.052(a), Texas Utilities Code.

[4] Section 12.053(a), Texas Utilities Code.

[5] Section 12.053(a-1), Texas Utilities Code.

[6] Section 12.053(b), Texas Utilities Code.

[7] Public Utility Commission of Texas (PUC), *Performance Measures Report - Fiscal Year 2021 Annual*, pp. 3-4, accessed online October 2, 2022, https://www.puc.texas.gov/agency/resources/reports/pm/FY2021_PM.pdf.

[8] Sections 39.151(d) and 39.151(g-1), Texas Utilities Code.

[9] Section 418.302, Texas Government Code.

[10] Section 418.303, Texas Government Code.

[11] Section 418.302, Texas Government Code.

[12] Section 418.304(a), Texas Utilities Code.

[13] Section 38.201(c), Texas Utilities Code.

[14] Section 38.203(a), Texas Utilities Code.

[15] Section 38.201(e), Texas Utilities Code; PUC and Railroad Commission of Texas, *Texas Adopts First-Ever Electricity Supply Chain Map*, accessed online on October 2, 2022, https://www.puc.texas.gov/agency/resources/pubs/news/2022/042922-Joint-RRC-PUC-Map-press-release.pdf.

[16] PUC, *Performance Measures Report - Fiscal Year 2021 Annual*, pp. 5-6.

[17] PUC, *Legislative Appropriations Request for Fiscal Years 2024 and 2025*, p. 2, accessed online on October 2, 2022, https://www.puc.texas.gov/agency/resources/reports/approp/legappreq24-25.pdf.

[18] PUC, *Performance Measures Report - Fiscal Year 2021 Annual*, pp. 4-5.

[19] Section 56.021, Texas Utilities Code.

[20] PUC, *Order Changing the TUSF Assessment*, Project Number 50796 Item Number 60 (July 14, 2022) (final order), accessed October 2, 2022, https://interchange.puc.texas.gov/Documents/50796_60_1222172.PDF.

[21] PUC, "Power to Choose", accessed online October 2, 2022, https://www.powertochoose.org/.

ERCOT at a Glance

Electric utilities in Texas formed the Electric Reliability Council of Texas (ERCOT) as a nonprofit voluntary membership organization in 1970 to promote reliability of the transmission grid, a network of power lines, transformers, and other equipment that moves electricity.[1] In 1999, the Texas Legislature codified ERCOT's role as an independent system operator in preparation for the creation of the competitive wholesale and retail electric markets and charged ERCOT with additional responsibilities related to administering those markets.[2] Today, under direct oversight from the Public Utility Commission of Texas (PUC), ERCOT is responsible for reliably operating the transmission grid, which delivers about 90 percent of electricity consumed in the state.[3] The accompanying textbox explains how the term "ERCOT" is used when describing electricity in Texas. To fulfill its mission, ERCOT performs the following key functions:

- Manages the flow of electricity from more than 1,000 generation assets (e.g., natural gas plants, wind turbines) over nearly 53,000 miles of long-distance transmission power lines to balance energy supply and demand.[4]
- Analyzes future electric system needs by assessing electricity supply and demand trends on a seasonal basis and performing long-term infrastructure planning to identify transmission power lines needed for the ERCOT grid.
- Administers the wholesale electric market and calculates and settles transactions carried out by generation companies and other wholesale buyers and sellers in the ERCOT region.
- Provides all generation companies, retail electric providers, and other wholesale buyers and sellers of electricity with access to the ERCOT grid through non-discriminatory, standardized processes.
- Coordinates customer transfers between retail electric providers in competitive retail areas based on customer selection of a new provider.

Understanding ERCOT

ERCOT, Inc.
A Texas nonprofit corporation responsible for operating the transmission grid.

ERCOT grid
The transmission grid operated by ERCOT, Inc. that is largely physically separated from the rest of the country.

ERCOT region
The geographic footprint of the transmission grid operated by ERCOT, Inc.

The *Texas Electricity Primer* provides additional details regarding the state's electric system.

Key Facts

- **Governance.** The 87th Legislature restructured the 16-member ERCOT Board of Directors, removing members that represented interests in the electric industry like generation companies, utilities, and retail electric providers, and barring board members from having any fiduciary duty or assets in the ERCOT region's electric market.[5] Today, an 11-member board of directors consisting primarily of public members governs ERCOT.[6] The table on the following page details the board's current membership. A three-member committee appointed by the governor, lieutenant governor, and speaker of the House of Representatives selects eight of the directors who must have experience in finance, business, engineering, trading, risk management, law, or electric market design.[7] The selected directors serve staggered three-year terms and cannot serve more than three terms consecutively.[8] The chief executive officer of ERCOT, chair of PUC, and public counsel of the Office of Public Utility Counsel serve as ex-officio members of the board.[9]

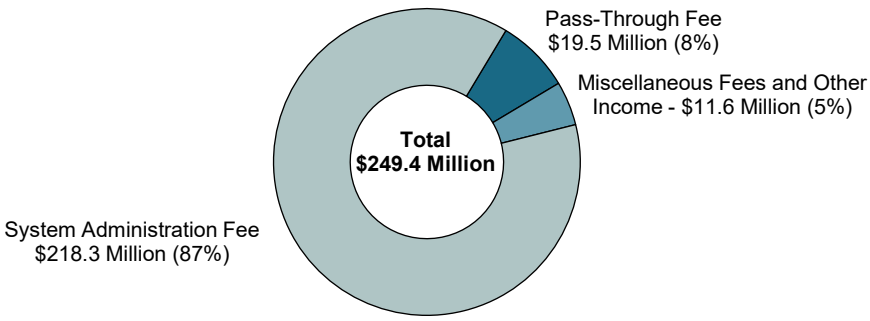
The board relies on the 30-member Technical Advisory Committee for recommendations on ERCOT protocols and procedures. The committee consists of stakeholders representing seven different industry sectors, including consumers, different types of utilities, and other market participants. Through various subcommittees, working groups, and task forces, the stakeholders discuss, develop, and vote on recommended changes or perform board-directed studies or plans.[10] Collectively, these forums are referred to as the "ERCOT stakeholder process."

ERCOT Board of Directors

Member	Representation
Paul Foster, Chair	Public Member
Bill Flores, Vice Chair	Public Member
Carlos Aguilar	Public Member
Julie England	Public Member
Robert "Bob" Flexon	Public Member
Peggy Heeg	Public Member
Zin Smati	Public Member
John Swainson	Public Member
Dogood A. "Chris" Ekoh	Interim Public Counsel of the Office of Public Utility Counsel
Peter Lake	Chair of Public Utility Commission (non-voting)
Pablo Vegas	Chief Executive Officer of ERCOT (non-voting)

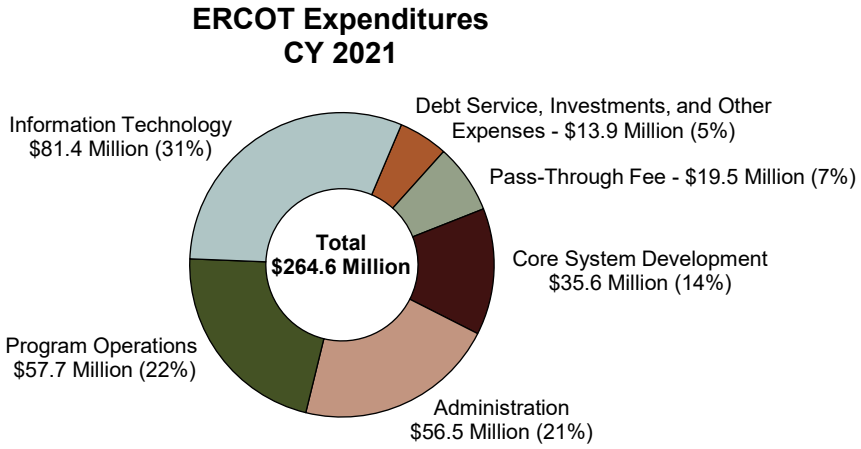
- **Funding.** As shown in the *ERCOT Sources of Revenue* chart, ERCOT received almost $250 million in revenue in calendar year 2021.[11] Most of ERCOT's operating revenue is from the system administration fee it assess on certain wholesale buyers of electricity based on the customer demand they serve. ERCOT submits its proposed budget and fee amount to PUC for approval on a biennial basis.[12] The fee has been set at 55.5 cents per megawatt-hour since 2016. If this fee were passed directly to customers, the charge would average about $7 per household per year.[13]

ERCOT Sources of Revenue CY 2021



Most of ERCOT's remaining revenue comes from a federal pass-through fee it collects from certain Texas companies and submits to the North American Electric Reliability Corporation (NERC), which is responsible for developing and enforcing federal reliability standards.[14]

As shown in the *ERCOT Expenditures* chart, in calendar year 2021, ERCOT spent nearly $265 million. ERCOT's largest expenditures include over $81 million on information technology (IT) and almost $58 million on program operations, including costs to operate ERCOT's control centers where staff manage the grid and the wholesale electric market. Core system development includes the initiation, planning, and implementation of hardware and software upgrades to support new and evolving features of the grid and market systems, separate from the IT department's expenditures that maintain and support a variety of internal systems used by ERCOT staff and market participants for day-to-day functions.[15]



ERCOT maintains an operating balance consisting of excess cash from years when revenues exceed expenditures and manages proceeds from the sale of congestion financial instruments.[16] In years when expenditures exceed revenues, ERCOT can use these two funds to cover the difference, as it did in calendar year 2021.[17] Because ERCOT is not subject to state reporting requirements, Sunset staff did not prepare an analysis of it's use of historically underutilized businesses in purchasing goods and services.

- **Staffing.** At the end of 2021, ERCOT employed 767 staff. In fiscal year 2021, ERCOT supplemented its staff with 93 temporary contract workers, principally for its IT department that supports all ERCOT's operations. Most staff, 95 percent, are based in Taylor, with the remainder located in it's Austin and Bastrop facilities, as shown in the *ERCOT Region* map on Page 29. Because ERCOT is not subject to state equal opportunity employer reporting requirements, Sunset staff did not prepare an analysis comparing the percentages of minorities and women in ERCOT's workforce to the statewide civilian labor force.

- **Grid operations.** ERCOT does not own any generation assets or transmission infrastructure. Instead, like an air traffic controller, ERCOT instructs generation companies to produce only enough power to meet current consumer demand to ensure electricity is generated in the most efficient manner. ERCOT maintains several systems designed to receive a constant stream of data from generation assets and transmission utilities, which help it make decisions in real time, such as whether to instruct generation companies to increase or decrease electricity production. Additionally, several IT systems repeatedly check grid vital signs, such as frequency and voltages, to ensure the grid is operating reliably.

  ERCOT, generation companies, and transmission power line companies in Texas must meet state and federal reliability standards, generally described in the textbox on the following page.[18] The Federal Energy Regulatory Commission and NERC enforce federal standards.[19] PUC and ERCOT are working toward formalizing ERCOT's role as the state reliability monitor, the entity that conducts

compliance monitoring to ensure market participants meet their reliability obligations under PUC rules and ERCOT protocols.

Electric Reliability Standards

Requirements to operate elements of an electric grid within certain limits to avoid grid instability, blackouts, or failure when a disturbance occurs.

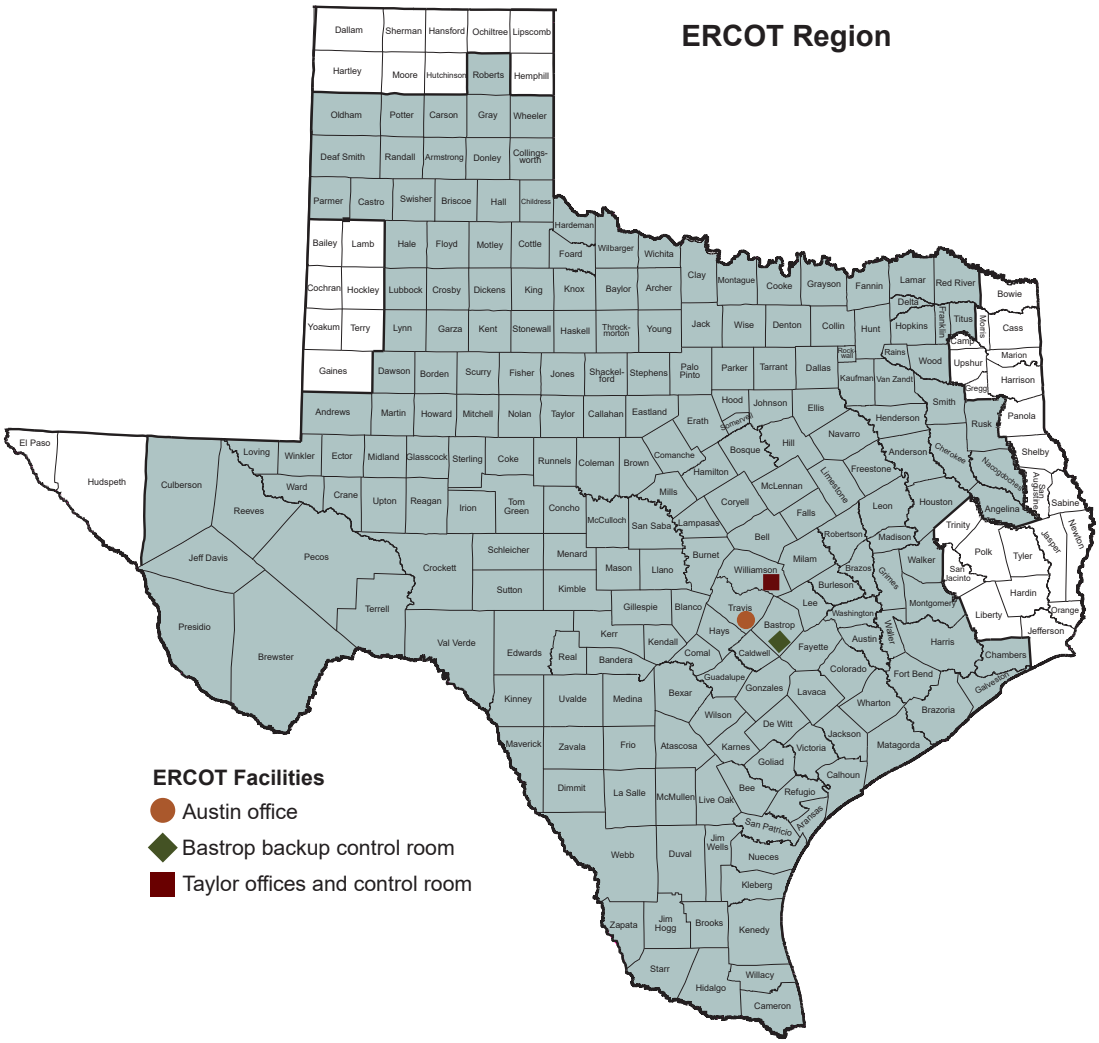
- **Transmission planning.** As part of its responsibility to maintain grid reliability, ERCOT performs transmission power line planning, collaborating with electric utilities to identify potential deficiencies in the grid and solutions to address future needs. Although ERCOT does not perform generation planning, it tracks the status of current and planned generation assets in the ERCOT region to ensure the grid has sufficient infrastructure to deliver electricity to homes and businesses.

- **Competitive wholesale electric market.** ERCOT administers a competitive wholesale market for retail electric providers, municipally owned utilities, and cooperatives to purchase power from generation companies. Supply and demand in the wholesale market generally drives electricity prices, with a few mechanisms meant to encourage additional electric generation when needed. ERCOT maintains detailed information about electricity production, delivery, and consumption, which it uses to settle the more than $15 billion in annual financial transactions among companies providing generation, transmission, distribution, and retail services.

- **Competitive retail electric market.** ERCOT enables the almost 8 million customers in competitive areas to switch their retail electric provider based on their own preferences, such as providing the lowest rates or supporting renewable resources.[20] When customers select a new retail electric provider, ERCOT coordinates the necessary steps for reassigning a customer to the new provider.

- **Statewide coordination.** ERCOT representatives serve on two councils the Legislature established after Winter Storm Uri to improve the reliability of energy and electricity operations. An ERCOT representative serves as a member of the Texas Energy Reliability Council, formalized to enhance coordination and communication among state agencies and stakeholders in the energy and electric industries.[21] The chief executive officer of ERCOT serves as a member of the Texas Electricity Supply Chain Security and Mapping Committee, an interagency effort to map the state's critical electricity supply infrastructure, among other responsibilities.[22]

- **PUC oversight.** The commission reviews and approves ERCOT's fees, budget, and most board decisions.[23] PUC sets rates for wholesale transmission service in the ERCOT region and enforces state reliability, market, and customer protection standards for companies participating in Texas' electric market.[24] The *PUC at a Glance* section of this report provides additional information about PUC.


ERCOT Region
ERCOT Facilities
Austin office
Bastrop backup control room
Taylor offices and control room

[1] Electric Reliability Council of Texas (ERCOT), *Self-Evaluation Report*, September 2021, pp. 22 and 195, accessed online October 28, 2022, https://www.sunset.texas.gov/public/uploads/files/reports/ERCOT%20SER_9-01-21.pdf.

[2] SB 7, Acts of the 76th Texas Legislature, Regular Session, 1999.

[3] All citations to Texas statutes are as they appear on http://statutes.legis.texas.gov/. Section 39.151(a), Texas Utilities Code; ERCOT, *Fact Sheet*, October 2022, accessed online August 3, 2022, https://www.ercot.com/files/docs/2022/02/08/ERCOT_Fact_Sheet.pdf.

[4] ERCOT, *Fact Sheet*.

[5] SB 2, Acts of the 87th Texas Legislature, Regular Session, 2021.

[6] Section 39.151(g-1), Texas Utilities Code.

[7] Sections 39.151(g-1) and 39.1513, Texas Utilities Code.

[8] ERCOT, *Amended and Restated Bylaws*, October 2021, accessed online September 28, 2022, https://www.ercot.com/files/docs/2021/10/12/Amended_and_Restated_Bylaws_of_ERCOT__eff_10122021_.pdf.

[9] Section 39.151(g-1), Texas Utilities Code.

[10] ERCOT, *Amended and Restated Bylaws*.

[11] ERCOT prepares financial reports using the calendar year, defined as January 1 through December 31.

[12] Section 39.151(e), Texas Utilities Code.

[13] Fee estimate is based on 1,000 kWh usage per month. ERCOT, *Self-Evaluation Report*, September 2021, p. 33.

[14] 16 U.S. Code Sections 824o(c), 824o(d), and 824o(e); 18 Code of Federal Regulations, Section 39.4.

[15] Core System Development also includes a $4.8 million capital expenditure for ERCOT's Austin headquarters and emergency control center.

[16] As of December 2021, ERCOT's cash balance was nearly $19.8 million and the congestion proceeds held were approximately $1 billion.

[17] To avoid debt or using a revolving line of credit, ERCOT's board authorized using a portion of the congestion proceeds to temporarily cover certain operating expenses in low revenue years and prioritized repayment of funds used in this manner; ERCOT, *Financial Corporate Standard*, March 3, 2020.

[18] 16 U.S. Code Sections 824o(a)(3) and 824o(a)(4).

[19] 16 U.S. Code Section 824o(e); 18 Code of Federal Regulations, Section 39.7.

[20] ERCOT, *Fact Sheet.*

[21] Section 418.303, Texas Government Code.

[22] Section 38.201, Texas Utilities Code.

[23] Sections 39.151(d) and 39.151(g-1), Texas Utilities Code.

[24] Chapters 17 and 36, Texas Utilities Code; Sections 35.004, 38.005, and 39.157, Texas Utilities Code; 16 Texas Administrative Code, Part 2, Chapter 25, Subchapter S, Section 25.503.

OPUC at a Glance

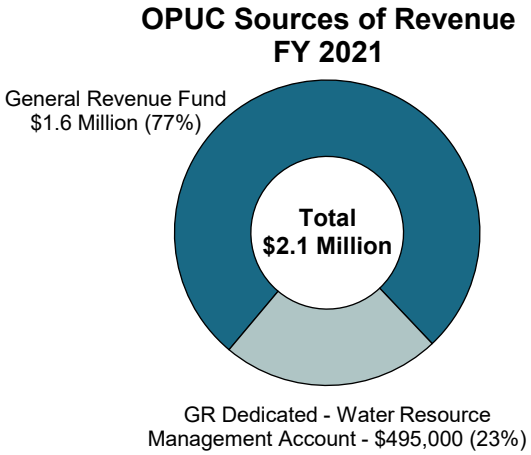
The Legislature established the Office of Public Utility Counsel (OPUC) in 1983 as an independent agency separate from the state's Public Utility Commission of Texas (PUC) to represent the interests of residential and small commercial consumers, as a class, in electric, water and wastewater, and telecommunications utility matters.[1] To fulfill its mission, OPUC performs the following key activities:

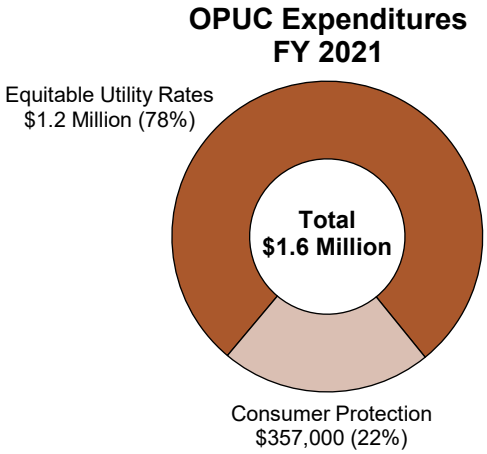
- Advocates on behalf of consumers in utility rate cases and contested cases before PUC, the State Office of Administrative Hearings, and appeals to state courts.
- Participates in rulemaking projects at PUC to protect consumer interests.
- Represents consumers as a board member of the Electric Reliability Council of Texas (ERCOT), in the ERCOT stakeholder process, and on the Texas Energy Reliability Council.
- Addresses utility-related consumer inquiries and complaints.

Key Facts

- **Public Counsel.** OPUC does not have a policymaking body, such as a board or commission. Instead, the governor, with the advice and consent of the Senate, appoints the public counsel as chief executive of the agency for a two-year term.[2] Statute requires the public counsel to be a Texas resident licensed to practice law in the state, with a demonstrated commitment to safeguarding the rights of the public, and possessing the knowledge and experience necessary to practice effectively in utility proceedings.[3]

- **Funding.** As shown in the *OPUC Sources of Revenue* chart, in fiscal year 2021, OPUC received $2.1 million in funding from the General Revenue Fund and the General Revenue Dedicated Water Resource Management Account. The agency spent over 75 percent of its funding intervening in major utility cases to achieve equitable rates for residential and small commercial consumers, and the remainder on consumer protection efforts, such as participating in rulemakings at PUC, as shown in the *OPUC Expenditures* chart. OPUC lapsed nearly $562,000 in fiscal year 2021 because the funds were committed to ongoing contracts that straddled multiple fiscal years; without unexpended balance authority, the funding expired at the end of the fiscal year. To avoid this situation in the future, the 87th Legislature provided OPUC with unexpended balance authority.[4] Appendix D describes OPUC's use of historically underutilized businesses in purchasing goods and services for fiscal years 2019 to 2021.





- **Staffing.** Although authorized to hire 20.5 staff in fiscal year 2021, OPUC employed only 12 due to difficulties in hiring and retaining staff. All staff is located in Austin and consists mainly of attorneys. OPUC also spent about $380,000 on contracts in fiscal year 2021 for seven expert witnesses to provide testimony and analysis to assist OPUC staff with contested cases. Because of the agency's small size, Sunset staff did not prepare an analysis comparing the agency's workforce composition to the overall civilian labor force.

- **Litigation.** In fiscal year 2021, OPUC intervened in 51 contested utility cases, including 45 electric cases and six water and wastewater cases. These contested cases include rate cases for regulated utilities and other cases that affect the rates consumers pay, such as cases involving certificates of convenience and necessity that determine which utility provides service. OPUC estimates its participation in these contested cases resulted in consumer savings of $173.5 million.[5] OPUC also participated in two appeals of PUC decisions to state courts in fiscal year 2021.[6]

- **PUC rulemakings.** OPUC participated in 27 rulemakings at PUC in fiscal year 2021.[7] OPUC provided comments on projects concerning electric rules, water and wastewater rules, the Texas Universal Service Fund, broadband rules, and ERCOT-related rulemaking projects.

- **ERCOT involvement.** OPUC's public counsel serves as a voting member on the ERCOT Board of Directors representing residential and small commercial consumers and participates as a voting representative on ERCOT's Technical Advisory Committee (TAC) and its subcommittees.[8] TAC is made up of electric industry stakeholders and makes recommendations to the ERCOT board. These roles enable OPUC to provide input on issues affecting consumers, such as changes to ERCOT protocols that would affect retail electricity prices or reliability. OPUC's public counsel also serves as a member of the Texas Energy Reliability Council, which the Legislature restructured and formalized after Winter Storm Uri to enhance coordination and communication among state agencies and stakeholders in the energy and electric industries.

- **Consumer complaints and outreach.** Statute authorizes OPUC to assist consumers who have complaints concerning their utility services but have been unable to get resolution from PUC.[9] OPUC also maintains a dedicated telephone number and email account to assist residential and small commercial consumers during utility-related emergencies. The agency typically receives an average of about 200 complaints per year but due to Winter Storm Uri, OPUC received 336 in fiscal year 2021, most related to electric complaints and inquiries. OPUC is involved in consumer outreach through social media and has consumer education materials on its website. The agency also conducts an annual meeting to receive feedback from the public about its activities.

[1] Chapter 274 (SB 232), Acts of the 68th Texas Legislature, Regular Session, 1983.

[2] All citations to Texas statutes are as they appear on http://www.statutes.legis.texas.gov/. Section 13.021, Texas Utilities Code.

[3] Section 13.022, Texas Utilities Code.

[4] Office of Public Utility Counsel (OPUC), Rider 3, p.VIII-5, Article 8 (SB 1), Chapter 1053 (SB 1), Acts of the 87th Legislature, Regular Session, 2021 (General Appropriations Act).

[5] OPUC, *Annual Report for Fiscal Year 2021*, accessed online September 24, 2022, https://www.opuc.texas.gov/wp-content/uploads/2022/02/OPUC-FY21-Annual-Report-FINAL_signed.pdf.

[6] *Entergy Texas v. Public Utility Commission of Texas*, NO. 01-18-00556-CV, 2020 (Tex. App.- Houston June 30, 3030, no pet.) (memorandum opinion); *Texas Industrial Energy Consumers, Cities Advocating Reasonable Deregulation, & Office of Public Utility Counsel v. Public Utility Commission of Texas*, No. 03-17-00490-CV, 2021 (Tex. App. - Austin August 11, 2021, petition filed).

[7] OPUC also participated in one project at the Railroad Commission of Texas related to the designation of critical natural gas facilities in fiscal year 2021.

[8] Section 19.151(g-1)(2), Texas Utilities Code; Section 5.1(a)(2)(v), Electric Reliability Council of Texas *Amended and Restated Bylaws*, October 2021, accessed online September 28, 2022, https://www.ercot.com/files/docs/2021/10/12/Amended_and_Restated_Bylaws_of_ERCOT__eff_10122021_.pdf.

[9] Section 13.003(a)(7), Texas Utilities Code.

Issue 1

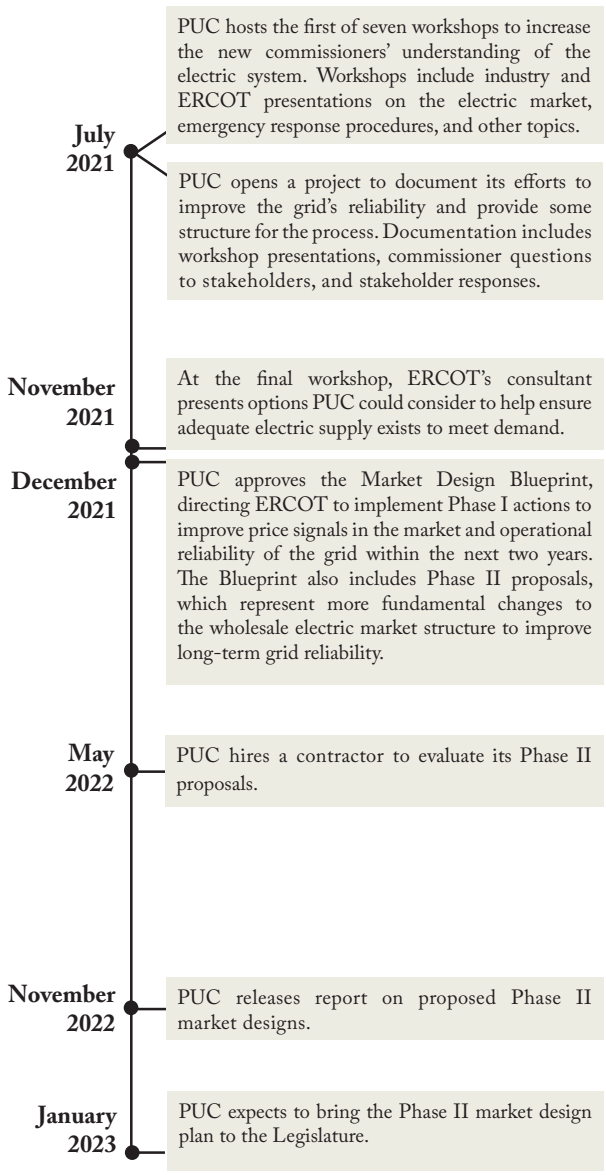
Without Additional Resources and Clear Decision-Making Processes in Place, PUC Cannot Truly Fulfill Expectations for Ensuring a Reliable Electric Grid.

Background

The Public Utility Commission of Texas' (PUC) authority over the electric industry consists of regulation of traditional, monopoly electric utilities, oversight of the electric market, and oversight of the Electric Reliability Council of Texas (ERCOT) — the nonprofit corporation that manages the ERCOT grid. ERCOT is statutorily responsible for ensuring the reliability and adequacy of the grid and administers the electronic systems that balance supply with consumer demand.[1] The *Texas Electricity Primer* provides additional details regarding Texas' electric system, ERCOT's responsibilities, and PUC's regulatory role. Although PUC has some electric industry experts on staff, the agency generally organizes its staff by function rather than by industry. For example, its Division of Compliance and Enforcement handles enforcement cases not just for the electric industry but for the water, wastewater, and telecommunications industries as well. In fiscal year 2021, PUC employed 166 staff and operated on a budget of $16.1 million. In calendar year 2021, ERCOT employed 767 staff and operated on a budget of $249.4 million.

Following Winter Storm Uri, in 2021 the Legislature restructured the governing bodies of PUC and ERCOT and made numerous changes to the electric industry and market in Texas designed to prepare for, prevent, and respond to weather emergencies and generally enhance the electric grid's reliability.[2] Appendix E provides additional information about Winter Storm Uri and the Legislature's response. Since Summer 2021, PUC and ERCOT have worked to implement legislative mandates and comply with ambitious deadlines, with PUC conducting 24 rulemakings, a 200 percent increase compared to previous years.[3] As described in the timeline, PUC also initiated "Wholesale Electric Market Design," a two-phase effort to reform the electric market to improve reliability, culminating with the agency presenting its plan to the Legislature.[4]

Wholesale Electric Market Design Timeline



Findings

In the two decades since the Legislature restructured major portions of the Texas electric market, commonly known as deregulation, the electric grid and industry have experienced significant transformation, which has accelerated during the last five years largely driven by technological advancements and increases in demand for electricity, summarized in the textbox below.[5] However, the law governing Texas' electric market and industry, the Public Utility Regulatory Act, has remained largely unchanged. Despite significant legislative reforms made in response to Winter Storm Uri, much of the statute is outdated, focused on ensuring a smooth transition into competitive markets, which took place over 20 years ago, and does not envision or address what PUC's or ERCOT's role should be as the electric market and industry continue to evolve.

Evolution of the Texas Electric System

- **The state is growing.** Texas' population grew by almost 4 million between 2010 and 2020, more than double the growth rate of the nation, with over 300,000 people added in 2021. Texas also continues to attract large industrial customers, like Samsung and Tesla, with their manufacturing facilities connecting to both transmission and distribution lines in Texas.
- **Extreme weather is increasing strain on the grid.** The record for highest electricity demand within the ERCOT region was broken 10 times during summer 2022, one of the hottest summers on record. The state's historic low temperatures reached during Winter Storm Uri drove demand that would have been (without load outages) almost 10,000 megawatts (MW) higher than ERCOT's 2021 extreme seasonal assessment scenario and caused over 50,000 MW of generation outages.
- **The ERCOT grid and electric market have significantly changed.** In 2010, ERCOT moved to a nodal market, breaking up four zones into thousands of localized nodes and completely changing the way electricity prices are calculated in a more granular and transparent manner. In 2014, the completion of ERCOT's Competitive Renewable Energy Zones added 3,600 miles of new transmission lines and connected 22,000 MW of wind capacity to the ERCOT grid. Additionally, almost 8 million advanced electric meters have been installed in the ERCOT region, allowing customers to view their electricity use, and installation in areas outside the ERCOT region is continuing.
- **Growth in renewable resource generation is outpacing new gas and coal plants.** At the end of 2021, approximately 10,000 MW of commercial solar capacity was connected to the ERCOT grid, five times greater than the amount connected in 2018, with at least another 20,000 MW planned to be connected by 2023. Wind capacity in the ERCOT region totaled 33,925 MW at the end of 2021, with another 6,000 MW planned for connection by 2023. Over 6,000 MW of coal and natural gas generation in the ERCOT region retired between 2018 and 2021, with less than 2,000 MW of new gas-fired generation estimated to be installed by 2023.
- **Advancing technologies are creating never-before-seen market participants.** Cryptocurrency mining could account for 17,000 MW of new demand by 2030, which is enough to power 3.4 million homes. ERCOT expects more than 4,500 MW of battery storage capacity will be installed in the ERCOT region by the end of 2023, up from 94 MW of capacity in 2018.

Throughout the review, Sunset staff heard numerous concerns about PUC and ERCOT needing to adapt to emerging technologies, extreme weather events, and continued population growth. However, in a deregulated environment, the market — and the private businesses that participate in it — largely determines electricity prices, as well as where and what type of generation is built. As such, the state has no single entity comprehensively planning to ensure there is

enough electricity to meet future needs or how changing technology, consumer behavior, and weather will affect those needs.

While these are important issues, addressing them requires significant policy decisions outside the scope of Sunset staff. Instead, this review focused on PUC's internal processes for making important decisions that affect the electric grid, market, industry, and ultimately all Texans, and identified a number of challenges — some outside PUC's control and some of its own making — that must be addressed. As the industry continues evolving, PUC needs robust structures and processes in place to ensure it considers all input, analyzes its options, clearly articulates decisions, and evaluates the effectiveness of changes.

PUC lacks staff resources for independent analysis.

Several factors inhibit PUC from making fully informed decisions to effectively oversee the electric industry and providing a complete picture of the grid's ability to meet the state's growing needs.

- **Limited independent analytical capabilities.** PUC currently lacks the expertise and staff resources to independently analyze an abundance of electric data and information to make fully informed regulatory decisions, including evaluating their impacts on market participants and the general public. For example, PUC cannot currently verify the results and conclusions made in ERCOT-endorsed transmission line project reports to ensure all suitable alternatives have been identified, far-reaching impacts are considered, and the best, most cost-effective solution is selected. As a billion-dollar industry, even marginal changes to the ERCOT grid may be significant for Texas ratepayers and need full analysis and consideration. While PUC has several subject matter experts in its Market Analysis Division, they are primarily dedicated to tracking activity in markets and transmission organizations that operate outside of the ERCOT region and whose decisions affect utilities in Texas.

  Additionally, since PUC does not directly oversee municipally owned utilities and electric cooperatives, having the ability to do more independent, forward-looking analysis could also help identify trends that may need legislative attention. For example, the commission may need to consider the costs and benefits of whether ERCOT should have visibility into distribution systems as new distributed generation and demand response programs are established. The *Planning for the Future* textbox on the following page describes additional examples of major projects that may benefit from PUC analysis.

  PUC should not be dependent on those it oversees for analysis.

  As the industry regulator, PUC should not be dependent on those it oversees for analysis of information it needs to make strategic decisions that affect the entire state. However, absent internal resources, PUC has historically relied on ERCOT, the Independent Market Monitor (IMM), or the competing interests of market participants to vet potential solutions to problems and identify impacts and unintended consequences of decisions on the market. The market participants have private interests to protect, which may be at

odds with the broader public interest in providing reliable electricity to all Texans, and as explained in the *Incomplete Analytics* textbox below, neither ERCOT nor the IMM are perfectly situated to provide the type of analysis PUC needs. The commission's independence from market influence is especially important now, as PUC evaluates and takes steps to implement market reforms that will affect how industry stakeholders conduct business in Texas while safeguarding the reliability of the ERCOT grid.

Planning for the Future

- **Transmission construction reports.** PUC requires every transmission project owners to submit monthly reports, but PUC staff lack the bandwidth to review those reports in depth. No other entity is checking on a utility's project budget or timeline to ensure efficient use of resources, which PUC only reviews during the utility's rate case, years after any cost overruns or delays have occurred.
- **Technology studies.** Although transmission lines are able to carry some maximum amount of power, they often carry much less due to safety and reliability concerns. These constraints act as a chokepoint for electricity and limit the supply of electricity to some areas. Independent analysis of new transmission technologies could help inform PUC about which types of transmission lines or equipment could best alleviate these constraints when approving construction of future transmission projects.
- **Reliability impact analysis.** The commission could more thoroughly analyze and evaluate the impacts of its decisions on the industry. For example, the commission could evaluate how reliability is affected by new types of market participants connecting to the transmission grid or distribution systems to help develop new regulations that protect reliability.
- **Cost-benefit impact analysis.** The commission could more thoroughly analyze and evaluate the costs or benefits of its decisions, including the cost if the decision is not implemented. For example, the commission could compare the cost of upgrading power lines with circuitry needed to roll blackouts through a service area during an emergency versus the cost of not installing the circuitry.

Incomplete Analytics

ERCOT. While PUC has complete authority to access ERCOT's data, which includes vast amounts of operational and financial data about electricity generation, consumption, and pricing, it lacks the technological capability to do so independently of ERCOT. Further, this data is extremely granular, often recorded on a second-by-second basis, and ERCOT struggles to provide clear and concise explanations of the data's significance to those without substantial knowledge of the industry. Further, any analysis provided by ERCOT may still carry inherent bias due to its focus on grid operations, which prioritizes reliability over considering the cost of such operations. Even if ERCOT were able to provide regulatory impact analysis, PUC staff's current lack of analytical capabilities forces the agency to rely on ERCOT's analysis without independent verification.

IMM. The IMM has complete access to ERCOT's data to detect and report any potential market manipulation, market rule violations, or market power abuses in the wholesale electric market. While the IMM could take on similar duties for the retail market, the scope of analysis PUC needs may be much broader than market analysis, such as evaluating cost impacts of improvements to the distribution system on transmission and distribution utilities, which are completely outside of the IMM's current scope of work. Additionally, the IMM's analysis of stakeholders' behavior is backward-looking, while PUC needs forward-looking analysis to anticipate behavior or effects that may not be determined from historical trends, such as how competition is affected in the retail market when companies merge.

Recognizing this deficiency, in its 2024-25 Legislative Appropriations Request, PUC's exceptional item requests include funding for a data analytics team and additional engineering expertise.[6] The team would support gathering and analyzing electric system data and information and the engineering expertise would support technical review of plans and issues relating to electric utilities. These resources could provide PUC with independent analysis useful for a more proactive, strategic approach to industry oversight, such as by identifying trends and challenges anticipated to impact the industry and addressing them before they become reliability problems.

Independent analysis could identify challenges before they become reliability problems.

- **Undefined metrics for industry regulation.**

  No state definition for reliability. While market participants are subject to federal reliability requirements, the state lacks a clearly defined reliability goal or target necessary to measure and evaluate its efforts, hold market participants accountable for reaching those goals, or fully plan for the grid's future reliability needs. For example, common reliability standards known in the electric industry include a "one-in-ten" standard, which is a resource adequacy standard where the probability of an outage resulting from demand exceeding generation capacity occurs less than one day in 10 years, and "expected unserved energy," which estimates the amount of demand that cannot be served if an outage were to occur.[7] Federal reliability requirements indicate a minimum level of reliability necessary for the grid, but both the commission and Legislature have clearly indicated the desire for a higher level of reliability for state grid operations.[8] In August 2022, the State Energy Plan Advisory Committee also reported to the Legislature that PUC should define a clear reliability metric or standard for the ERCOT region, which is necessary in evaluating the efficacy of any proposals to improve grid reliability.[9] The lack of clear goals also prevents effective communication with the Legislature about the potential cost-benefit tradeoffs in achieving a desired level of grid reliability, since these costs will eventually get passed on to customers. Recognizing this deficiency, the commission is working to develop an appropriate reliability standard as part of its Market Design effort.[10]

  The state lacks a clearly defined reliability goal for the electric industry.

  Missing ERCOT performance measures. Statute requires ERCOT to develop its own performance measures to track its operations and report to PUC, but the metrics ERCOT has established are either very broad or overly complex and provide limited insight into how well ERCOT is performing its responsibilities.[11] For example, many of ERCOT's measures relate to the transmission grid and market systems, such as having its grid and systems be available and online 99 percent of the time, and its finance measure is to manage spending to be equal to or less than the budget.[12] However, ERCOT does not have a performance measure indicating whether its system upgrades are meeting any on-time and on-budget expectations.[13] While ERCOT provides PUC with status and cost updates of its grid and market system upgrades, a closeout report is not provided for these projects once completed.[14] Such a report would document the actual costs and time

to complete each project, with an explanation for any variances from the original budget and timeline to evaluate ERCOT's project management performance. Delays in implementation of these projects may delay future systems upgrades, like the new reliability and market changes being considered as part of the Market Design effort.

- **Disjointed reporting requirements.** As detailed in Appendix F, PUC and ERCOT publish numerous reports on various aspects of the electric industry. However, the separate reports do not provide a cohesive, comprehensive view of the current state of the electric grid and market or clearly highlight future needs and challenges necessary to drive decision making. For example, ERCOT's nearly 80-page *Long Term System Assessment* (LTSA) is written for market participants but is submitted to the Legislature without much context or explanation given to understand the significance of what is being shown or how the Legislature could use the information.[15] The report provides estimates of future demand for electricity and new generation capacity added to the ERCOT grid, but this information is buried among graphs and detailed analysis without a clear indication of whether total generation will be sufficient to meet expected demand.[16] Without this, the Legislature cannot gauge whether the state needs more generation or steps it, or PUC, could take to improve capacity, which is half of the LTSA's statutory purpose — to report on the need for increased generation capacity.[17]

  PUC and ERCOT reports do not provide a cohesive, comprehensive view of the grid's future needs.

  Similarly, ERCOT submits the *Report on Constraints and Needs* to PUC with recommendations for addressing issues within the ERCOT region, but ERCOT's singular focus on the transmission grid makes it impractical for it to identify half of the constraints and needs statute requires — those of distribution systems.[18] Since ERCOT lacks visibility into distribution systems, it cannot provide PUC with information about the problems those systems face or recommendations to address those problems, such as the technical problems of connecting a growing number of battery storage and solar facilities to distribution systems.

  PUC should review ERCOT's key assumptions to ensure they reflect the agency's expectations.

  Additionally, PUC is not involved in setting or approving every key assumption ERCOT uses in its reports, which leads to reports that may not reflect PUC's expectations. For example, the *Capacity, Demand, and Reserves Report* and *Seasonal Assessment of Resource Adequacy Report* — known as the CDR and SARA Reports, respectively — look at various scenarios that stress test the grid, such as low wind conditions.[19] While technical in nature and intended for market participants, the commission has recognized these reports are now being used by both policymakers and the general public to gain insight into the health of the ERCOT grid.[20] PUC has already identified some areas for improvement to meet this new expectation, such as increasing the CDR Report's publication frequency to more accurately capture new commercially available capacity, and defining terms like resource adequacy to provide clarity and ensure the grid's reliability needs are met.[21] Other informative reports like the

Report on Constraints and Needs may also benefit from PUC's review of key assumptions to ensure they support each report's intent.

The state would benefit from a more clearly defined, fully transparent process when decisions that affect the entire electric industry and millions of Texans are made.

PUC's heightened focus on swiftly implementing legislatively mandated improvements to market design and grid operations over the last two years was necessary and appropriate. However, Sunset staff identified some needed course corrections or clarifications involving those recent legislative changes. Further, in advance of implementing Phase II of its Market Design effort and potential new legislative directives from the 88th Legislature, PUC needs to put well defined structures in place to better reflect new processes and provide certainty to the electric industry and ERCOT.

- **Informal processes for giving ERCOT instructions.** Statute has given PUC complete authority to oversee ERCOT since 2001 when PUC certified ERCOT as the independent system operator. However, statute does not clearly identify how PUC can give ERCOT direction outside of a contested case or rulemaking proceeding.[22] In practice, PUC has broadly interpreted its statutory authority and uses multiple informal mechanisms to guide ERCOT's actions, including verbal directives, memos, and orders. While these informal methods may help the commission move quickly, they do not always adhere to best practices for openness, inclusiveness, and transparency.

  PUC's informal methods for directing ERCOT are not always fully transparent.

  While market participants have the opportunity to weigh in on how changes will be implemented through ERCOT's stakeholder process, in cases where ERCOT is acting on a PUC directive, no clear mechanism exists for them to provide input on PUC's initial decision. This input could provide valuable information to PUC about practical or logistical considerations of the decision. Additionally, PUC's directives are not always clear to ERCOT. For example, when the commission directed ERCOT to implement a statutory requirement for a firm fuel product, it had to clarify its intent at an open meeting because the commission had not previously provided a clear final order to ERCOT.[23] The table on the following page describes several other examples of the various informal ways PUC has instructed ERCOT.[24] In light of the considerable changes PUC is currently undertaking and potential cost impacts to the industry, the process needs to be clearly communicated so market participants know when and how they can provide input and what PUC expects of them.

- **Incomplete authority over ERCOT decisions.** As part of the reforms following Winter Storm Uri, the Legislature required PUC to review and approve ERCOT protocols before they can take effect.[25] However, statute does not explicitly authorize the commission to reject or remand the proposed protocols, which would allow PUC to more effectively perform its intended oversight role and ensure ERCOT's actions align with PUC

  Statute does not allow PUC to reject or remand ERCOT protocols.

expectations and priorities.[26] By contrast, for other statutory responsibilities, statute clearly authorizes PUC to reject or modify the plan, proposal, or other item, including ERCOT's budget.[27]

Informal PUC Directives to ERCOT

Method	Directive	Description
Verbal directive	Operate the grid conservatively	In the immediate aftermath of Winter Storm Uri, in late spring and early summer 2021, PUC and ERCOT begin looking at options for operating the grid more "conservatively" to increase reliability. PUC provides no formal, documented direction to ERCOT in the way of considerations, timeline for these operations, or other expectations.
Verbal directive and memo	Adjust the Operating Reserve Demand Curve (ORDC), impacting wholesale pricing when energy reserves are low	Following a workshop four months earlier, the PUC chair filed a memo the morning of January 17, 2019, just before the open meeting, outlining her recommendation to adjust an ORDC calculation. The commissioners discussed the change for a few minutes, ultimately deciding their verbal directive and the memo were sufficient to initiate the change at ERCOT.
Verbal directive, memo, and vote	Temporarily waive an ERCOT protocol that protects the confidentiality of certain outage information	The PUC chair filed a memo on June 23, 2021, a day before the open meeting, outlining his recommendation to increase information around generation outages. The commission invited one stakeholder and ERCOT to comment on this agenda item during the open meeting before unanimously voting to adopt a directive that largely aligned with the recommendation of the memo.

- **Unclear appeal process.** PUC has not updated its rules to account for the Legislature's decision to require PUC to approve ERCOT protocols, leaving market participants unsure of their rights.[28] Before the change, PUC rule allowed market participants to appeal any ERCOT decision to the commission, but under the new process, PUC now approves all ERCOT protocols, making the appeal process largely unnecessary. Although market participants have only appealed a protocol once in the last four years, PUC should provide more clarity about the process moving forward.

The ERCOT board should have an opportunity to discuss sensitive matters without PUC.

- **Intrusive executive session attendance.** As an ex-officio member of the ERCOT board, the PUC chair is statutorily authorized to attend ERCOT executive sessions and in practice, other commissioners attend as well.[29] However, the ERCOT board should have an opportunity to discuss certain confidential matters without the presence of its regulator. For example, on occasion the board may need to consult with its legal counsel on highly sensitive matters for which it has not yet determined a position. PUC can adequately fulfill its oversight role and ensure ERCOT is carrying out its responsibilities without attending every executive session as the commission retains final approval for ERCOT's budget, protocols, and most board decisions.[30]

- **Undefined commissioner roles and responsibilities.** Given the uniqueness of PUC's new, five full-time member structure, the commission could benefit from formalized policies to promote transparent decision making, ensure clear lines of responsibility, and enhance communication among commissioners.[31] For example, commission-approved governance roles and responsibilities could clarify the role of the chair compared to other members, establish parameters under which individual commissioners can pursue action on a new issue, and formalize the process for submitting comments to federal agencies. Additionally, although various agency rules describe the commission's procedural responsibilities, PUC has not developed a policy separating the policymaking functions of the commissioners from day-to-day administrative responsibilities of PUC staff, as required by statute.[32] Given the commissioners' full-time status, such a policy is vital to avoiding blurred lines of responsibility between the commission and staff, and confusion about who is in charge of operations, which can undermine an agency's effectiveness. The agency has made strides to facilitate communication among commissioners and between commissioners and agency staff, including establishing a new position to manage these relationships. However, formalized policies could help the commission more cohesively work together as a team to execute a shared policy vision and ensure the agency is operating effectively.

Formalized policies could help the commission more cohesively work together.

Sunset Staff Recommendations

Change in Appropriation

1.1 The House Appropriations and Senate Finance committees should consider appropriating PUC its exceptional item requests for funding a data analytics team and additional engineering expertise.

This recommendation would express the will of the Sunset Commission that the Legislature consider appropriating additional funding to PUC to enhance its capabilities related to analyzing electric market and related data and information. In its 2024-25 Legislative Appropriations Request, PUC submitted exceptional item requests for four new employees and $955,000 annually to establish a data analysis team within its Market Analysis Division, and approximately $1.1 million annually for engineering expertise and technical support it anticipates needing on a long-term basis.

Having the ability to conduct its own independent analysis would help PUC identify specific issues facing the electric industry from the state perspective. PUC could then develop data-driven solutions, update its rules or identify needed legislation, and publish or disseminate relevant findings to better fulfill its mission of protecting customers, fostering competition, and promoting high quality infrastructure. Although focused on the electric industry, PUC could consider expanding this team's expertise in the future to help analyze data related to its water and telecommunications regulations.

Change in Statute

1.2 Authorize PUC to issue directives to ERCOT outside formal rulemaking and contested cases and authorize stakeholders to formally provide input on these directives.

Recognizing the more dynamic nature of the electric industry, statute would clearly authorize PUC to use methods other than contested cases and rulemakings to instruct and provide direction to ERCOT.

Statute would require PUC to identify, by rule, what types of issues are subject to verbal directives, memos, and orders, in addition to contested cases and rulemakings, to improve the consistency and clarity of the commission's decision-making process. As part of these rules, PUC would:

- Specify a directive to ERCOT must be included as an item on a commission meeting agenda and stakeholders have the opportunity to comment on the agenda item, in accordance with Recommendation 2.2.
- Provide timelines for the release of any relevant discussion materials, like memos, so market participants and the public can better understand commission proposals before providing comments.
- Establish the conditions under which a commission vote is required when issuing directives to ERCOT.

In addition to PUC's existing ability to conduct emergency rulemaking, as authorized under the Administrative Procedure Act, this recommendation would authorize PUC to direct ERCOT outside of these requirements in emergency and other urgent situations to protect health, safety, and ERCOT grid reliability. PUC would define, by rule, what constitutes an urgent or emergency situation and the process by which it would direct ERCOT in such situations.

PUC should also update its existing rules to eliminate the formal appeal process for ERCOT protocols, which is no longer appropriate or necessary since protocols must now be approved by the commission. For any PUC directive that goes through ERCOT's stakeholder process and then to the commission for approval, market participants would have the opportunity to provide input to ERCOT through the stakeholder process and then to PUC through the normal comment period at the open meeting. This recommendation would not affect the formal appeal process for items unrelated to protocols.

This recommendation would promote a more transparent and inclusive decision-making process as well as provide more certainty to the industry about the process and how they can participate.

1.3 Clarify PUC's authority over ERCOT protocols to include the ability to reject or remand them.

This recommendation would clarify the commission's existing authority over ERCOT protocols by explicitly authorizing the commission to not only review and approve proposed protocols, but also reject or remand them. Although statute would not specifically authorize PUC to modify a protocol, the recommendation would authorize PUC to provide suggested modifications as part of a remand back to the ERCOT board.

1.4 Authorize ERCOT to restrict commissioners' presence at executive sessions.

This recommendation would authorize ERCOT to develop a policy establishing circumstances under which the PUC chair and any other commissioners could be excluded from executive session discussions. ERCOT's policy should be approved by its board but would not be subject to PUC approval. As an ex-officio member, the PUC chair would still participate in all regular ERCOT board meetings and any executive sessions that do not fall under the policy. Excluding all commissioners from certain executive sessions would give the ERCOT board an opportunity to review sensitive matters without PUC influence but would not inhibit the commission's ability to adequately oversee ERCOT.

1.5 Consolidate three electric-related reporting requirements.

This recommendation would work in conjunction with Recommendation 5.3 to provide the Legislature a more complete picture of the electric grid and industry. Specifically, this recommendation would consolidate

three statutorily required reports — the *Long Term System Assessment Report*, *Report on Constraints and Needs*, and *Grid Reliability Assessment* — into a new *Electric Industry Report*. This report would also clearly outline basic information about the electric grid and market in Texas, such as generation capacity, customer demand, and transmission capacity currently installed on the grid and expected in the future. This recommendation would require ERCOT, in coordination with PUC, to submit the consolidated report to the Legislature by January 15 of odd-numbered years to provide the Legislature needed insight on the electric industry in advance of the legislative session. As part of this recommendation, PUC and ERCOT should work together to ensure the content meets the statutory intent in a nontechnical and easy-to-understand manner for legislators and the general public with little knowledge of the industry.

PUC's *Biennial Agency Report*, as amended in accordance with Recommendation 5.3, would continue to report on the scope of competition in the electric markets and provide recommendations for modifications and improvements to the agency's statutory authority. The newly consolidated electric focused report would provide a more granular level of information specific to the electric industry that would allow the Legislature to consider any significant policy changes needed.

As a management action, ERCOT should review its other, non-statutory reporting requirements to ensure they continue to be needed, have a clearly defined purpose, and meet the needs of market participants, PUC, and any other applicable stakeholders. PUC and ERCOT should also update any rules or protocols related to the consolidation of these reports.

Management Action

1.6 Direct PUC to develop a state reliability definition.

This recommendation would direct PUC to define a state reliability standard or goal for the electric industry. To implement this recommendation, PUC should identify far-reaching consequences of any proposed solutions and ensure robust participation by market participants and the public in deciding what the reliability definition means for the electric industry in Texas. PUC should also ensure compliance with federal standards when developing the definition.

1.7 Direct ERCOT to re-evaluate its performance measures, with input from PUC.

This recommendation would direct ERCOT to develop performance measures that provide PUC more insight into how well it is meeting its statutorily required responsibilities. PUC should determine what data and information it needs to help the commission oversee ERCOT and ensure ERCOT's updated measures reflect that information.

1.8 Direct PUC, in coordination with ERCOT, to approve assumptions used in electric industry reports.

This recommendation would direct PUC to approve key assumptions ERCOT uses in its statutorily required and other reports, such as determining the conditions involved in a worst-case scenario, to ensure the assumptions support each report's intent. While ERCOT continues to be the expert for these reports, PUC is best positioned over the electric industry to evaluate and adjust the assumptions as needed to meet each report's objective.

1.9 Direct the commission to develop policies regarding separating commissioner roles and responsibilities.

To promote transparent decision making and ensure clear lines of responsibility among commissioners and between the commission and staff, this recommendation would direct the commission to develop two

policies. First, PUC should adopt a policy to clarify the roles and responsibilities among commissioners. At a minimum, the policy should:

- Delineate the powers and duties of the chair.
- Indicate how the commission, as a whole, will establish and track priorities.
- Establish a process for information sharing among commissioners, including how commissioners request information or assistance from staff.
- Establish a process to submit formal comments to federal agencies.

Second, this recommendation would direct PUC to adopt a policy to clearly separate commission policy functions from staff's day-to-day operations as already required by statute.

Fiscal Implication

If the Legislature were to appropriate PUC its exceptional item requests, Recommendation 1.1 would result in an annual cost to general revenue of approximately $2.1 million. Given the agency's resource constraints, additional funding may not cover the costs associated with implementing this or other recommendations. However, the exact fiscal impact cannot be estimated at this time.

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1 All citations to Texas statutes are as they appear on http://www.statutes.legis.texas.gov/. Section 39.151, Texas Utilities Code.

2 HB 1510, 87th Texas Legislature, Regular Session, 2021; SB 2, 87th Texas Legislature, Regular Session, 2021; SB 3, Acts of the 87th Texas Legislature, Regular Session, 2021; SB 2154, 87th Texas Legislature, Regular Session, 2021.

3 Public Utility Commission of Texas (PUC), *Legislative Appropriations Request for Fiscal Years 2024 and 2025*, 2022, p. 1, accessed online October 13, 2022, https://www.puc.texas.gov/agency/resources/reports/approp/legappreq24-25.pdf.

4 PUC, *Approval of Blueprint for Wholesale Electric Market Design and Directives to ERCOT*, Project Number 52373 Item Number 336 (January 13, 2022) (final order), accessed November 3, 2022, https://interchange.puc.texas.gov/search/documents/?controlNumber=52373&itemNumber=336.

5 University of Texas at San Antonio, *Updates on Texas' Demographic Trends and the On-going Research at Texas Demographic Center*, March 7, 2021, pp. 2 and 4, accessed online October 24, 2022, https://demographics.texas.gov/Resources/Presentations/OSD/2022/2022_03_07_CommissiononCommunityCollegeFinanceWorkingGroup.pdf; United States Census Bureau, "QuickFacts - Texas," accessed online October 24, 2022, https://www.census.gov/quickfacts/TX; U.S. Census Bureau, "New Vintage 2021 Population Estimates Available for the Nation, States, and Puerto Rico," December 21, 2021, accessed online October 24, 2022, https://www.census.gov/newsroom/press-releases/2021/2021-population-estimates.html; Electric Reliability Council of Texas (ERCOT), *Summer 2022 Operational and Market Review*, October 18, 2022, p. 3, accessed online November 10, 2022, https://www.ercot.com/files/docs/2022/10/11/6%20Summer%202022%20Operational%20and%20Market%20Review.pdf; University of Texas at Austin Energy Institute, *The Timeline and Events of the February 2021 Texas Electric Grid Blackouts*, July 2021, pp. 28-29, accessed online November 3, 2022, https://www.puc.texas.gov/agency/resources/reports/utaustin_(2021)_eventsfebruary2021texasblackout_(002)final_07_12_21.pdf; ERCOT, *Texas Nodal Market Guide version 3.0*, December 2010, pp. 4-5, accessed online November 3, 2022, https://www.ercot.com/files/docs/2010/12/10/ercot_nodal_market_guide_v3.0.doc; Olivera Jankovska and Julie A. Cohn, Texas "CREZ Lines: How Stakeholders Shape Major Energy Infrastructure Projects", Rice University's Baker Institute for Public Policy, November 17, 2020, p. 4, accessed online October 24, 2022, https://www.bakerinstitute.org/research/texas-crez-lines-how-stakeholders-shape-major-energy-infrastructure-projects; PUC, *Self-Evaluation Report*, September 2021, p.66, accessed online October 24, 2022, https://www.sunset.texas.gov/public/uploads/files/reports/PUC%20SER_9-01-21.pdf; ERCOT, *Self-Evaluation Report*, September 2021, p. 24, accessed online https://www.sunset.texas.gov/public/uploads/files/reports/ERCOT%20SER_9-01-21.pdf; ERCOT, *Report on Existing and Potential Electric System Constraints and Needs*, December 2021, p. 8, accessed online October 10, 2022, https://www.ercot.com/files/docs/2021/12/23/2021_Report_Existing_Potential_Electric_System_Constraints_Needs.pdf; Potomac Economics, *2021 State of the Market Report for the ERCOT Electricity Markets*, May 2022, p. 32, accessed online October 22, 2022, https://www.potomaceconomics.com/wp-content/uploads/2022/05/2021-State-of-the-Market-Report.pdf; ERCOT, *Capacity Changes by Fuel Type Chart September 2022*, accessed online October 5, 2022, https://www.ercot.com/files/docs/2022/10/05/Capacity%20Changes%20by%20Fuel%20Type%20Charts_September_2022.xlsx; David Green and Siddhartha Kazai, "Cryptocurrency in Texas", August 2022, FiscalNotes, accessed online October 10, 2021, https://comptroller.texas.gov/economy/fiscal-notes/2022/aug/crypto-tx.php; ERCOT, *Fact Sheet*, ERCOT, October 2022, accessed online August 3, 2022, https://www.ercot.com/files/docs/2022/02/08/ERCOT_Fact_Sheet.pdf (1 MW of electricity can power about 200 Texas homes during periods of peak demand).

[6] PUC, *Legislative Appropriations Request for Fiscal Years 2024 and 2025*, August 5, 2022, pp. 5, 66, and 74 (exception item numbers 4 and 7), accessed online October 13, 2022, https://www.puc.texas.gov/agency/resources/reports/approp/legappreq24-25.pdf.

[7] National Association of Regulatory Utility Commissioners, *Resource Adequacy Primer for State Regulators*, July 2021, pp. 8,9, accessed online November 11, 2022, https://pubs.naruc.org/pub/752088A2-1866-DAAC-99FB-6EB5FEA73042.

[8] 16 U.S. Code Sections 824o(c)(1) and 824o(i)(3).

[9] State Energy Plan Advisory Committee, *Report to the 87th Legislature*, September 1, 2022.

[10] PUC, *Open Meeting of November 10, 2022*, Control Number 52373 Item Number 382 (November 10, 2022) (Memorandum), accessed online November 11, 2022, https://interchange.puc.texas.gov/search/documents/?controlNumber=52373&itemNumber=382.

[11] Section 39.151(d-3), Texas Utilities Code.

[12] ERCOT, *ERCOT Key Performance Indicators*, December 9-10, 2021, accessed online October 23, 2022, https://www.ercot.com/files/docs/2021/12/02/13_2022_ERCOT_Key_Performance_Indicators_(KPIs).pdf.

[13] Ibid.

[14] ERCOT, *ERCOT's 2021 Annual Report*, April 29, 2022, accessed online November 11, 2022, https://interchange.puc.texas.gov/Documents/52933_12_1205009.PDF.

[15] Section 39.904(k), Texas Utilities Code.

[16] ERCOT, *2020 Long-Term System Assessment*, December 2020, accessed online November 3, 2022, https://www.ercot.com/files/docs/2020/12/23/2020_LTSA_Report.zip.

[17] Section 39.904(k), Texas Utilities Code.

[18] Section 39.155(b), Texas Utilities Code.

[19] 16 Texas Administrative Code, Part 2, Chapter 25, Subchapter O, Division 2, Section 25.362(i)(2)(H) (2014) (Public Utility Commission of Texas, *Electric Reliability Council of Texas (ERCOT) Governance*); 16 T.A.C., Part 2, Chapter 25, Subchapter S, Section 25.505 (2022) (PUC, *Resource Adequacy Reporting Requirements in the Electric Reliability Council of Texas Power Region*); ERCOT Nodal Protocols Section 3.2.

[20] PUC, *Memo filed May 25, 2022*, Control Number 52373 Item Number 372 (May 25, 2022) (Memorandum), accessed online November 11, 2022, https://interchange.puc.texas.gov/Documents/52373_372_1210865.PDF.

[21] Ibid.

[22] Sections 39.003 and 39.151(d), Texas Utilities Code.

[23] PUC, *Open Meeting, May 12, 2022*, archival video, time stamp 1:38:30, accessed online November 11, 2022, https://texasadmin.com/tx/puct/open_meeting/20220512/.

[24] PUC, *Open Meeting of January 17, 2019*, Control Number 48551 Item Number 57 (January 17, 2019) (Memorandum), accessed October 5, 2022, https://interchange.puc.texas.gov/search/documents/?controlNumber=48551&itemNumber=57; PUC, *Memo filed for June 24, 2021, Open Meeting, Agenda Item No. 28*, Control Number 52266 Item Number 2 (June 23, 2021) (Memorandum), accessed October 5, 2022, https://interchange.puc.texas.gov/search/documents/?controlNumber=52266&itemNumber=2.

[25] Similar to an agency's rules, ERCOT promulgates "protocols" to describe the corporation's policies, guidelines, procedures, standards, and criteria. While statute uses both "rules" and "protocols," this report uses the more common term "protocols."

[26] Section 39.151 (d), Texas Utilities Code.

[27] Sections 39.151(d-1), 39.151(d-2), 39.402(c), 39.452(b), and 39.452(h), Texas Utilities Code.

[28] SB 2, Acts of the 87th Texas Legislature, Regular Session, 2021; 16 T.A.C., Part 2, Chapter 22, Subchapter M, Section 22.251 (2003) (PUC, *Review of Electric Reliability Council of Texas (ERCOT) Conduct*).

[29] Section 39.151(g-1)(1), Texas Utilities Code.

[30] Sections 39.151(d) and 39.151(g-1), Texas Utilities Code.

[31] SB 2154, Acts of the 87th Texas Legislature, Regular Session, 2021.

[32] Section 12.102, Texas Utilities Code.

Issue 2

To Restore Trust, PUC Needs to Further Improve Its Public Communication Efforts.

Background

The Public Utility Commission of Texas (PUC) oversees the state's electric, water and wastewater, and telecommunication utilities, licenses and registers entities to provide service in Texas, enforces the agency's statutes and rules, and offers customer assistance in resolving consumer complaints. In the last decade, PUC's responsibilities related to utility regulation expanded when the Legislature transferred the regulation of water and wastewater utility rates and services from the Texas Commission on Environmental Quality to PUC in 2013. PUC also oversees the Electric Reliability Council of Texas (ERCOT), the nonprofit corporation that manages the electric grid for the majority of the state.

Following Winter Storm Uri in 2021, the Legislature overhauled the governing structures of PUC and ERCOT and made several statutory changes to improve the state's ability to respond to weather emergencies. Appendix E provides additional information about Winter Storm Uri and the Legislature's response.

Findings

As the state's regulator of certain utilities that are vital to Texas' increasing population and growing economy, as well as the agency responsible for protecting and educating consumers of these services, PUC has a duty to communicate well with the public. In 2021, Winter Storm Uri disrupted many of these critical utilities, exposing unacceptable vulnerabilities. During the period surrounding Winter Storm Uri, almost 11 million Texas homes and businesses lost power or water, and more than 200 people died.[1] The storm also revealed significant problems with PUC's communications and ultimately destroyed the state's and public's trust in the agency. Following Winter Storm Uri, over half of Texans surveyed by the University of Houston reported they disapproved or strongly disapproved of PUC's performance, and PUC's 2022 biennial customer service survey found 70 percent of respondents reported they were dissatisfied or very dissatisfied with their experience with the agency.[2] Additionally, during the period surrounding Winter Storm Uri, ERCOT and PUC received significant media coverage about their insufficient and confusing communications regarding the condition of the electric grid, problems that continued through the summer.[3]

Despite improvements, problems with PUC's communications persist.

PUC has made improvements to its public communications, including establishing an Office of Public Engagement in August 2022, hiring two additional communications staff, starting a website redesign, and coordinating more regularly with ERCOT on grid-related communications. However, Sunset staff received multiple comments from the public throughout the review that indicated problems with PUC's communications persist, including confusion about PUC's role and dissatisfaction with the ability to provide meaningful stakeholder input. The agency is in the midst of a pivotal transition, facing

several new challenges that require effective public communications and better coordination with ERCOT, and while rebuilding the public's trust is going to take time, more work is needed.

PUC's complicated jurisdiction necessitates a more robust, proactive approach to public communications to avoid confusion and ensure the public has important information it needs.

- **Confusing jurisdiction.** PUC's jurisdiction across all industries it regulates is inherently complex and, as described in the accompanying textbox, often overlaps with federal, state, and, local entities, resulting in confusion about the agency's role and functions. PUC also often relies on utilities, retail electric providers, and telecommunications companies to be the first line of communication with the public and to resolve consumer complaints that involve them. Given these complexities, PUC must clearly communicate its role to the public because consumers need to understand which entity to contact to file a complaint, how to give input on decisions that could affect utility costs, and how to get information and resolution during electric or water outages.

Other Entities Involved in Utility Oversight

Federal

- **Federal Energy Regulatory Commission:** Regulates the interstate transmission of electricity, natural gas, and oil.
- **North American Electric Reliability Corporation:** Ensures the reliability of the bulk power system by developing and enforcing reliability standards.
- **U.S. Environmental Protection Agency:** Enforces federal standards for water health and safety and air emissions from power plants.
- **Federal Communications Commission:** Regulates long distance telephone service, wireless and cell service, and cable television.

State

- **ERCOT:** Operates the state's electric grid and facilitates electric markets.
- **Office of Public Utility Counsel:** Represents the interests of residential and small commercial consumers, as a class, in utility proceedings.
- **Texas Commission on Environmental Quality:** Regulates the health and safety of water and wastewater systems and air emissions from power plants.
- **Comptroller of Public Accounts:** Houses the Broadband Development Office with the goal of expanding broadband service in underserved areas.
- **Railroad Commission of Texas:** Regulates natural gas service.

Local

- Individual utilities and other entities provide service to end-use customers. Appendix A provides additional detail about the various types of entities PUC regulates.

During the review, Sunset staff received several comments from the public related to many issues PUC has no jurisdiction over, including broadband service, the state's decision to maintain its own electric grid largely disconnected from the rest of the country, and natural gas utilities, demonstrating continued confusion over the agency's jurisdiction and responsibilities. Further, the number of non-jurisdictional complaints PUC receives indicates ongoing confusion over what the agency has responsibility for and can control. In 2021, PUC received at least 40 complaints related to natural gas that were meant for the Railroad Commission of Texas. The same year, PUC received at least 500 nonjurisdictional water and wastewater complaints, more than a quarter of the total water complaints, indicating consumers may not understand when to contact PUC versus a utility or the Texas Commission on Environmental Quality.

- **Inadequate PUC and ERCOT coordination.** Winter Storm Uri demonstrated how poor coordination and lack of clearly defined roles and responsibilities between PUC and ERCOT created confusion among the public regarding the state's electric system in general, what to do in anticipation of an extreme weather event or other emergency, when to conserve energy, and who to contact during a power outage.

  As ERCOT's overseer, PUC is responsible for ensuring both entities provide clear, consistent, and easily understandable information the public needs. As the independent system operator responsible for the technical operation of the electric grid, ERCOT's primary audience is the market participants that generate, distribute, and sell electricity in the electric markets. Although the general public is not ERCOT's primary audience, ERCOT is responsible for providing expert information to the public about the condition of the electric grid, especially during emergencies. Since Winter Storm Uri, PUC and ERCOT have taken steps to improve their communications and coordination, as summarized in the accompanying textbox.[4] However, PUC and ERCOT have not formally coordinated their approach to public communications on areas of overlap and have not established and documented each entity's specific roles and responsibilities related to media requests, content of social media posts, press releases, and website content related to the electric grid, contributing to public confusion. For instance, while both entities have crisis communications plans, PUC's plan does not discuss coordination with ERCOT. Moreover, a 2021 internal audit of ERCOT's crisis communications procedures identified several deficiencies ERCOT has not yet fully addressed. Since Winter Storm Uri, ERCOT has updated documentation of its roles and responsibilities for meeting its audiences' communications needs, and is in the process of revising its conservation alerts matrix. However, PUC lacks a documented strategy for ensuring future crisis communications are consistent and effective across both entities through all communications channels.

  Communications Improvements

  - Stated commitment to reduce jargon in communications
  - More frequent meetings between PUC and ERCOT staff
  - ERCOT designating a PUC liaison
  - ERCOT implementing certain lessons learned and hosting a statewide listening tour

  Confusion over conservation appeals suggests better coordination is needed.

  More recent experiences also suggest better coordination is still needed. In July 2022, amid record-breaking demand for electricity, ERCOT issued a conservation appeal, which PUC reviewed and echoed.[5] However, the appeal caused confusion as it was unclear what triggered it. ERCOT issues "energy emergency alerts" as required by the federal government when its reserves drop low enough to cause unacceptable risk of outages, and publishes the criteria that trigger those alerts.[6] Conservation "appeals" and "notices," by comparison, have no reserve level trigger, are not defined in ERCOT's communications matrix, and are typically issued to encourage conservation during periods of high energy usage, but not when outages are imminent.[7] Possibly due to confusion over the difference between these

terms, people relied on their own interpretations. Some news outlets reported the possibility of rolling blackouts, contradicting ERCOT's statement in the conservation appeal that system-wide outages were not expected.[8] A small Texas police and fire department also misunderstood the appeal as a call for rolling blackouts, posting to social media that power would be cut to random homes for an hour at a time.[9] Newspapers reported several Texans overreacted to the appeal, including a person setting their thermostat to 80 degrees and showering in the dark, which was unnecessary.[10] The confusion showed a clear need for better coordination between PUC and ERCOT when issuing emergency communications, including guidelines for the difference between an appeal, notice, and alert, and for translating conservation notices into different languages to allow Texans' to quickly read and comply with calls for conservation. While PUC and ERCOT cannot prevent bad media reporting or misinterpretation, they can more clearly define when and how to communicate with the public and provide necessary context and actions the public should take.

PUC and ERCOT need to better distinguish between an appeal, notice, and alert.

PUC's primary methods for interacting with and informing the public are inadequate.

The general public interacts with all state agencies primarily through their website, social media, and commission meetings to get a general understanding of what the agency does, find basic information about the functions the agency performs, and interact with the agency on issues that affect the public. At PUC, problems with these basic methods for interacting with and informing the public contribute to ongoing distrust of the agency, especially as it is moving so quickly to implement changes.

- **Antiquated website with insufficient consumer information.** State law tasks agencies with informing the public and stakeholders about various agency functions and making information available via a public website.[11] As Texans increasingly rely on online platforms to access and interact with their government, these websites have become an important consideration for evaluating an agency's ability to communicate with the public effectively. Ensuring an agency's websites are up-to-date and accurate so members of the public remain informed and have opportunities to participate in their government is critical.

  PUC has started a website redesign project but its website is still difficult to navigate.

  PUC recognizes its website is outdated and has started a redesign project, including compiling an inventory of all the websites the agency maintains, such as Power to Choose. However, this project is in its early stages. PUC has not yet thoroughly reviewed content to remove outdated information and the website is still difficult to navigate, with nonfunctional hyperlinks and information often buried several layers away from the homepage in hard-to-find or duplicate pages. Unsurprisingly, almost 50 percent of respondents to PUC's most recent biennial customer service survey disagreed or strongly disagreed that its website contained clear or accurate information on events, services, and contact information.

Additionally, PUC has not used its website to consistently provide meaningful and easy-to-understand consumer information. In PUC's customer service survey, a plurality of respondents disagreed or strongly disagreed that the agency's materials provided thorough and accurate information.[12] PUC provides some fact sheets on its website to help the general public navigate the complicated world of utilities, but a lot of the information is presented in overly complicated language or does not provide consumers clear information about how the agency's decisions may affect them directly. For example, PUC has a fact sheet explaining the basics of the Texas Universal Service Fund and how a surcharge on people's phone bills supports the fund, but when the commission increased the surcharge in July 2022 following a court decision, the agency did not use the fact sheet or other information on its website to explain there was an increase or how it would affect the average consumer's phone bill.[13] The lack of clear communication left consumers confused about the sudden increase to their phone bills, with some reports that bills increased more than $4 per line per month.[14] Further, the agency's website provides little information about PUC's current Wholesale Electric Market Design, which could have significant cost impacts on the public in the future. Instead, that information generally resides in PUC's primary document repository, the Interchange, which contains a wealth of information but, as explained in the accompanying textbox, is also challenging to navigate.[15] Other information that could help water utility customers is either not available on PUC's website or difficult to find. For example, several links to water utility tenant fact sheets lead to information meant for property owners.

Until recently, PUC's website provided little information about its Market Design effort.

Problematic Interchange

The Interchange is PUC's document repository on its website that houses the agency's projects, contested case proceedings, petitions for rulemaking, and other proceedings. Though PUC did not design the Interchange as a public resource, it is the main way for the public to provide comments and find information on agency projects. Although PUC provides instructions for using the Interchange, public advocacy groups noted challenges using the system and Sunset staff even experienced trouble finding documents. To successfully search or submit comments through the Interchange, a person would need to know the correct keyword or unique numerical identifier for the project, which can be hard to find. For example, a keyword search for "market design" yields 18 results but does not pull up all materials on the project or all stakeholder comments. By contrast, searching for "market design" using the unique identifier "52373" yields 380 results, which someone would still have to sift through to find important information. Other information a person may need is simply unsearchable, such as information on all water utilities by class.

- **Limited public comment at open meetings.** Although the commission has a standing agenda item reserved for general public comment at its open meetings, it does not allow individuals to comment on specific agenda items unless invited by the commission. While this practice is not in violation of the Open Meetings Act and Sunset staff did not observe the commission deny individuals the opportunity to comment, restricting the public and stakeholders' ability to directly address the commission — except for appropriate restrictions on comments regarding contested cases

— does not align with best practices for public access and transparency. Allowing sufficient opportunities for public comment is especially important considering the significant changes PUC is undertaking following Winter Storm Uri and the potential financial impact on industry stakeholders and the public.

- **Lack of available meeting minutes.** Unlike many state agencies, PUC does not provide minutes for commission meetings on its website, creating unnecessary challenges in the public's ability to follow and provide input on important agency decisions. Meeting minutes provide a record of what happened at the meeting, including commission decisions on agenda items. While the agency technically complies with the Open Meetings Act by providing a recording of its open meetings and making transcripts available for a fee, the lack of minutes adds a layer of difficulty for the public trying to understand PUC's actions.[16]

PUC needs to better strategically plan for and evaluate its communications agencywide.

As evidenced by the communication difficulties discussed previously, PUC could benefit from implementing formal, agency-wide strategic communications planning and the ability to better measure its effectiveness. Developing comprehensive goals and objectives for agency-wide communications would ensure communications are coordinated, cohesive, and effective. Additionally, having clearly defined metrics for evaluating the success of communications across all agency divisions would promote accountability by ensuring the agency uses its limited resources on meaningful communications that align with agency priorities.[17] While PUC currently uses some tools to evaluate the effectiveness of its communications, such as measuring the top 10 viewed website pages and tracking the number of likes on social media posts, these metrics should be tied to PUC's stated communication goals and objectives. PUC would also benefit from evaluating more meaningful measures of success, such as whether the tone of press coverage is positive or negative, how often fact sheets are updated to answer frequently asked questions, or the percentage of news coverage quoting PUC spokespersons.[18] Strategically planning for and measuring its communications strategies would allow PUC to determine whether it is meeting its intended goals and objectives, as well as the needs of the public, and to adjust its communications strategies accordingly.

Strategic planning would ensure communications are coordinated and effective.

Sunset Staff Recommendations

Change in Statute

2.1 Require PUC to develop and regularly update a strategic communications plan.

To build on and provide PUC direction in its current efforts to improve communications, this recommendation would require PUC to develop an agency-wide strategic communications plan and update it at least biennially. PUC should use the plan to develop effective means of communicating with its different audiences based on their needs and expectations as well as goals, and use robust metrics to

assess its efforts and respond to changing dynamics and needs. This recommendation would help ensure the agency uses its limited resources effectively, provide guidance during periods of staff turnover, and enhance transparency of agency operations.

In implementing this recommendation, PUC should consider documenting the following components in the strategic communications plan:

- Identification of PUC's audiences for communications, including the general public and market participants, and the needs of each.
- Explanation of PUC's roles and responsibilities, including how the agency's role in public communications differs from ERCOT and other entities.
- Development of key messages and identification of the tools staff will use to communicate them.
- Guidelines for social media, including identifying when coordination with ERCOT and other entities is required, considerations for message consistency across platforms, and a comment response policy.
- Development of meaningful goals, objectives, and metrics to gauge the effectiveness of PUC's communications efforts.
- A strategy for resolving problems identified in the agency's biennial customer service survey.

2.2 Require PUC to allow public testimony at commission meetings on agenda items.

By requiring PUC to allow members of the public to comment on any agenda item during commission meetings, at a time determined by the commission, this recommendation would improve the ability of the public to meaningfully participate in matters before the commission. This recommendation would not affect the commission's existing ability to limit comments on contested cases or limit the length of testimony generally.

Management Action

2.3 Direct PUC and ERCOT to create a guidance document to better coordinate public communications.

To improve the clarity and usefulness of PUC's and ERCOT's public communications, the two entities should coordinate and document their roles and responsibilities related to public communications, including, at a minimum, press releases, social media, and website content. This documentation could help avoid confusing communications with the public and media on areas of overlap between PUC and ERCOT. In implementing this recommendation, PUC should consider establishing best practices for both PUC and ERCOT to use when communicating with the public during an emergency, including reducing jargon, providing information in different languages, and communicating consistently across different channels of communications.

2.3 Direct PUC to provide up-to-date, easily accessible information as part of its current website redesign efforts.

PUC should develop a process to routinely monitor, evaluate, and update its website and ensure the information posted is current, clear, accurate, and easily accessible, including on the Interchange. As part of this update process, PUC should ensure information on Market Design and recent rulemaking projects are easily available, and consider using best practices in search functionality to improve the usability of

the Interchange. PUC also should consider consolidating related information so it is easier for the public to find and removing or updating broken links. This recommendation would help ensure the public and stakeholders accessing PUC's website have the most up-to-date information and understand how to best engage with the agency. Updating the website also would help reduce confusion for media using PUC's website as a resource.

2.4 Direct PUC to prepare minutes of commission meetings and provide them on its website.

Under this recommendation, PUC should prepare, and post on its website, minutes of commission meetings, including actions taken on each agenda item. Providing meeting minutes would improve the ability of the public to participate meaningfully at PUC.

Fiscal Implication

Given the agency's resource constraints, PUC will likely incur costs associated with implementing these recommendations. However, the exact fiscal impact cannot be estimated at this time. In its 2024-25 Legislative Appropriations Request, PUC's exceptional item requests include $255,000 to support its new Office of Public Engagement and $512,000 per fiscal year for several information technology needs, including redesigning its external-facing websites and replacing legacy applications.

[1] Texas Health and Human Services, *February 2021 Winter Storm-Related Deaths - Texas*, December 31, 2021, accessed online October 11, 2022, https://dshs.texas.gov/news/updates/SMOC_FebWinterStorm_MortalitySurvReport_12-30-21.pdf.

[2] University of Houston Hobby School of Public Affairs, *The Winter Storm of 2021*, accessed online August 9, 2021, https://uh.edu/hobby/winter2021/storm.pdf.

[3] Taylor Goldenstein, "Remember ERCOT's confusing Winter Storm tweets? They were reviewed by regulators, word for word." *Houston Chronicle*, April 8, 2021, accessed online November 11, 2021, https://www.houstonchronicle.com/politics/texas/article/ERCOT-confusing-winter-storm-tweets-not-a-mistake-16086898.php; "Editorial: Lack of communication made matters worse during storm," *Waco Tribune-Herald*, February 27, 2021, accessed online November 11, 2022, https://wacotrib.com/opinion/editorial/editorial-lack-of-communication-made-matters-worse-during-storm/article_835a052e-786b-11eb-8bd1-47f6091b01dc.html.

[4] Shelby Webb, "New ERCOT CEO's first priority is restoring trust. Fixing the grid is more complicated." *Houston Chronicle*, October 3, 2022; Elizabeth Souder, "The new ERCOT CEO wants to rebuild your trust in the Texas electricity grid," *Dallas Morning News*, May 5, 2021; Kelso King, "PUCT and ERCOT address future communications plans," *Grid Monitor*, June 3, 2021, accessed online October 20, 2022, https://dash2.gridmonitor.com/news/articles/?id=5704.

[5] Electric Reliability Council of Texas (ERCOT), *ERCOT Issues Conservation Appeal to Texans and Businesses*, July 13, 2022, accessed online October 21, 2022, https://www.ercot.com/news/release?id=8926f1a4-4e8f-9dfb-e393-7d6609eda6a3; ERCOT, "REVISED: ERCOT Issues Conservation Appeal to Texans and Businesses," July 13, 2022, accessed online November 6, 2022, https://www.ercot.com/news/release?id=f91df9ae-7a4d-5148-36b1-d7bd1f0f5bb4.

[6] ERCOT, "ERCOT Energy Emergency Alert (EEA) Communications," January 2022, accessed online November 6, 2022, https://www.ercot.com/files/docs/2022/01/04/Energy_Emergency_Alert_Communications_Matrix.pdf.

[7] Ibid.

[8] Bethany Erickson, "ERCOT Issues Energy Conservation Alert Through 8 p.m. Here's What You Need to Know," *D Magazine*, July 11, 2022, accessed online November 5, 2022, https://www.dmagazine.com/frontburner/2022/07/ercot-is-warning-energy-demand-may-exceed-reserves-heres-what-you-need-to-know/; Christian Flores, "Despite guarantees power will stay on, report reveals possibility of rolling blackouts," *CBS Austin*, July 11, 2022, accessed online August 9, 2022, https://cbsaustin.com/newsletter-daily/despite-guarantees-power-will-stay-on-report-reveals-possibility-of-rolling-blackouts.

[9] James Hartley, "Farmersville says warning of blackouts was false alarm, miscommunication with ERCOT," *Fort Worth Star-Telegram*, July 13, 2022, accessed online August 9, 2022, https://www.star-telegram.com/news/local/article263454163.html.

[10] Sneha Dey, Mitchell Ferman, Jaden Edison, and Jayme Lozano, "Still wary of the electric grid's reliability, some Texans complied with ERCOT's requests to conserve power this week," *Texas Tribune*, July 14, 2022, accessed online August 9, 2022, https://www.texastribune.org/2022/07/14/texas-grid-ercot-conservation/.

[11] Multiple Texas statutes require state agencies to make critical information available online. For example, Sections 2001.023 and 2054.132, Texas Government Code direct agencies to post proposed rules and all forms to be used by the public on their websites.

[12] Over 40 percent of those surveyed responded "not applicable."

[13] Public Utility Commission of Texas (PUC), *Utili-Facts: TUSF*, accessed online October 15, 2022, https://www.puc.texas.gov/consumer/facts/factsheets/telefacts/TUSF.PDF.

[14] KPRC Houston, "KPRC 2 Investigates why your cell phone bill might be going up next month," August 10, 2022, accessed online October 13, 2022, https://www.click2houston.com/news/local/2022/08/10/kprc-2-investigates-why-your-cell-phone-bill-might-be-going-up-next-month/.

[15] PUC, *Reliability Reforms - Submitting Public Comment*, accessed online November 11, 2022, https://www.puc.texas.gov/industry/electric/rrmd-comments.pdf.

[16] Section 551.021, Texas Government Code.

[17] Anne Gregory, *Planning and Managing Public Relations Campaigns: A Strategic Approach*, Third Edition, London: Kogan Page Ltd., 2010, p. 160-161; Sarah Durham, *The Nonprofit Communications Engine*, Brooklyn: Big Duck Studio, Inc., 2019, pp. 16-17; Robert L. Dilenschneider, *The AMA Handbook of Public Relations*, United States: American Management Association, 2010, p. 50; Federal Communicators Network, *Communicator's Guide for Federal State, Regional, and Local Communicators*, December 2000, accessed online October 14, 2022, https://govinfo.library.unt.edu/npr/library/papers/bkgrd/communicators.pdf.

[18] Cision, "5 Must-Have KPIs to Measure Your Communications Campaign," March 17, 2021, accessed online November 11, 2022, https://www.cision.com/2021/03/must-have-kpis-to-measure-your-communications-campaign/. Kevin Knutson, "Measuring the Effectiveness of Local Government Communications," City-County Communications & Marketing Association, accessed online November 11, 2022, https://www.3cma.org/2775/Measuring-the-Effectiveness-of-Local-Gov.

Issue 3

PUC Needs Additional Resources and Attention Focused on Its Water and Wastewater Regulation to Avoid Overburdening Utilities and Their Customers.

Background

When the Legislature created the Public Utility Commission of Texas (PUC) in 1975, the agency was given regulatory authority over water and wastewater utilities.[1] In 1985, the Legislature transferred jurisdiction over water and wastewater utilities to the Texas Water Commission, which was later consolidated into the Texas Commission on Environmental Quality (TCEQ).[2]

In 2013, the Legislature transferred the economic regulation of water and wastewater from TCEQ to PUC.[3] As described in the accompanying table, the Legislature transferred regulation over retail and wholesale utility rates, certificates of convenience and necessity (CCN), and other related functions and services to PUC effective September 1, 2014. TCEQ retained authority over environmental and water quality issues of public water and wastewater systems. Both PUC and TCEQ have authority to appoint temporary managers for troubled water utilities and to refer utilities to the Office of the Attorney General for receivership.

PUC and TCEQ Authority Over Water and Wastewater Utilities

PUC	TCEQ
Oversees and regulates the economic aspects of retail and wholesale water and wastewater rates, including temporary rates, emergency increases, and appeals	Oversees and regulates the environmental aspects of water and wastewater systems, including ensuring systems meet federal and state water quality standards, issuing wastewater permits, and registering public water systems
Issues CCNs, which allow a utility to operate within a defined service area, and approves sales, transfers, and mergers of these utilities	Establishes water and wastewater system design criteria, and ensures compliance
Ensures utilities have certain financial, managerial, and technical capabilities	Collects the regulatory assessment fee levied on certain water and wastewater utilities
Provides consumer assistance and receives and investigates complaints regarding certain utilities' water and wastewater rates and services	Provides consumer assistance and receives and investigates complaints regarding systems' water quality and wastewater system and discharge concerns
Joint Authority	
Appoints a temporary manager to a troubled utility or refers the utility for receivership	
May compel utilities to provide adequate service	
May compel emergency interconnections	

As part of the transfer, the Legislature also created three classes of investor-owned water and wastewater utilities based on the number of connections they serve to better tailor regulatory requirements to different sized utilities, which the Legislature further refined in 2019 by creating a fourth class.[4] The table on the following page summarizes the current number of water and wastewater utilities in the state. Even

though statute generally defines a water "utility" very narrowly to refer to an investor-owned water or wastewater utility, this issue uses the term broadly to include any entity that provides water, wastewater, or both services to retail customers.[5]

Number of Water and Wastewater Utilities Statewide by Type

Utility Type	Water Only	Wastewater Only	Water and Wastewater	Total Customers Served
Class A Investor-Owned Utility (10,000+ connections)	1	0	6	182,963
Class B Investor-Owned Utility (2,300-9,999 connections)	5	0	7	43,889
Class C Investor-Owned Utility (500-2,299 connections)	24	0	13	30,645
Class D Investor-Owned Utility (<500 connections)	404	37	56	33,592
Municipally Owned Utility	460	40	490	8,219,784
Water and/or Sewer District	816	36	108	1,560,285
Water Supply Corporation	696	11	51	672,999

PUC's primary jurisdiction is over investor-owned water and wastewater utilities but, as explained in Appendix G, the agency has varying levels of authority over other types of utilities, including water and sewer districts and water supply corporations. In fiscal year 2021, PUC completed 69 water-related rate reviews and 79 CCN applications.

To fund PUC's water and wastewater regulatory activities, the Legislature appropriates the agency funds from general revenue and the General Revenue Dedicated Water Resource Management Account.[6] In fiscal year 2021, PUC received $2.8 million from the Water Resource Management Account. A portion of the account comes from a regulatory assessment fee statute imposes on certain water and wastewater utilities to support state agencies with duties related to water and wastewater utility regulation.[7] The account also includes other fees TCEQ collects, such as application fees, public health service fees, and waste treatment inspection fees. Utilities collect the regulatory assessment fee from their retail customers and TCEQ collects it from the utilities.[8] The *Regulatory Assessment Fee* table summarizes the fee and total revenue TCEQ collected from each utility type in calendar year 2021. Unlike electric utilities and other entities PUC regulates, water and wastewater utilities do not pay the gross receipts assessment described in the textbox on the following page.[9]

Regulatory Assessment Fee

Type of Water and Wastewater Utility	Assessment Fee	Revenue CY 2021
Investor-Owned Utility	1%	$2,915,117
Water Supply Corporation	0.5%	$2,501,730
District	0.5%	$6,675,536
Affected County	1%	$85,425
Municipally Owned Utility	N/A	$0
Other Counties	N/A	$0
Total		**$12,177,808**

Gross Receipts Assessment

Statute imposes a gross receipts assessment on each public utility, retail electric provider, and electric cooperative under PUC jurisdiction that serves the ultimate customer, including each interexchange telecommunications carrier. Statute sets the assessment at a rate of one-sixth of 1 percent of gross receipts from the sale of electric and telecommunications services to Texas customers. This assessment, which the Comptroller of Public Accounts collects and deposits into the General Revenue Fund, totaled $55.4 million in fiscal year 2021.

Findings

Through its recent reviews of TCEQ, the Texas Water Development Board, and the Texas State Soil and Water Conservation Board, Sunset staff has observed how water oversight, regulation, and funding present numerous challenges for the state. Water and wastewater infrastructure is aging, system needs vastly outweigh available state and federal funding, and the burden of maintaining the systems often falls to small, unsophisticated water utilities and other entities. Sunset staff has identified and attempted to address issues with the way these agencies manage their water-related responsibilities but repeatedly found many of these issues relate to more significant policy decisions that do not lend themselves to objective analysis.

Water regulation presents numerous challenges for the state.

Unsurprisingly, the Sunset review of PUC revealed similar challenges, as the agency navigates a regulatory system the Legislature designed to ensure rates, operations, and services are "just and reasonable" to both retail public utilities and their customers.[10] PUC identified a number of changes in its Self-Evaluation Report, which it is statutorily required to submit to Sunset in preparation for the review, that could streamline water and wastewater rate regulation and promote the Legislature's stated preference for consolidation and regionalization.[11] However, Sunset staff found many of these changes would entail numerous sensitive policy considerations not appropriate for a Sunset staff review. Instead, Sunset staff focused its review on the most significant challenge facing PUC — being under-resourced for the critical functions it performs, which has also affected the agency's ability to take the time to step back and ensure its own processes are not creating unnecessary problems for its staff and utilities.

PUC remains the appropriate agency to regulate water and wastewater utility rates and services but lacks the resources to do so efficiently.

As the first Sunset review of PUC since the transfer from TCEQ, Sunset staff planned to evaluate whether the transfer had achieved the anticipated benefits, including standardizing electric and water utility rate regulation for more efficient regulation and improved complaint resolution. However, Sunset staff found a lack of data made determining whether the regulation is better suited at PUC or TCEQ infeasible. As discussed later in this issue, PUC lacks the data necessary to fully analyze and evaluate its performance, such as application processing timelines. However, even if PUC had such information available,

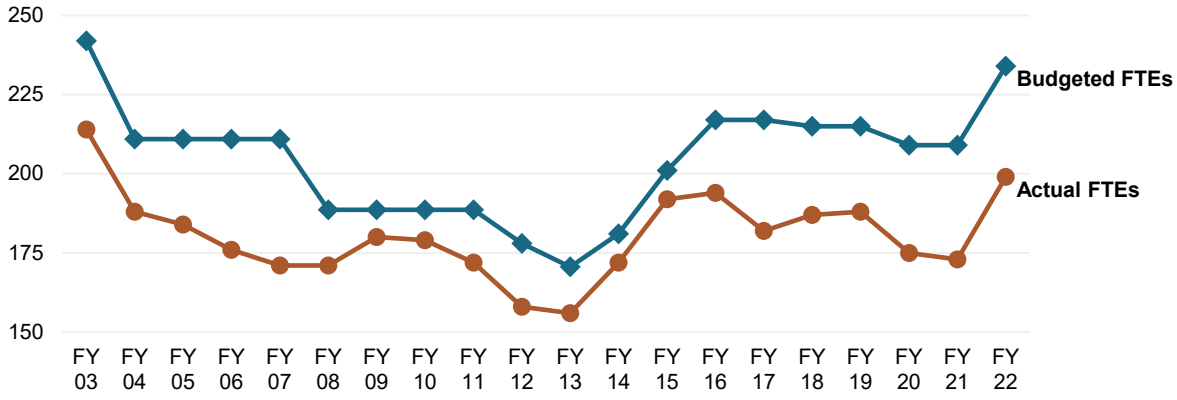
Sunset staff lacked historical data to compare TCEQ's performance to PUC's. The Legislature has also made changes to PUC's ratemaking function since the transfer, making a direct comparison difficult.

Despite these challenges, Sunset staff ultimately concluded another transfer would be unnecessarily disruptive to water and wastewater utilities, TCEQ, and especially PUC, which is working on significant changes to electric regulation following Winter Storm Uri. Further, the Sunset review of TCEQ earlier this year identified problems that will need attention. Transferring rate regulation back to TCEQ would likely distract the agency from making those improvements and from its broader environmental mission, which was one of the initial reasons for the transfer — to keep TCEQ focused on its primary environmental protection mission. The state has also benefitted from PUC's considerable ratemaking expertise as the agency has recommended statutory changes to improve regulation, such as allowing streamlined alternative ratemaking processes, which the Legislature authorized in 2019.[12] Additionally, when reviewing state agencies, Sunset staff often looks at other states' organizational structures and found of the 45 states that regulate water rates, only Connecticut combines economic and environmental regulation of water. Finally, although Sunset staff found PUC needs to improve its data collection and analysis and provide better guidance to water and wastewater utilities, the review did not identify problems significant enough to warrant a transfer back to TCEQ.

The state benefits from PUC's considerable ratemaking expertise.

While PUC remains the appropriate agency to regulate water and wastewater rates and services, it has never been fully resourced to do so efficiently. PUC initially received 20 staff and $1.4 million per fiscal year as part of the transfer, but these resources followed a decade of reduction in staff, as shown in the chart below. Like many agencies, PUC's staff level declined due to state budget cuts and even though the agency's authorized and actual staffing has increased slightly since taking over water and wastewater rate regulation, it still has fewer staff than it did 20 years ago, despite regulating an additional industry.

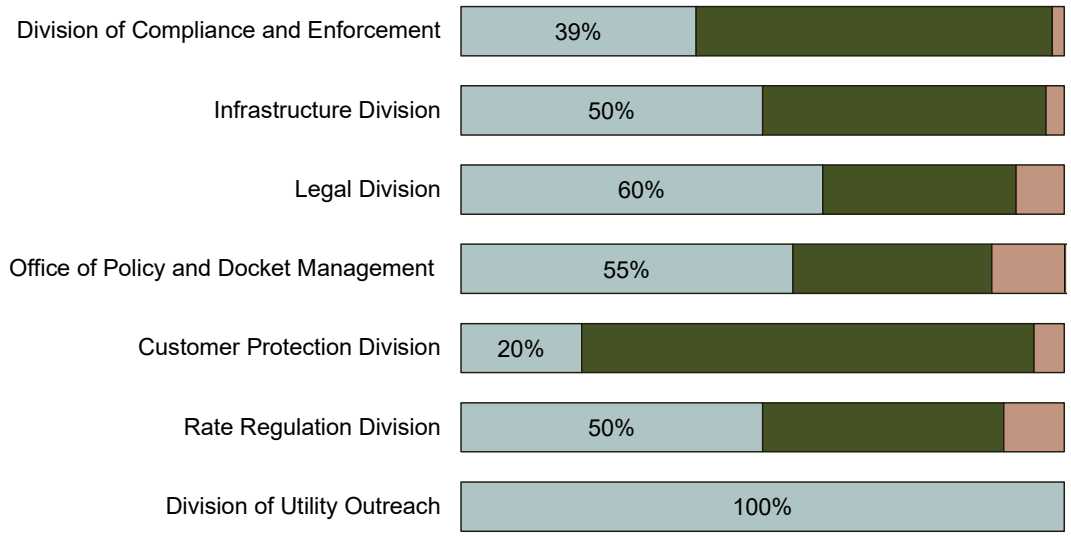
PUC Has Fewer Staff Now Than 20 Years Ago



Although much attention is rightfully focused on PUC's regulation of the electric industry following Winter Storm Uri, its water regulation is just as important, as access to reliable, affordable water is vital to the wellbeing of every Texan. However, PUC's staff and associated funding levels do not cover the cost of regulation, as the agency spends a disproportionate amount of time on water and wastewater regulation compared to its funding. PUC estimates the agency spends approximately 60 percent of its time on average on water and wastewater regulation, as depicted in accompanying chart.[13] PUC has eight full-time equivalent staff dedicated to working exclusively on water and wastewater, but at least 105 spend some time on the regulation. However, in fiscal year 2021, PUC received $2.8 million from the Water Resource Management Account, meaning only about 17 percent of the agency's funding was dedicated to water and wastewater regulation. Recognizing its unmet needs, PUC's exceptional item requests in its 2024-25 Legislative Appropriations Request include approximately $3.5 million for the biennium to help cover the agency's water-related activities.[14]

PUC estimates it spends 60% of its time on water regulation.

Water Regulation Consumes PUC's Time



PUC needs to improve its data management and regulatory processes to maximize its already limited resources and ensure it best serves water and wastewater utilities.

The 2011 Sunset review of PUC highlighted how the agency's established ratemaking and CCN processes would benefit the increasingly larger, more sophisticated water and wastewater utilities. While true, many rural areas of the state are still served by small utilities, which have found PUC's regulatory processes difficult to navigate, and this review identified key areas of concern PUC needs to address to ensure more efficient regulation.

- **Limited data collection and use.** As previously mentioned, PUC lacks comprehensive data Sunset staff could use to evaluate how well the agency

Utilities Struggle with Regulatory Delays

- Statute requires PUC to grant a landowner petition for a streamlined expedited release from a CCN within 60 days of the petition's filing, but in one case PUC failed to grant the petition for 240 days.
- In a wastewater CCN amendment case that lasted 629 days, PUC staff twice did not meet the deadlines established by an internal administrative law judge and failed to request an extension, requiring the utility to write a letter to PUC to get the case moving.
- In an appeal of a special utility district's rate change that lasted 977 days, PUC approved nearly $410,000 in rate case expenses.

is regulating water and wastewater rates and services. Issue 4 discusses how this lack of data is not only a problem with PUC's water regulation but across the agency. Throughout the review, water and wastewater utilities and stakeholders expressed frustration with PUC's lengthy and difficult regulatory processes, as highlighted in the accompanying textbox.[15] While PUC indicated these cases are outliers, the agency does not collect the data to prove these are highly unique situations. Delays can keep utilities from recovering costs for necessary infrastructure upgrades in a timely manner and increase their legal fees, which ultimately harms retail customers since statute and PUC rule authorize utilities to recover reasonable and necessary rate case and other legal expenses from their ratepayers.[16] Undoubtedly, some delays may be attributed to the resource constraints noted above, incomplete applications utilities submit, or other issues outside PUC's control. However, without proper data or analysis, the agency cannot definitively identify whether delays or other challenges are occurring and the reasons for them, or make improvements to better allocate resources. Instead, staff generally rely on institutional memory to identify problems. For example, staff anecdotally report the mapping requirements in a water utility's CCN application that determine the service boundaries present challenges for both staff and the utilities, but PUC has never analyzed that phase of the process to know how long it takes, whether the timeline has changed over time, or if delays occur with certain types or classes of utilities.

- **Insufficient direction and assistance.** Meeting statutory requirements that rates be "just and reasonable" to provide continuous and adequate water and wastewater service often requires significant effort by agency staff, as many small utilities lack the sophistication or resources to provide what PUC considers even the most minimal information. Although PUC has made strides to assist water and wastewater utilities, as described in the textbox on the following page, the agency needs to do more to ensure these utilities, especially small ones, understand and comply with the current rules.[17] Without clear rules and guidance, processes take longer, resulting in additional burdens on PUC staff and increased costs for utilities and their customers.

PUC's water rules need updating.

Unclear rules. In recent months, the commissioners have noted some of the agency's water rules need updating to provide more clarity for utilities. For example, during a June 2022 meeting, one commissioner commented that PUC has not yet addressed in rule whether a reconciliation review of temporary rates should be completed before a sale, transfer, or merger is finalized.[18] Additionally, during a September 2022 meeting, the commission noted its rule regarding petitions for rate reviews needs clarification to align it with PUC's expectations.[19] Although the commission has been appropriately focused on other rule changes in response to legislative

directives following Winter Storm Uri, these types of issues would typically be addressed as part of the agency's standard four-year rule review process. However, as discussed in Issue 5, PUC routinely just readopts the entire rule chapter without making any changes, as it did in 2019 with its first review of water and wastewater rules since the transfer.[20]

Limited guidance materials. PUC recognizes the smallest utilities often lack the resources and capabilities to adequately comply with its regulatory processes, and although it has taken some steps to help these utilities, the agency could do more to provide better guidance on the front end to ensure it gets what it needs early in the process to limit delays. For example, PUC does not provide easy-to-understand materials for utilities to know what to expect during a typical CCN amendment or rate change process. PUC also has not developed a separate, comprehensive rate adjustment application for Class D utilities, which currently must complete the same lengthy application as the larger Class C utilities if not applying for the standard 5 percent rate increase. While PUC regards this application as the bare minimum needed to justify a rate increase, it does not provide easy-to-follow instructions, frequently asked questions, or tips to help small utilities complete the application. Sunset staff continually heard concerns from smaller utilities that the application process is overly complex and burdensome. Additionally, PUC does not provide clear guidance regarding the timing and process for utilities that need to submit applications to both PUC and TCEQ, which can lead to confusion and delays, and can pose an unnecessary risk to utilities trying to finalize a sale, transfer, or merger. While PUC retains a contractor that provides financial planning, managerial, and technical assistance to utilities, including help filing applications, this does not negate the need for PUC to do everything it can to ensure its documents, instructions, and other guidance are clear and comprehensive.

PUC Efforts to Help Water Utilities

2019

- Creates the Division of Utility Outreach (DUO) to provide outreach and education to water and wastewater utilities to help them understand and comply with agency statutes and rules. The division also retains a contractor that provides managerial and technical assistance to utilities. DUO held one in-person training workshop in 2019 on retail rate setting, CCNs, customer complaints, and cybersecurity.

2020

- Establishes FaucetFacts, DUO's dedicated website for communicating with and providing information to water and wastewater utilities. DUO held two virtual training workshops in 2020.
- Implements a simplified process that allows Class D utilities to apply for a flat 5 percent rate increase each year instead of going through the more complex comprehensive rate case process.

PUC must ensure its instructions and guidance are clear and comprehensive.

Inconsistent communication of decisions. As discussed further in Issue 4, PUC does not have a method to clearly and consistently communicate with regulated entities when the commission makes a decision that sets precedent as to how it will interpret the law. Similarly, PUC lacks a mechanism for widely sharing commissioner directives that may lengthen the application process or reflect shifting commission expectations of water and wastewater utilities. For example, in 2019 the commission requested staff ensure future CCN applications contain some specific information they believed was necessary to determine the actual need for the CCN.[21]

While the largest water and wastewater utilities have the resources to keep up with the commission's decisions and direction, the same is not true for small water and wastewater utilities. Although PUC's Division of Utility Outreach periodically meets with trade associations or emails important information about commission decisions to them, as the regulator, PUC should consistently communicate these types of changes to ensure utilities can adequately comply with the agency's expectations.

PUC's and TCEQ's differing interpretations of the appointment terms for temporary managers cause inefficiencies.

As a result of the transfer, both PUC and TCEQ have authority to appoint a temporary manager to operate a water and wastewater utility if the utility is abandoned, has been referred to the Office of the Attorney General for the appointment of a receiver, or is a smaller utility in violation of certain water or wastewater system requirements.[22] The agencies have a memorandum of understanding in which they agree to consult with each other on a case-by-case basis to determine which agency will take the lead and which agency will have a supporting role in each area of joint jurisdiction, including temporary managers.

PUC and TCEQ have different statutory interpretations regarding the length of time a temporary manager may be appointed. TCEQ believes an appointment may only be made by emergency order for up to two 180-day terms, or about 12 months, while PUC interprets statute to allow it to also appoint a temporary manager by a regular order, with no time limit. Since a temporary manager appointment typically lasts between 17 and 24 months, the differing interpretations sometimes result in PUC taking over the appointment from TCEQ after 360 days to ensure the utility's customers continue receiving service, avoiding the need for the utility to be referred to the Office of the Attorney General for receivership, which can last a decade or more. According to PUC, it took over temporary manager appointments from TCEQ 15 times in the last four fiscal years, as shown in the accompanying table. This inefficient and unnecessary process further strains PUC's limited resources since PUC must coordinate with the temporary manager, draft its own order appointing the manager, hold a preliminary hearing on the appointment, and finally approve the appointment in an open meeting.

Temporary Manager Appointments PUC Took Over From TCEQ

FY 2019	2 utilities (2 systems)
FY 2020	4 utilities (5 systems)
FY 2021	4 utilities (4 systems)
FY 2022	5 utilities (10 systems)

Sunset Staff Recommendations

Change in Appropriation

3.1 The House Appropriations and Senate Finance committees should consider increasing PUC's appropriation to ensure it can recover its costs to regulate water and wastewater utilities efficiently.

This recommendation would express the will of the Sunset Commission that the Legislature consider appropriating additional funding to PUC to adequately staff water and wastewater regulatory duties, consistent with the agency's 2024-25 Legislative Appropriations Request. To accomplish this goal, the committees could consider the following:

- Consider increasing PUC's appropriation from the Water Resource Management Account to cover the agency's actual costs of its water regulation. This account has not been fully appropriated and according to TCEQ, had an available balance of $53 million at the end of fiscal year 2021.[23] Increasing this appropriation to PUC would not affect TCEQ's appropriation from the account.
- Consider increasing the amount of general revenue PUC receives to fully cover its actual costs of regulating water utilities.
- Consider using a method of finance swap similar to PUC's suggestion in its Legislative Appropriations Request to the 88th Legislature to have some or all water utilities pay the gross receipts assessment instead of the regulatory assessment fee. Depending on the Legislature's approach, this could result in a revenue loss to the state since the gross receipts assessment is currently lower than the regulatory assessment fee.

Change in Statute

3.2 Amend statute to extend the length of an emergency temporary manager appointment.

To align statute with realistic needs of troubled water utilities and PUC's and TCEQ's current practices, this recommendation would extend the term of an emergency temporary manager appointment from 180 days to 360 days, with the option for one renewal. This would allow for circumstances when an emergency appointment is needed for more than the current 360 day limit. This recommendation would also allow the appointment to be extended further if the utility is in the process of going through a sale, transfer, or merger at PUC.

Management Action

3.3 Direct PUC to comprehensively review its water and wastewater rules, processes, and guidance documents to identify and address areas for improvement.

Given the complexities of ratemaking and other water-related statutes PUC enforces, this recommendation would direct PUC to conduct a comprehensive review, with stakeholder input, of its water and wastewater regulations. As part of this recommendation, PUC should create a work group or use a series of workshops, similar to those it has conducted for electric industry projects, to solicit input from a diverse group of stakeholders, including all types and classes of water and wastewater utilities; stakeholder groups, such as the Texas Rural Water Association, Texas Association of Water Companies, and Texas Water Conservation Association; consumer advocates; and other state agencies, as appropriate. The goal of this review would be to identify needed updates, efficiencies for the agency and utilities, and ways to reduce the regulatory burden on small utilities. At a minimum, the agency and stakeholders should:

- Identify rules in need of clarification or updating to reflect the agency's and utilities' experiences and commission expectations.
- Discuss perceived and actual procedural bottlenecks that cause delays in PUC's processes and consider options to address them.
- Identify and consider any opportunities for streamlining PUC's processes and the potential impacts on various utility types and classes.
- Identify additional guidance documents or other materials that could help utilities comply with agency statute, rules, and processes.
- Identify any challenges utilities face in coordinating applications or other areas of regulatory overlap between PUC and TCEQ, and consider options to address those challenges.
- Identify any statutory barriers to improvements in PUC's water and wastewater regulation. PUC could include any necessary statutory recommendations in the *Biennial Agency Report* it submits to the Legislature.

As a result of this effort, PUC would have a comprehensive list of potential improvements to its rules, processes, and guidance materials and should seek to make changes as soon as practicable. PUC should also use any information gleaned from this effort to inform its plan for improving its data collection and analysis in accordance with Recommendation 4.1. For example, if the water and wastewater stakeholder discussions uncover problems that seem unique to only a certain utility class, PUC could ensure it considers how that data could be easily captured and analyzed.

Fiscal Implication

These recommendations are designed to improve PUC's water and wastewater regulation. If the Legislature were to appropriate PUC its exceptional item request, Recommendation 3.1 would result in an annual cost of approximately $1.7 million. However, the Legislature would determine the amount through the appropriations process. Although the recommendation for PUC to review its water and wastewater rules, processes, and guidance documents should improve efficiency in the long term, given the agency's resource constraints, additional funding may not cover the costs associated with implementing the recommendation. However, the exact fiscal impact cannot be estimated at this time.

[1] Chapter 721 (HB 819), Acts of the 64th Legislature, Regular Session, 1975.

[2] Chapter 795 (SB 249), Acts of the 69th Legislature, Regular Session, 1985.

[3] Chapter 170 (HB 1600), Acts of the 83rd Legislature, Regular Session, 2013.

[4] HB 1600, 2013; Chapter 967 (SB 700), Acts of the 86th Legislature, Regular Session, 2019; All citations to Texas statutes are as they appear on http://www.statutes.legis.texas.gov/. Section 13.002 (4-a through 4-d), Texas Water Code.

[5] Section 13.002(23), Texas Water Code.

[6] When the Legislature created the Public Utility Commission of Texas (PUC), statute imposed a gross receipts assessment on electric, telecommunications, and water utilities to defray the costs of regulation. When regulation over water and wastewater utilities was transferred to the Texas Water Commission, water and wastewater utilities no longer paid this assessment as they were no longer under PUC's jurisdiction. When water regulation was transferred back to PUC in 2014, water utilities were again not required to pay the gross receipts assessment.

[7] Section 5.701(n), Texas Water Code.

[8] Ibid.

[9] Section 16.001, Texas Utilities Code; Texas Comptroller of Public Accounts, State Revenue and Expenditure Dashboard, "Comptroller Object 3230 – Public Utility Gross Receipts Assessment", 2021, accessed online October 25, 2022, https://bivisual.cpa.texas.gov/CPA/opendocnotoolbar.htm? document=documents%5CTR_Master_UI.qvw.

[10] Section 13.001(c), Texas Water Code.

[11] Sections 13.182(d), 13.241(d), 13.245(c-4)(2)(b), and 26.081, Texas Water Code.

[12] PUC, *Agency Strategic Plan for the Fiscal Years 2019 to 2023*, p. 15, accessed online October 26, 2022, https://puc.texas.gov/agency/resources/reports/stratplan/strategic_plan_2018.pdf; SB 700, 2019.

[13] PUC, "Administrator's Statement", *Legislative Appropriations Request for Fiscal Years 2024 and 2025*, August 5, 2022, p. 2, accessed online November 11, 2022, https://www.puc.texas.gov/agency/resources/reports/approp/legappreq24-25.pdf.

[14] Ibid.

[15] Section 13.2541(c), Texas Water Code; PUC, "Petition of 2021 FII Walnut Springs, LLC to Amend Springs Hill Water Supply Corporation's Certificate of Convenience and Necessity in Guadalupe County by Streamlined Expedited Release," Docket Number 53201, accessed online October 26, 2022, https://interchange.puc.texas.gov/search/filings/?UtilityType=A&ControlNumber=53201&ItemMatch=Equal&DocumentType=ALL&SortOrder=Ascending; PUC, Application of Monarch Utilities I L.P. to Amend its Sewer Certificate of Convenience and Necessity in Chambers County, Docket Number 51578, accessed online October 26, 2022, https://interchange.puc.texas.gov/search/filings/?UtilityType=A&ControlNumber=51578&ItemMatch=Equal&DocumentType=ALL&SortOrder=Ascending; PUC, "Ratepayers Appeal of the Decision by Bear Creek Special Utility District to Change Rates", Docket Number 49351, accessed online October 26, 2022, https://interchange.puc.texas.gov/search/filings/?UtilityType=A&ControlNumber=49351&ItemMatch=Equal&DocumentType=ALL&SortOrder=Ascending.

[16] 16 Texas Administrative Code, Part 2, Chapter 24, Subchapter B, Section 24.44 (2019)(PUC, *Rate-case Expenses*); 16 T.A.C., Part 2, Chapter 24, Subchapter D, Section 24.101(e)(1) (2018)(PUC, *Appeal of Rate-making Decision*, *Pursuant to the Texas Water Code Section 13.043*); Sections 13.043(e), 13.084, and 13.183, Texas Water Code.

[17] PUC, *Self-Evaluation Report*, September 2021, p.169; 16 T.A.C., Part 2, Chapter 24, Subchapter B, Section 24.49 (2020)(PUC, *Application for a Rate Adjustment by a Class D Utility Under Texas Water Code §13.1872*).

[18] PUC, open meeting on Docket Number 52341, June 16, 2022, archival video, time stamp 0:05:00, accessed online October 26, 2022, https://www.adminmonitor.com/tx/puct/open_meeting/20220616/; PUC, Commissioner McAdams Memo, Docket Number 52341 Item Number 38 (June 15, 2022), accessed online October 26, 2022, https://interchange.puc.texas.gov/Documents/52341_38_1224108.PDF.

[19] PUC, open meeting on Docket Number 53063, September 15, 2022, archival video, time stamp 0:09:40, accessed online October 26, 2022, https://www.adminmonitor.com/tx/puct/open_meeting/20220915/.

[20] PUC, Adopted Rule Review, 44 *Texas Register,* p.2,622 (2019).

[21] PUC, "Order Requiring Additional Information Regarding the Need for Service," Docket Number 48746 Item Number 17 (August 29, 2019), accessed online November 10, 2022, https://interchange.puc.texas.gov/Documents/48746_17_1031813.PDF.

[22] Section 13.4132, Texas Water Code.

[23] Texas Commission on Environmental Quality, *Annual Financial Report Fiscal Year Ended August 31, 2021*, p. 20, accessed online November 11, 2022, https://www.tceq.texas.gov/downloads/agency/administrative/legislatively-mandated-reports/sfr-045-21.pdf.

Issue 4

PUC's Poor Data Practices and Lack of Policies and Procedures Limit Its Ability to Best Allocate Resources and Serve the Regulated Community.

Background

The Public Utility Commission of Texas (PUC) performs a range of functions common across the electric, water and wastewater, and telecommunications industries it regulates, including rate regulation; licensing and registering entities to provide service in Texas; investigating and taking enforcement action against entities violating statutes or agency rules; and resolving consumer complaints.[1]

When a regulated entity, customer of a regulated entity, or PUC staff initiates a matter for the agency's review and decision, staff opens a case. Cases form the majority of staff's work but vary widely in complexity and may or may not be disputed by other interested parties. The textbox below describes common case types and examples.

Common Case Types

- **Registration applications or amendments.** Certain entities must apply to PUC for a registration, license, or permit to provide service in Texas or to make changes to existing registrations. Common examples include applications to sell or transfer a utility and applications to receive a new certificate of convenience and necessity, which allows an entity to operate within a defined service area.
- **Rate cases.** Certain entities must get approval from PUC to collect money necessary to recover their costs of providing service. Other entities' independent rate decisions are subject to appeal at PUC. Common examples include comprehensive rate cases where PUC reviews all expenses and rate of return on an entity's investment, and streamlined rate cases where PUC only reviews certain costs subject to review in the next comprehensive rate case.
- **Investigations and enforcement cases.** PUC investigates whether a regulated entity violated statute or agency rules. Common examples include investigations of whether a utility failed to provide continuous and adequate water or electric service or violated PUC's customer protection rules.

The Office of Policy and Docket Management (OPDM) is involved in every case at some point. OPDM advises the commissioners on the legal and factual issues of cases the commission decides and the office's administrative law judges issue final orders in routine cases. The Legal Division represents PUC staff in all cases except enforcement cases. The *Case Snapshot* textbox highlights the number of key cases PUC closed in fiscal year 2021. PUC's electronic document repository, the Interchange, serves as the primary information source for both PUC staff and the public to monitor where cases are in the process.[2]

Case Snapshot - FY 2021

Water and Wastewater

- Rate cases: 69
- CCN applications and amendments: 79
- Sales, transfers, mergers: 63

Electric

- Rate cases: 69
- CCN applications and amendments: 34
- Sales, transfers, mergers: 5

Findings

PUC cannot adequately track or use data to drive decision making, further straining its already limited resources.

Although PUC spends significant staff time reviewing and approving registration and rate applications and other types of cases, the agency does not have the capability to easily or efficiently collect, access, and use data about this work. In addition to clear data management challenges, PUC has not assessed whether its existing technology and tools continue to meet the agency's needs. As a result, some data tracking at the agency has become perfunctory, taking up time without consistently producing the information staff, commissioners, and policymakers likely need to make data-driven decisions.

PUC does not know how long its most common case types take.

- **Outdated and inadequate data management tools.** Cumbersome databases, many of which date back to the 1990s, prevent PUC staff from effectively collecting and tracking important data and information about its principal functions. Although PUC did not design the Interchange to be a database, it remains the primary location PUC stores its case data. While valuable as an electronic "filing cabinet," the Interchange is inadequate for quickly and easily aggregating and producing needed information. For example, in response to a Sunset staff request for three years worth of data regarding the various types of cases PUC completed, staff had to run special queries using the Interchange's limited search feature and manually verify the information on individual cases just to compile one year of comprehensive data. The accompanying textbox shows additional requested data PUC could not easily provide.

Data PUC Cannot Easily Provide

- How long it takes to determine whether applications are administratively complete or sufficient.
- How long it takes to complete the most common types of cases, such as the average number of days to get a final order on a water or electric certificate of convenience and necessity amendment.
- How long various streamlined rate cases take.
- How long it takes to complete a case if it is disputed versus when there are no intervenors or protestors involved.
- How frequently PUC misses or extends statutory deadlines for cases.
- How long it takes to get a case set on the commission's agenda for a final order after a staff recommendation or State Office of Administrative Hearings proposal for decision has been made.

As a result of the Interchange's deficiencies, staff uses separate databases and spreadsheets to track cases within the Legal Division and OPDM, as well as complaints and enforcement cases. A 2020 internal audit of PUC's Legal Division highlighted problems that arise when divisions use spreadsheets rather than more robust databases to track active cases. Of a random sample of 30 cases in the division's tracking spreadsheet, the auditor found errors in 63 percent.[3] The Legal Division concurred with the auditor's findings and abandoned the spreadsheet, and now relies on the

Interchange despite its limitations. PUC also maintains a separate database of historical investigations solely to report its official Legislative Budget Board performance measures, not to meaningfully assist staff with any of its key functions and activities. Finally, but importantly, the divisions' databases do not communicate with each other. For example, PUC's enforcement database does not include information from its complaint database to give a fuller picture of potential bad actors by allowing staff to easily view enforcement actions and complaints against an entity over time.

- **Lack of comprehensive trend analysis to improve operations.** Due to the technical limitations noted above and staff's considerable workload, PUC does not conduct comprehensive trend analysis of its cases, missing opportunities to improve the efficiency of its operations and better serve regulated entities. In its most recent Legislative Appropriations Request, PUC recognized having additional capacity to routinely analyze its work could strengthen its oversight of electric markets, as discussed further in Issue 1.[4] However, PUC has not similarly envisioned how it could better collect, manage, and use data related to its cases.

  In place of robust analysis, PUC relies almost exclusively on institutional knowledge to identify problems, such as delays that may indicate procedural bottlenecks. For example, staff anecdotally report settlement negotiations among the parties in an electric rate case often draw out the process considerably, but PUC has never quantified these delays or assessed whether they ultimately have a monetary impact, which is important since rate case expenses can eventually be included in the rate customers must pay. Without this type of information, PUC lacks a full understanding of how its processes work (or do not work) and cannot make needed process changes or proactively address problems before they negatively impact regulated entities or their customers.

  PUC relies almost exclusively on institutional knowledge to identify problems.

  Trend analysis is not unprecedented within the agency, however. In 2017, PUC's Customer Protection Division noticed the number of complaints it received by phone decreasing and online complaints increasing. Division staff tracked these data over time to confirm their impressions and are using the data to improve their online complaints form to facilitate easier, less time-consuming complaint intake. Assessing and addressing trends in other divisions could similarly inform resource allocation decisions and better ensure staff do not either overlook or overestimate actual problems.

PUC's lack of policies, procedures, and guidance documents for critical functions does not align with best practices and leaves the agency vulnerable to turnover and inconsistent decisions and outcomes.

- **Incomplete procedures and reference materials.** Throughout the review, Sunset staff heard numerous concerns from regulated entities about differing legal interpretations among PUC's staff attorneys or that the attorneys lacked experience and necessary in-depth knowledge of agency statutes

and rules to efficiently and effectively process often highly complex utility cases. Between 2020 and 2022, the Legal Division's annual turnover rate was about 40 percent. During the Sunset review, the division director was the only attorney with more than three years of experience and he transferred to the division in April 2022. OPDM also reported difficulties hiring and retaining staff, noting its job postings remain open for over three months on average. As of February 2022, just over 50 percent of all PUC staff had fewer than five years of service with the agency and almost one-third had less than two years. At the other end of the spectrum, key personnel in several divisions are either eligible or nearly eligible for retirement.[5]

The Legal Division had an annual turnover rate of 40% since 2020.

PUC is keenly aware of the challenges high staff turnover poses, but the agency could do more to mitigate the associated risks. First, PUC needs additional internal documentation of how personnel perform key tasks. Although the Legal Division relies on some templates, checklists, and documented procedures, these are not comprehensive. For example, the Legal Division's internal audit discussed previously noted that the division lacked policies addressing how staff performs administrative tasks related to its contested cases, and the division acknowledged gaps in its "formal written procedures for different types of contested cases most commonly addressed by the division."[6] Second, PUC could better preserve its institutional knowledge by documenting common scenarios and challenges staff frequently encounter in various cases and how to address such issues.

When combined with an up-to-date precedent manual that documents commission decisions, discussed below, having more comprehensive policies, procedures, and various references for how staff should perform common tasks would help mitigate the harms staffing challenges cause. Without a concerted effort to document and update these materials, PUC staff's remaining institutional knowledge will likely depart alongside experienced staffers as they retire or move on to other opportunities. Failing to preserve this institutional knowledge through formal written documentation increases the risk inexperienced staff do not know or misinterpret relevant laws and rules as they process cases.

PUC can do more to mitigate the harms staffing challenges cause.

- **No precedent manual.** At PUC, a precedent represents the commission's interpretation and application of the law given the particular facts of a case. Precedent guides agency staff and stakeholders on how the commission is likely to decide a case with similar facts when statute and rules are silent or unclear. PUC previously maintained a decision digest to highlight commission decisions, but discontinued it due to resource constraints. Currently, PUC lacks a precedent manual or any similar guidance document to help ensure consistent decisions and assist entities in preparing their cases.

  The absence of an up-to-date, publicly accessible precedent manual disproportionately affects smaller utilities that lack the resources to conduct their own analysis or pay for external services that track commission decisions. The addition of water and wastewater rate regulation to PUC's jurisdiction in 2013 increases the importance of such documentation. As

discussed further in Issue 3, although large and sophisticated members of the electric and telecommunications industries have the resources to analyze precedent themselves, water and wastewater utilities tend to be much smaller and struggle to keep up with changes in the regulatory environment in the absence of a written manual.

The lack of a precedent manual disproportionately affects smaller utilities.

PUC's lack of a precedent manual also burdens PUC staff who must individually stay informed about changes in precedent by reviewing past commission meetings, memos, and other available documentation. Given recent changes in the commission's structure and membership, as well as rapid changes to PUC's regulatory environment, requiring each staff member to track and analyze changes on their own is an inefficient use of their limited time and increases the risk they may miss important developments, resulting in inconsistencies.

- **Outdated contracting procedures.** Like most agencies, PUC outsources certain duties its staff lacks the expertise or resources to complete. The agency currently manages 18 external contracts involving 15 contractors. These contracts totaled about $16 million in fiscal year 2021, but PUC does not directly pay for all of them. For example, the Electric Reliability Council of Texas funds certain contracts related to the electric industry. PUC relies on a central contract oversight team to assist agency divisions with their procurement and contracting processes.

  In 2020 and 2021, PUC's internal auditor identified concerns with the agency's contract procurement, monitoring, oversight practices, and training among other issues.[7] Given these findings and the recent controversy regarding potential conflicts of interest in an important contract, discussed in the textbox on the following page, Sunset staff closely scrutinized PUC's procurement and contracting procedures.[8] When evaluating an agency's contracting functions, Sunset uses the general framework established in the *State of Texas Procurement and Contract Management Guide*, as well as documented standards and best practices compiled by Sunset staff.[9] Sunset staff found the agency's procedures are generally strong. Still, PUC should make certain changes to better support personnel outside the central contracting team who are less experienced in contract oversight, particularly as its most recent Legislative Appropriations Request suggests the agency may increase its use of contracting in the future.[10]

  Contracting at PUC is generally strong.

  Agencies need uniform contracting policies and procedures to ensure effective contract management. PUC last updated its contract manager guide and handbook in 2015, long before its recent internal audits.[11] During the Sunset review, PUC indicated it was in the process of overhauling these materials but had not yet completed a draft, so Sunset staff could not assess its progress. Maintaining current and comprehensive contracting policies and procedures would better support the agency's contract managers as they monitor contract requirements and hold vendors accountable for their performance.

Energy and Environmental Economics (E3) Market Design Contract

In May 2022, PUC contracted with E3 to review the various proposals the commissioners are considering under the Phase II Wholesale Electric Market Design Blueprint. PUC faced allegations its contract with E3 suffers from serious and unmitigated conflicts of interest because E3 submitted a market redesign proposal as a part of its work for two market participants, NRG Energy and Constellation. PUC received only two responses to its request for proposal (RFP) and both presented potential conflicts of interest since the other bid was from PUC's existing Independent Market Monitor. PUC could have rebid the contract entirely to seek additional bidders but expressed concerns doing so may have yielded a similar result since few firms exist that are capable of doing the analysis required under the RFP or that do not also perform analytical work for market participants.

Sunset staff found PUC gave adequate consideration to the potential conflicts both bidders posed, evaluated the bids fairly and in line with best practices, and took appropriate steps to mitigate any associated risks. Although some of the same analysts at E3 who worked on the market design proposal are also working on the contract with PUC, the agency implemented several controls to prevent E3 from engaging in market manipulation. For example, the contract prohibits E3 from providing any services to market participants directly related to PUC's Market Design effort and expressly states E3 certified it terminated its relationship with NRG and Constellation before signing the contract. The contract also allows PUC to limit the work E3 does with parties not involved in the Market Design, should PUC determine the work presents a potential conflict.

Additionally, because contracting is a small part of their jobs, none of PUC's contract administrators who manage the day-to-day work with contractors, including the Independent Market Monitor and cyber monitor, receive formal contract training through the comptroller's office. Instead, PUC's central contracts team supports contract administrators. This arrangement has been effective, but the agency acknowledges it could make some improvements to better assist staff who are not comptroller certified.

Sunset Staff Recommendations

Management Action

4.1 Direct PUC to develop a plan to prioritize improving its case data collection and analysis.

This recommendation would direct PUC staff, in consultation with its full-time commission, to develop a plan to improve the agency's data collection, management, and use, specifically related to its cases. In developing this plan, PUC should:

- Evaluate its current data capabilities and limitations, taking inventory of its case data tracking tools and databases across the agency, and analyzing their value to staff and decision makers.
- Consult with division staff regarding what data and potential tools could improve both their day-to-day work and ability to make strategic decisions over the long-term.
- Identify the need to combine existing or procure new tools that would allow the agency to effectively collect and track performance data over time.
- Identify any additional resources needed to improve data collection, tracking, and use, which the agency could include in its next Legislative Appropriations Request.

PUC should submit the plan to the commission for approval by December 2024 and also provide a copy to the Sunset Commission and applicable legislative oversight committees. This recommendation would help PUC develop long-term strategies related to its case processing functions and create efficiencies by allowing the agency to identify, document, and correct procedural bottlenecks.

4.2 Direct PUC's Legal Division and Office of Policy and Docket Management to develop comprehensive policies and procedures.

At a minimum, these policies should include formal written procedures for each major type of case these divisions commonly handle and provide information on key staff duties and procedural deadlines. PUC should also document common situations, questions, and mistakes within each type of case. The Legal Division and OPDM should consider organizing these materials into a single, easy-to-use policy and procedure handbook for each division. Creating and consistently updating their policies and procedures would make these divisions more resilient to the staffing challenges they face and aid newer staff in learning the relevant procedures and rules governing the complex world of utility regulation.

4.3 Direct PUC to create and maintain a precedent manual, prioritizing rulings related to water and wastewater regulation.

Under this recommendation, PUC should develop a precedent manual or similar guidance document to help regulated entities understand the commission's interpretation of relevant statutes and rules, and improve staff's ability to make consistent and fair decisions. As the commission establishes new precedent, summaries of the decisions should be published in the manual by subject areas and made available on the agency's website. In addition, any published decisions from state and federal courts that govern PUC's regulated entities should be considered for inclusion in the manual. Given the lack of sophistication among many small water utilities, PUC should prioritize water-related rulings for the precedent manual. Water and wastewater utilities face the greatest difficulties in remaining current with commission decisions, so directing resources to this area first would maximize the recommendation's immediate impact. To avoid further strain on the agency's resources, the new manual would not include prior precedent, only those made after this recommendation's adoption. The manual would not bind the commission but rather provide guidance to agency staff and regulated entities on how the commission has looked at and ruled on similar facts in previous cases.

4.4 Direct PUC to update its contract manager guide and handbook.

This recommendation would direct PUC to enhance its existing contracting policies and procedures by completing its planned update of its contract manager guide and handbook. The updated guide and handbook should reflect process improvements PUC has made to its contract management function following its internal audits in 2020 and 2021. Once updated, PUC should provide training to all its contract administrators on the updated guide and consider the need to supplement this with additional internal training or other materials that could assist in monitoring contract deliverables. Giving contract managers up-to-date and comprehensive reference materials would increase their ability to oversee contracts and maximize their value to the agency. Additionally, PUC should consider how an increased use of contracting may necessitate the need to have contract administrators certified in the future. The comptroller's training provides important information on monitoring and enforcing contracts, complying with requirements in the state's contract management guide, documenting contracting decisions, planning for problems, and evaluating performance.

Fiscal Implication

These recommendations are meant to improve PUC's internal operations and efficiency and could reduce PUC's workload over the long term by allowing the agency to identify and eliminate procedural bottlenecks and better allocate staff resources. Given the agency's resource constraints, PUC will likely incur costs associated with implementing the plan required under Recommendation 4.1 and other recommendations. However, the exact fiscal impact cannot be estimated at this time.

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1 Public Utility Commission of Texas (PUC), *Self-Evaluation Report*, pp. 1-5, accessed online October 26, 2022, https://puc.texas.gov/agency/resources/reports/sunset/serfinalreport090121.pdf.

2 PUC, "Interchange Filing Search," accessed online October 26, 2022, https://interchange.puc.texas.gov/.

3 PUC Internal Audit Division, *Legal Division's Processes for Contested Cases*, accessed online October 26, 2022, https://www.puc.texas.gov/agency/about/audit/reports/contestedcases.pdf.

4 PUC, *Legislative Appropriations Request for Fiscal Years 2024 and 2025*, p. 5, accessed online October 2, 2022, https://www.puc.texas.gov/agency/resources/reports/approp/legappreq24-25.pdf.

5 PUC, *Self-Evaluation Report*, p. 10.

6 PUC Internal Audit Division, *Legal Division's Processes for Contested Cases*, p.7.

7 PUC Internal Audit Division, *Public Utility Commission's Contract Procurement Process*, accessed online October 15, 2022, https://www.puc.texas.gov/agency/about/audit/reports/project2020-300.pdf; PUC Internal Audit Division, *Contract Oversight at the Public Utility Commission*, accessed online October 15, 2022, https://www.puc.texas.gov/agency/about/audit/reports/project2021-200.pdf.

8 Contract No. 47-22-00009 between PUC and Energy and Environmental Economics, Inc., (E3) p. 20, accessed online October 15, 2022, https://www.puc.texas.gov/agency/resources/reports/fiscal/contracts/473-22-00009-Amendment.pdf; E3, *The Load-Serving Entity (LSE) Reliability Obligation*, pp. 8-10, accessed online October 15, 2022, https://interchange.puc.texas.gov/Documents/52373_134_1156385.PDF; Contract No. 47-22-00009 between PUC and E3.

9 Texas Comptroller of Public Accounts, *State of Texas Procurement and Contract Management Guide*, Version 2.1, accessed online September 23, 2022, https://comptroller.texas.gov/purchasing/publications/procurement-contract.php.

10 PUC, *Legislative Appropriations Request for Fiscal Years 2024 and 2025*, p. 5.

11 PUC, *Contract Management Guide and Handbook*, accessed online October 26, 2022, https://www.puc.texas.gov/agency/resources/reports/fiscal/contracts_manual.pdf.

Issue 5 | Texas Has a Continuing Need for PUC.

Background

The Public Utility Commission of Texas (PUC) oversees electric, water and wastewater, and telecommunications utilities in Texas to protect consumers, foster competition, and promote high quality utility infrastructure. The agency's authority falls into two broad categories: regulation of traditional, monopoly utilities and oversight of competitive markets. In 1975, the Legislature created PUC to regulate rates and services of monopoly utilities in place of the patchwork of local regulations that existed previously. This regulation was intended as a substitute for competition. Since then, legislative changes to restructure major portions of electric and telecommunications markets, commonly known as deregulation, have shifted PUC's focus toward fostering competition in those industries, though its role in telecommunications has continued to decline as the industry evolves and PUC has no role in wireless or broadband services. In 2013, the Legislature transferred the regulation of water and wastewater rates and certain services from the Texas Commission on Environmental Quality to PUC.[1] Today, to varying degrees, PUC performs a range of functions common across all three industries, including rate regulation; licensing and registering entities to provide service in Texas; investigating and taking enforcement action against entities violating statutes or agency rules; and resolving consumer complaints. Appendix A provides a breakdown of these functions by industry.

As summarized in Appendix E, following Winter Storm Uri in 2021, the Legislature overhauled PUC's governance structure and the Electric Reliability Council of Texas (ERCOT) Board of Directors, and made numerous changes to the electric industry and markets in Texas designed to prepare for, prevent, and respond to weather emergencies, and generally enhance the electric grid's reliability. At the same time, the Legislature moved up PUC's Sunset date two years to 2023, to keep a close watch on the agency during the implementation of these significant changes.[2]

Findings

Texas has a continuing need for PUC to regulate certain public utilities and oversee ERCOT's operation of the state's electric grid.

Electricity, water and wastewater, and basic telecommunications services are vital to Texans' everyday lives, and the state has a continuing interest in overseeing these important industries. Where monopoly utilities still provide service, PUC regulation assures Texans the rates, operations, and services are just and reasonable.[3] In competitive areas of the state, PUC still needs to regulate companies to ensure they compete fairly and follow state and federal laws and rules. PUC's oversight of competitive electric markets provides minimum standards of service quality, customer service, and fair business practices to promote high-quality service to customers and fair access to the marketplace. In fiscal year 2021, PUC investigated 11,069 billing issues or other complaints related to utility service and helped secure about $1.5 million in refunds and bill credits to utility customers across the three industries it regulates.

The state also has a continuing interest in overseeing ERCOT's operation of the electric grid and the evolving electric industry. ERCOT plays a significant role in protecting the health and safety of Texans by ensuring the transmission of electricity to more than 26 million Texas customers, representing 90 percent of the state's total electric demand.[4] Transmission lines in the ERCOT region stretch across approximately 53,000 miles, enough to wrap around the Earth more than twice.[5] ERCOT also validates and processes transactions for the state's wholesale electric market, through which generators sell electricity at prices that fluctuate based on supply and demand. During Winter Storm Uri, the total value of transactions in the ERCOT market reached $59 billion.[6]

Winter Storm Uri highlighted the need for additional oversight of ERCOT.

Electricity outages, price spikes, and deaths during Winter Storm Uri highlighted the need for additional oversight of ERCOT and the electric industry. PUC's oversight of ERCOT's finances, budget, and operations is essential because, as a nonprofit corporation, ERCOT is not subject to other traditional oversight mechanisms, such as the legislative appropriations process. PUC also conducts investigations into electric market manipulation, approves ERCOT's protocols, and enforces regulations meant to strengthen the reliability of the grid after Winter Storm Uri, such as weatherization requirements for electric power plants. In fiscal year 2021, PUC conducted 108 investigations related to market oversight, approved 48 ERCOT protocols, and recommended more than $7.5 million in administrative penalties for power plants that failed to file winter readiness reports with PUC by the December 2021 deadline.[7]

PUC has made progress implementing recent legislative reforms but more time is needed to make additional changes and evaluate whether these efforts have ultimately been successful.

Although PUC has implemented many of the changes resulting from legislation following Winter Storm Uri, including conducting 24 rulemaking projects, the agency's efforts are still in progress. PUC's role in electric utility regulation also may be impacted by the work of several new legislatively created committees, whose work is ongoing or only recently finished. The textbox on the following page describes these various endeavors in more detail.[8]

Evaluating PUC's implementation of all legislative reforms is a task for the future.

Evaluating the ultimate outcomes and benefits of these and other changes is a task for the future because the agency cannot implement all of these quickly and the results will not be immediately apparent. As discussed throughout this report, the Sunset review identified some needed course corrections involving recent legislative changes as well as other improvements, but these and other changes will take time to fully implement and ultimately evaluate.

PUC does not meaningfully review and revise its administrative rules every four years, resulting in outdated rules that do not reflect the current regulatory environment.

Statute requires state agencies to review their rules every four years to determine whether the reasons for initially adopting each rule continue to exist. The four-

Ongoing Electric Regulation Efforts

- **Ongoing Wholesale Electric Market Design effort.** In December 2021, PUC approved an initial blueprint for ERCOT to reform the electric market to improve reliability in two phases. This approval and ERCOT's ongoing implementation of certain items constitute Phase I of this effort, but PUC only received its final report from the contractor it hired to evaluate several market design proposals as part of Phase II in November 2022. Based on the contractor's evaluation, PUC expects to present its market design plan to the Legislature for consideration in 2023.
- **Weatherization rulemaking finalized.** In October 2021, PUC adopted a new rule requiring power generation entities and transmission service providers, including utilities, to weatherize their facilities against extreme weather in time for the winter season. In September 2022, PUC adopted additional rules for year-round weatherization requirements, but it is too early to evaluate the effectiveness of these changes.
- **First electricity supply chain map completed.** The Legislature established the Texas Electricity Supply Chain Security and Mapping Committee in 2021, composed of representatives from PUC, ERCOT, the Railroad Commission of Texas, and the Texas Division of Emergency Management. The committee developed the new map of the state's critical infrastructure and electricity supply chain in April 2022, ahead of schedule, but more time is needed to assess how the map is used in practice and what the update process involves.
- **State energy plan adopted.** The Legislature created the State Energy Plan Advisory Committee in 2021, composed of 12 members appointed by the governor, lieutenant governor, and speaker of the House of Representatives. The Legislature tasked the committee with preparing a comprehensive state energy plan to evaluate barriers to sound economic decisions in the electric and natural gas markets, methods to improve the reliability, stability, and affordability of electricity service, and the state's electric market structure and pricing mechanisms, including ancillary services and emergency response services. The committee adopted the plan and recommendations to the Legislature in August 2022, but whether the Legislature implements any of the recommendations and their potential impact on PUC is yet to be seen.
- **Texas Energy Reliability Council (TERC) recommendations published.** The Legislature formalized TERC in 2021, made up of 25 representatives from the natural gas, electric, and other energy industries, PUC, and leadership from six other state agencies, to ensure Texas energy and electric industries meet high priority human needs, address critical infrastructure concerns, and enhance coordination and communication. TERC submitted its report and recommendations to the Legislature in November 2022, which, if implemented, may affect PUC's operations.

year rule review process is intended to be more than simply posting rules in the *Texas Register* for public comment before readoption. A meaningful rule review should consider whether the initial factual, legal, and policy reasons for adopting each rule are still relevant. As part of its analysis, an agency should consider the practical experience the agency, stakeholders, and the public have had with each rule over the past four years. The rules an agency adopts to implement its statutory requirements have the force of law until and unless the Legislature or a court overrides the rules or rescinds the agency's authority. As such, outdated rules that do not reflect the agency's current processes leave an agency open to legal liability and reduce transparency to stakeholders.

Despite its extensive new rulemaking efforts over the last year, PUC's approach to its four-year rule review and readoption process is bifurcated, leaving many rules extremely outdated and impairing the ability of the public and industry stakeholders to meaningfully contribute to updating the agency's regulations and operations. Although PUC maintains a rule review schedule and consistently conducts rule reviews, the agency routinely just readopts the entire rule chapter

without making any changes, even when needed changes have been identified through the review process. While PUC takes public comment during rule review, the agency simply notes these comments and suggested changes for the next time the agency may open that rule. This even happens in cases where the commission has agreed with the needed changes during multiple rounds of rule review.[9] PUC's bifurcated rule review process also results in regulated entities and members of the public having to interpret and comply with rules that may not accurately reflect current law or agency practice.

Some PUC rules are over 20 years old.

Sunset staff identified numerous outdated rules, some over 20 years old, including rules related to telecommunications service objectives and performance benchmarks, and several related to electric utilities generally.[10] For example, PUC first established goals for electric utilities' customer energy efficiency programs in 2008, but has not substantively updated the goals since an update in 2012 in response to legislation.[11] Outdated goals could result in ineffective incentives for utility customers to make buildings more energy efficient, potentially resulting in higher electricity bills and a higher burden on the grid. Although the commission has recently begun exploring updating its energy efficiency rule, a more substantive rule review process may have facilitated these changes much sooner.

Finally, outdated rule language can also generate confusion when regulated entities need to determine if and how they must comply with regulations. For example, one stakeholder noted in comments during the 2019 telecommunications rule review that PUC sent correspondence to telecommunications providers that exempted them from a reporting requirement still in rule, but the rule has not been updated to reflect agency practice.[12]

PUC has some reporting requirements that need to be eliminated or modified.

Several reports should be consolidated.

The Sunset Act establishes a process for the Sunset Commission to consider if reporting requirements of agencies under review need to be continued or abolished. The Sunset Commission has interpreted these provisions as applying to reports that are specific to the agency and not general reporting requirements that extend well beyond the scope of the agency under review. Reporting requirements with deadlines or that have expiration dates are not included, nor are routine notifications or notices, or posting requirements.

Statute requires PUC, sometimes in conjunction with ERCOT, to produce 11 reports specific to the agency, listed in Appendix F. Of these, Sunset staff found three that should be consolidated into one report, two that should be eliminated, one that needs to be properly codified in statute. Additionally, three reports specific to the electric grid should be consolidated into a new *Electric Industry Report*, as discussed in Issue 1.

- **Biennial Agency Report and Scope of Competition reports.** In 2021, in lieu of producing three separate reports, PUC combined its two statutorily required scope of competition reports for the Texas electric and telecommunications markets into its *Biennial Agency Report*.[13] Additionally,

as part of the consolidated report, PUC included information on its water utility regulation despite the fact that statute does not expressly mention PUC's water and wastewater regulation. Statute should be updated to reflect the consolidation of these reports and clarify that the reporting requirement includes all of PUC's regulated industries.

- **Report on Competitive Renewable Energy Zones (CREZ)**. Statute requires PUC to submit a report to the Legislature with an evaluation of PUC's implementation of the CREZ transmission line project.[14] The Legislature created this reporting requirement in 2005 when it required PUC to establish these zones, and the agency last submitted this report in 2008, after it first approved CREZ rules.[15] PUC finished implementing CREZ in 2014, making this reporting requirement no longer needed.

- **Report on the usage of the Texas No-Call List.** PUC started producing this report in 2007, when the Legislature enacted the Texas Telemarketing Disclosure and Privacy Act, but has not consistently submitted it. The report includes the number of telephone numbers on the no-call list, telemarketing complaints and enforcement actions, requests to be added to the no-call list, and PUC's recommendations for changes to the law.[16] PUC already provides no-call list complaint and enforcement information as part of its annual enforcement activity reports and could provide additional information to the Legislature upon request, so this report is no longer needed. Further, PUC could include any necessary recommendations to the Legislature in its *Biennial Agency Report*.

- **Report on statute and rules affecting conflicts of interest.** In 2021, the Legislature required PUC and ERCOT to annually review statutes, rules, protocols, and bylaws that apply to conflicts of interest for commissioners and board members, and to submit a report to the Legislature on how those provisions affect the ability of commissioners and board members to fulfill their duties.[17] Since this is a new reporting requirement, PUC and ERCOT have not yet produced or submitted this report, so it should be continued to give the Legislature and the Sunset Commission enough time to evaluate its effectiveness. In addition, the reporting requirement was not properly codified and needs to be added to statute to clarify that PUC and ERCOT should continue producing the report.

PUC's statute does not reflect standard language typically applied across the board during Sunset reviews.

PUC's statute contains standard language requiring commissioners to receive training and information necessary for them to properly discharge their duties.[18] While PUC conducts the required training, statute does not contain newer requirements for all topics the training must cover, such as a discussion of the scope of, and limitations on, the commission's rulemaking authority. Statute also does not require the agency to create a training manual for commissioners or specify commissioners must attest to receiving and reviewing the training manual annually.

Sunset Staff Recommendations

Change in Statute

5.1 Continue PUC for six years and remove the Sunset date of the agency's enabling statute.

This recommendation would continue PUC until September 1, 2029, and would also remove the Sunset date of the agency's statute to ensure only the agency, not its statute, expires.

5.2 Update the standard across-the-board requirement related to commissioner training.

This recommendation would require the agency to develop a training manual that each commissioner attests to receiving annually, and require existing commissioner training to include information about the scope of and limitations on the commission's rulemaking authority. The training should provide clarity that the Legislature sets policy, and agency boards and commissions have rulemaking authority necessary to implement legislative policy.

5.3 Abolish two and modify four of PUC's reporting requirements.

This recommendation would eliminate the requirements for PUC to produce a report on CREZ and a report on usage of the Texas No-Call List. PUC could continue to provide this information to the Legislature upon request. This recommendation also would eliminate separate reports on the scope of competition in electric and telecommunications markets, instead consolidating information from both reports into the *Biennial Agency Report*, to reflect PUC's current practice. To ensure the Legislature receives information on all utilities PUC regulates, this recommendation would specify that the requirement for PUC to provide recommendations on "utility regulation in general" in its *Biennial Agency Report* also includes water and wastewater utilities. The report required on statutes, rules, and ERCOT protocols and bylaws affecting conflicts of interest would be codified as a statutory reporting requirement. Further, as discussed in Issue 1, several other PUC and ERCOT reports should be consolidated. Appendix F provides a complete listing of these reports and Sunset's analysis of them.

Management Action

5.4 Direct PUC to update its policy guiding the agency's rule review process to ensure identified deficiencies in the rules are addressed.

This recommendation would direct PUC to update its policy formally establishing and explaining its four-year rule review process. The policy should require the review to consider current factual, legal, and policy reasons for readopting each rule, as well as practical experience the agency, regulated community, and public have had with each rule since its adoption or last review. The agency should also include the process for amending its rules in the policy, such as how the agency addresses issues and suggestions made during the rule review process in a meaningful way, ensuring identified potential or needed changes are proposed to the commission for a rulemaking project before the next four-year rule review. The policy should also include how to provide clear notice in the *Texas Register* when a rule will be amended as a result of the rule review, and when amendments will be published, if not during the rule review process. Finally, PUC should consider filing its rule review plan with the Office of the Secretary of State for publication in the *Texas Register*. PUC would provide a copy of the policy to the Sunset Commission by July 14, 2023, to consider during its compliance review of the agency.

Fiscal Implication

Continuing PUC would require an annual appropriation from the Legislature, which was $17.4 million in fiscal year 2021. Given the agency's resource constraints, PUC will likely incur costs associated with implementing the recommendation to conduct more thorough rule reviews as required by statute. However, the exact fiscal impact cannot be estimated at this time.

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1 Section 2.96, (HB 1600), Acts of the 83rd Legislature, Regular Session, 2013.

2 SB 713, Acts of the 87th Legislature, Regular Session, 2021.

3 All citations to Texas statutes are as they appear on http://www.statutes.legis.texas.gov/. Sections 31.001 and 36.003, Texas Utilities Code; Sections 13.001 and 13.182, Texas Water Code.

4 Potomac Economics, *2021 State of the Market Report*, May 2022, p. i., accessed online September 20, 2022, https://www.potomaceconomics.com/wp-content/uploads/2022/05/2021-State-of-the-Market-Report.pdf.

5 Federal Energy Regulatory Commission, "ERCOT", accessed online September 20, 2022, https://www.ferc.gov/industries-data/electric/electric-power-markets/ercot.

6 Potomac Economics, *2021 State of the Market Report*, p.ii.

7 Public Utility Commission of Texas (PUC), *PUC Files Violations Against Eight Generation Companies*, December 8, 2021, accessed online September 20, 2022, https://www.puc.texas.gov/agency/resources/pubs/news/2021/PUCTX-PR-NOVWinterReports.pdf.

8 PUC, *PUC Approves Major Improvements to Electric Grid Reliability, Enacts Changes to Wholesale Electricity Market*, December 16, 2021, accessed online October 5, 2022, https://www.puc.texas.gov/agency /resources/pubs/news/2021/PUCTX-REL-Market_Redesign_12162021.pdf; PUC, "PUC Adopts Rules for Weatherization of Power Infrastructure," October 21, 2021, accessed online October 5, 2022, https://www.puc.texas.gov/agency/resources/pubs/news/2021/PUCTX-REL-Weatherization.pdf; PUC, *Electric Weather Preparedness Standards - Phase II*, Project Number 53401, Item Number 36 (September 13, 2022) (Memo and Proposal for Adoption - Staff Rec), accessed October 5, 2022, https://interchange.puc.texas.gov/search /documents/?control Number=53401&itemNumber=36; Subchapter F, Chapter 38, Texas Utilities Code; Texas Electricity Supply Chain Security and Mapping Committee, *Mapping Report*, January 2022, accessed online September 28, 2022, https://www.puc.texas.gov /agency/resources/reports/mapping/2021_Mapping_Agency_Report.pdf; PUC and the Railroad Commission of Texas, "Joint News Release: Texas Adopts First-Ever Electricity Supply Chain Map," April 29, 2022, https://www.puc.texas.gov /agency/resources/pubs/news/2022/042922-Joint-RRC-PUC-Map-press-release.pdf; Sections 33(a) and (b), (SB 3), Acts of the 87th Legislature, Regular Session, 2021; Subchapter J, Chapter 418, Texas Government Code.

9 PUC, Adopted Rule Review, 36 *Texas Register* p. 4821 (July 29, 2011). PUC, Adopted Rule Review, 44 *Texas Register* p. 5640 (September 27, 2019).

10 16 Texas Administrative Code, Part 2, Chapter 25, Subchapter K, Section 25.271 (2018) (PUC, *Foreign Utility Company Ownership by Exempt Holding Companies*); 16 T.A.C., Part 2, Chapter 25, Subchapter D, Section 25.90(a) (2018) (PUC, *Market Power Mitigation Plans*). 16 T.A.C., Part 2, Chapter 25, Subchapter F, Section 25.131(e) (2018) (PUC, *Load Profiling and Load Research*); 16 T.A.C., Part 2, Chapter 26, Subchapter C, Section 26.54(b)(1), (b)(2), (b)(3) (2019) (PUC, *Service Objectives and Performance Benchmarks*); 16 T.A.C., Part 2, Chapter 26, Subchapter G, Section 26.142 (2019)(PUC, *Integrated Services Digital Network*).

11 16 T.A.C., Part 2, Chapter 25, Subchapter H, Section 25.181 (2019) (PUC, Energy Efficiency Goal); SB 1125, Acts of the 82nd Texas Legislature, Regular Session, 2011.

12 PUC, Adopted Rule Review, 44 *Texas Register* p. 5641 (September 27, 2019).

13 PUC, *Biennial Agency Report to the 87th Legislature*, January 2021, accessed online September 20, 2022, https://www.puc.texas.gov/agency/resources/reports/bar/2021_Biennial_Agency_Report.pdf; Sections 12.203, 31.003, and 52.006, Texas Utilities Code.

14 Section 39.904(j), Texas Utilities Code.

15 16 T.A.C., Part 2, Chapter 25, Subchapter H, Section 25.174 (2018) (PUC, *Competitive Renewable Energy Zones*).

16 Section 304.201, Texas Business and Commerce Code.

17 Section 34, SB 3, Acts of the 87th Legislature, Regular Session, 2021.

18 Section 12.059, Texas Utilities Code.

Issue 6

The State Has a Continuing Need for OPUC, but the Agency Should Strengthen Its Processes for Contracting With Legal Expert Witnesses.

Background

The Office of Public Utility Counsel (OPUC) represents the interests of residential and small commercial consumers in electric, water, and wastewater utility proceedings before the Public Utility Commission of Texas (PUC), the State Office of Administrative Hearings, and appeals of PUC decisions to state court. The agency has the authority to intervene in electric, water and wastewater, and telecommunications cases at PUC, and may represent residential consumers as a class in appeals to the Railroad Commission of Texas at the request of a municipality's governing body, though this has not occurred since 2000.[1] OPUC also represents residential and small commercial consumers as a voting board member of the Electric Reliability Council of Texas (ERCOT) and on ERCOT's Technical Advisory Committee and subcommittees.[2] In fiscal year 2021, the agency employed 12 staff and spent about $1.6 million.

Findings

Texas benefits from having an advocate to represent and protect the interests of residential and small commercial utility consumers.

The state has a continuing interest in representing residential and small commercial consumers in utility proceedings. A dedicated consumer advocate helps balance the disparity that often exists between the small consumer class and the corporations and utility companies that typically have greater expertise and resources available to effectively participate in utility proceedings. OPUC estimates its participation in 51 contested cases in fiscal year 2021 resulted in consumer savings of $173.5 million.[3] Residential and small commercial consumers will continue to need an advocate in utility matters for the foreseeable future as the changing landscape surrounding electric, water and wastewater, and telecommunications regulation drives up consumer rates.

OPUC estimates its participation in contested cases saved consumers $173.5 million.

To raise awareness of and represent consumer interests and needs, OPUC participated in 28 rulemaking and policy projects at PUC in fiscal year 2021. Project topics included oversight of wholesale electric market participants, alternative rate making mechanisms for water and wastewater utilities, and changes resulting from Winter Storm Uri. OPUC also receives and may help facilitate resolution of individual complaints from the public, including in instances where PUC lacks jurisdiction, such as for customers of municipally owned utilities. In fiscal year 2021, OPUC received 336 complaints and inquiries, with most complaints relating to billing and service outages. The table on the following page illustrates the agency's activities on behalf of residential and small commercial consumers for the last three fiscal years.

OPUC's Efforts to Support Consumers

	FY 2019	FY 2020	FY 2021
Electric Contested Cases	25	24	45
Water and Wastewater Contested Cases	5	7	6
State Court Appeals	3	2	2
PUC Rulemaking Projects	26	26	28
Complaints and Inquiries	225	187	336
Estimated Bill Savings*	$179 million	$1.2 billion	$173.5 million

* OPUC's estimated bill savings in fiscal year 2020 was impacted significantly by a single large case.

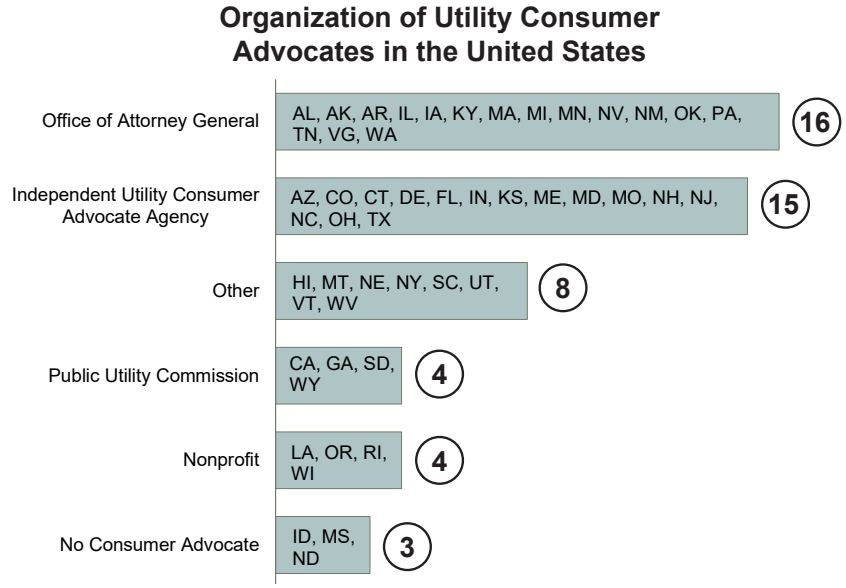
The state also benefits from having a designated representative for residential and small commercial consumers on the ERCOT Board of Directors and representatives who participate in the ERCOT stakeholder process where these consumers have a much smaller voice than industry representatives. Particularly with the changes at ERCOT following Winter Storm Uri, having an advocate to raise concerns when market decisions have a detrimental effect on certain consumers is valuable.

No substantial benefits would result from transferring OPUC's functions to a different state agency.

Most states have an independent utility consumer advocate.

Sunset staff considered organizational alternatives for administering the agency's functions, particularly given its limited staffing, but concluded no substantial benefit would result from transferring or merging functions with another state agency. As part of its analysis, Sunset staff reviewed organizational structures of utility consumer advocates in all 50 states. As shown in the chart on the following page, organizational structures vary widely, with the majority of states having a statutorily authorized independent consumer advocacy agency or housing this function within their attorney general's office.[4]

OPUC's independence allows it, as an advocate, to focus exclusively on the needs of the residential and small commercial consumers it represents. Transferring or administratively attaching OPUC to PUC could jeopardize this independence since PUC has to remain neutral, balance the interests of industry members and consumers, and weigh the public interest as a whole when making decisions. Given PUC's own resource constraints, a transfer or administrative attachment would not result in any significant cost savings. Although OPUC's duties could be transferred to the Office of the Attorney General (OAG), a similar number of staff would likely be necessary for OAG to perform OPUC's functions so again, no savings would result. Additionally, Sunset staff found no significant problems with OPUC's current operations that would necessitate a transfer.



Formalizing certain contracting processes for legal expert witnesses would ensure the agency's methods are effective and efficient.

OPUC regularly contracts with a small pool of legal expert witnesses to assist staff with contested cases before PUC and the State Office of Administrative Hearings. These individuals provide OPUC with subject matter expertise related to the facts of a given case, such as specializing in and providing testimony regarding financial components of utility rate design. The cost of OPUC's expert witness contracts varies widely depending on the needs of each individual case, ranging from just over $1,000 to $69,000 in fiscal year 2021. Overall, the agency relied on 27 contracts with seven expert witnesses valued at just over $640,000 in fiscal year 2021, but because these contracts can span multiple years, OPUC only expended $383,415.

OPUC contracts with experts to assist with contested cases.

When evaluating an agency's contracting functions, Sunset uses the general framework established in the *State of Texas Procurement and Contract Management Guide*, as well as documented standards and best practices compiled by Sunset staff.[5] As discussed below, OPUC could benefit from more formal processes and documentation surrounding its expert witness contracts.

- **No formal analysis for using outside experts.** Agencies should contract when they have a need they cannot fill with existing staff. In 2019, OPUC began solely contracting for subject matter experts rather than retaining them on staff. However, the agency did not perform a formal cost-benefit analysis of outsourcing for this expertise when the decision was made, nor since. Anecdotally, the agency believes it is using the more cost-effective approach, receiving a higher quality work product in more specialized areas and achieving more cost savings for consumers. However, OPUC's annual reports indicate consumer savings varies significantly year to year, so without a formal analysis, no documented evidence exists to support these claims.

OPUC's informal procurement process has resulted in a small pool of experts.

- **Informal contract solicitation process.** Agencies should use the procurement method appropriate to the objective for contracting to ensure they get the best value from their contracts. Although not required to go through a competitive procurement process for expert witnesses, OPUC's informal process has resulted in the agency using a small pool of experts, which it estimates totals one water and wastewater and 10 electric experts. While the highly specialized nature of the work limits the potential pool, OPUC may benefit from a request for qualifications process as a way to find new experts. Expanding the pool of witnesses is especially important since these individuals may work on contested cases for other parties and therefore be unavailable to OPUC.

In one case, OPUC had to cancel a contract after becoming aware of a conflict.

- **No formal conflict of interest disclosures.** Agencies should require potential contractors to disclose conflicts of interest and update that information throughout the term of the contract. OPUC does not require expert witnesses to sign conflict of interest disclosures and its contracts do not include any provisions to guard against conflicts. Instead, staff determine informally that no conflicts exist prior to signing a contract. In one case, this lack of formality resulted in OPUC cancelling a contract when the agency became aware of a conflict. Without documentation, the agency cannot be sure its expert witnesses are free from perceptions of impropriety and may waste limited resources contracting with individuals only to have to cancel the contract and start the process over. Because the agency intervenes in cases on behalf of residential and small commercial consumers, often against for-profit industries and utilities, ensuring the individuals working on cases have no conflicts is essential to maintaining impartiality and fairness, and ultimately the integrity of the work and public trust.

- **No performance evaluation of contracted experts.** Evaluating contractor performance as part of the contract closeout process is crucial to assessing the success of a contract. OPUC does not document expert witnesses' performance at contract closeout, relying instead on institutional knowledge. Assessing expert witness performance at the contract's conclusion would allow OPUC to document lessons learned about an individual expert and use experience to improve future vendor selection, rather than depend on institutional memory, which is especially problematic given the agency's turnover rate has ranged from 24 to nearly 76 percent annually over the last three fiscal years.

OPUC's statutory reporting requirement continues to be needed.

The Sunset Act establishes a process for the Sunset Commission to consider if reporting requirements of agencies under review need to be continued or abolished.[6] The Sunset Commission has interpreted these provisions as applying to reports that are specific to the agency and not general reporting requirements that extend well beyond the scope of the agency under review.

Reporting requirements with deadlines or that have expiration dates are not included, nor are routine notifications or notices, or posting requirements.

Statute requires OPUC to produce an annual report on the agency's activities, staff, and rate of success in representing residential and small commercial consumers appealing commission decisions during the preceding year.[7] The agency submits the report to the Senate Finance Committee, House Appropriations Committee, and legislative committees overseeing the agency. This report continues to be needed because it provides valuable information to the Legislature about OPUC's activities, enhancing the agency's transparency and accountability.

Sunset Staff Recommendations

Change in Statute

6.1 Continue OPUC for six years and remove the Sunset date of the agency's enabling statute.

This recommendation would continue OPUC until September 1, 2029, and would also remove the Sunset date of the agency's statute to ensure only the agency, not its statute, expires. Keeping the reviews of OPUC and PUC aligned promotes an efficient review of these two agencies, whose functions are intertwined.

Management Action

6.2 Direct OPUC to formalize and document certain contracting processes for legal expert witnesses.

This recommendation would direct the agency to make improvements to its contracting process for expert witnesses. At a minimum, OPUC should:

- **Conduct a formal analysis for outsourcing.** The analysis should, at a minimum, identify the challenges and potential benefits associated with retaining legal expert witnesses on staff, estimate any cost savings associated with outsourcing this function, and assess any consumer benefits. This analysis would help ensure the agency's decision to contract with legal expert witnesses is efficient, effective, and properly documented.
- **Publish a request for qualifications.** OPUC should go through a formal solicitation process at least once and if successful, should continue the practice periodically to expand its pool of potential expert witnesses.
- **Require signed conflict of interest statements from experts.** OPUC should document its experts have no conflicts of interest on a case prior to signing a contract and throughout the term of the contract. Having these signed statements would better protect the integrity of the agency's work.
- **Document expert witness performance.** OPUC should collect and use information regarding expert witness performance, particularly when considering future contract awards.

Fiscal Implication

Continuing OPUC would require an annual appropriation from the Legislature, which was $2.1 million in fiscal year 2021. The recommendations would not result in any additional fiscal impact to the state. While the contracting recommendations would require staff time, they relate to basic administrative responsibilities OPUC could implement within existing resources.

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1 All citations to Texas statutes are as they appear on http://www.statutes.legis.texas.gov/. Sections 13.003 and 101.052, Texas Utilities Code; Section 13.017, Texas Water Code.

2 Section 39.151(g-1)(2), Texas Utilities Code.

3 Office of Public Utility Counsel, *Annual Report for Fiscal Year 2021*, accessed online September 24, 2022, https://www.opuc.texas.gov/wp-content/uploads/2022/02/OPUC-FY21-Annual-Report-FINAL_signed.pdf.

4 The Other category includes states that house their utility consumer advocate in a state agency other than a dedicated independent agency, attorney general's office, or public utility commission; it also includes states that house their advocate in the legislative or executive branches. The Nonprofit category includes states that only have a nonprofit consumer advocate, not states that have both a nonprofit and governmental utility consumer advocate.

5 Texas Comptroller of Public Accounts, *State of Texas Procurement and Contract Management Guide*, Version 2.1, accessed September 23, 2022, https://comptroller.texas.gov/purchasing/publications/procurement-contract.php.

6 Sections 325.0075, 325.011(13), and 325.012(a)(4), Texas Government Code.

7 Section 13.063, Texas Utilities Code.

Appendix A | PUC Regulatory Responsibilities

The following chart summarizes PUC's varied regulatory responsibilities for key entities in the electric, water and wastewater, and telecommunications industries. The categories shown across the top of the chart represent general areas of oversight and regulation, but the specific requirements vary among the different types of entities in each category.

Type of Entity	Number of Entities (as of June 2022)	Registration Type	Rate Regulations (O = original jurisdiction; A = appellate jurisdiction)[1]	Oversight of Service or Customer Protection Requirements	Informal Complaints	Investigation and Enforcement
Electric Regulation						
Investor-Owned Utility (El Paso Electric)	4	Certificate of Convenience and Necessity (CCN)	O - outside city limits A - inside city limits	✓	✓	✓
Transmission and Distribution Utility (Oncor Electric)	4 Transmission and distribution 6 Transmission only	CCN	O - outside city limits and wholesale transmission service within ERCOT A - inside city limits	✓	✓	✓
Municipally Owned Utility (Austin Energy)	59 Within ERCOT 14 Outside ERCOT	CCN[3]	A - outside city limits			✓[2]
Electric Cooperative (Big Country Electric Cooperative)	50 Within ERCOT 23 Outside ERCOT	CCN[3]				✓[4]
Power Generation Company (BP Chemicals)	578	Registration				✓
Retail Electric Provider (Discount Power)	128	Certification		✓	✓	✓
Qualified Scheduling Entity (Luminant)	999	None				✓
Aggregator (Texas Cattle Feeders Association)	185	Registration		✓	✓	✓
Broker (Texas Utility Advisors, LLC)	1,679	Registration		✓	✓	✓
Power Marketer (Duke Energy)	350	Registration				

Appendix A

Type of Entity	Number of Entities (as of June 2022)	Registration Type	Rate Regulations (O = original jurisdiction; A = appellate jurisdiction)[1]	Oversight of Service or Customer Protection Requirements	Informal Complaints	Investigation and Enforcement
Water and Wastewater Regulation						
Investor-Owned Utility (Aqua Texas, Inc.)	431 Water 138 Wastewater	CCN	O - outside city limits A - inside city limits[5]	✓	✓	✓
Municipally Owned Utility (City of Georgetown)	956 Water 529 Wastewater	None[6]	A - outside city limits		✓[7]	✓[8]
Water and/or Sewer District (Guadalupe-Blanco River Authority)	927 Water 159 Wastewater	None[6]	A		✓[7]	✓[8]
Water Supply Corporation (El Oso Water Supply Corporation)	752 Water 61 Wastewater	CCN[9]	A		✓[7]	✓[8]
Telecommunications Regulation						
Incumbent Local Exchange Carriers (AT&T)	61	CCN or Certificate of Operating Authority	O[10]	✓	✓	✓
Competitive Local Exchange Carriers (Astound Broadband)	292	Certificate of Operating Authority or Service Provider Certificate of Operating Authority		✓	✓	✓
Automatic Dial Announcing Devices (A to Z Call Center Services, LLC)	303	Permit		✓	✓	✓
Interexchange Carriers (Windstream)	207	Registration		✓	✓	✓
Pay Telephone Service Provider (Crown Correctional Telephone)	18	Registration	O[11]	✓	✓	✓
Cable and Video Service Provider (Spectrum)	79	State-Issued Certificate of Franchise Authority				✓

Appendix A

[1] Original jurisdiction refers to circumstances where the Public Utility Commission of Texas (PUC) has authority to review and approve or modify the rates an entity charges. Appellate jurisdiction refers to circumstances where PUC has the authority to review and approve or modify the ratemaking decision of another entity after receiving an appeal from affected customers or parties. For a more thorough explanation of PUC's rate jurisdiction over water entities, see Appendix G.

[2] Subject to PUC regulation of wholesale transmission services.

[3] PUC issues certificates of convenience and necessity (CCNs) for service area boundary changes or service area exceptions.

[4] Subject to PUC regulation of wholesale transmission services. Section 41.060 of the Texas Utilities Code, also requires PUC to notify each cooperative of a complaint received from its customers.

[5] An investor-owned water utility with fewer than 15 potential service connections is not required to get a CCN. The exemption does not apply to wastewater utilities.

[6] Municipally owned water and wastewater utilities, and water or sewer districts may voluntarily choose to get a CCN.

[7] Depending on the nature of the complaint and whether the entity has or is required to have a CCN, PUC may have jurisdiction to take complaints related to a municipally owned utility, water or sewer district, or water supply corporation.

[8] PUC's enforcement authority over municipally owned water and wastewater utilities, water and sewer districts, and water supply corporations is limited in scope, as many of these entities' actions lie outside the agency's jurisdiction. For a more thorough explanation of PUC's jurisdiction over water entities, see Appendix G.

[9] A water supply corporation with fewer than 15 potential service connections is not required to get a CCN. The exemption does not apply to wastewater utilities.

[10] In practice, PUC's rate regulation of incumbent local exchange carriers is minimal. Statute provides for five classifications of regulation, including deregulation. The largest incumbent local exchange carriers are deregulated.

[11] Subject to rate caps PUC establishes.

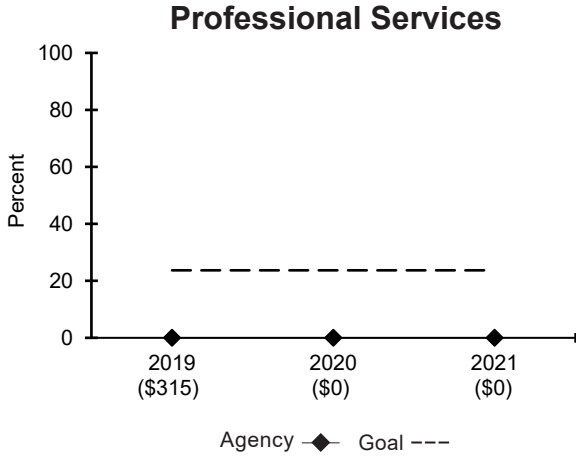
Appendix B

Public Utility Commission Historically Underutilized Businesses Statistics, FYs 2019-21

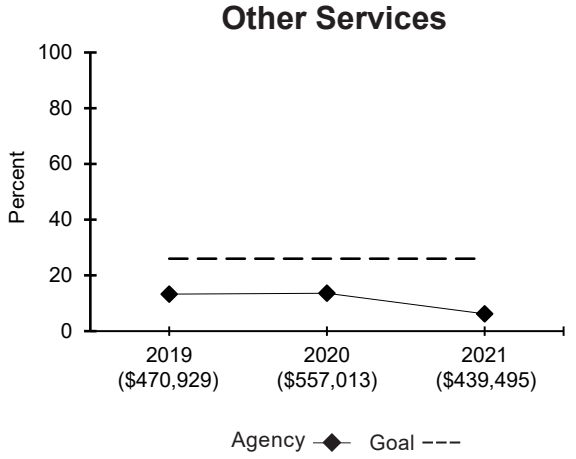
The Legislature has encouraged state agencies to increase their use of historically underutilized businesses (HUBs) to promote full and equal opportunities for all businesses in state procurement. The Legislature also requires the Sunset Commission to consider agencies' compliance with laws and rules regarding HUB use in its reviews.[1]

The following material shows trend information for the Public Utility Commission of Texas' use of HUBs in purchasing goods and services. The agency maintains and reports this information under guidelines in statute.[2] In the charts, the dashed lines represent the goal for HUB purchasing in each category, as established by the comptroller's office. The diamond lines represent the percentage of agency spending with HUBs in each purchasing category from fiscal years 2019-21. Finally, the number in parentheses under each year shows the total amount the agency spent in each purchasing category.

The agency exceeded the state goal for HUB spending in the commodities category in fiscal year 2019 but did not meet the goal in fiscal years 2020 and 2021. The agency did not meet the state goal in the other services category in each of the last three fiscal years. The agency did not have any spending in the heavy construction, building construction, or special trade categories in the last three fiscal years, and no spending in the professional services category in the last two fiscal years.

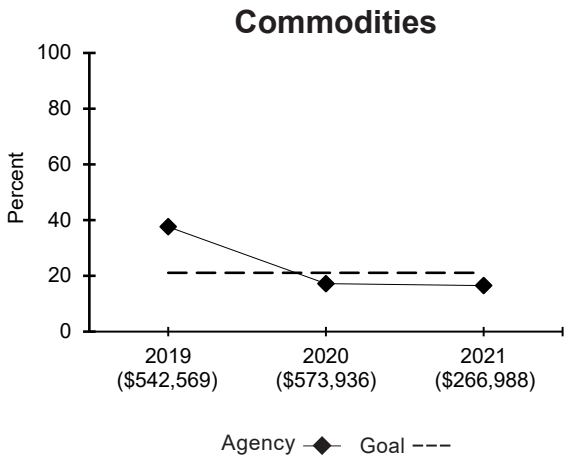


The agency did not have any spending in the professional services category in the last two fiscal years. The agency fell short of the state goal for HUB spending in the category in fiscal year 2019, but its spending was minimal.



The agency fell short of the state goal for HUB spending in the other services category in each of the last three fiscal years.

Appendix B



The agency exceeded the state goal for HUB spending in the commodities category in fiscal year 2019 but fell short of the goal in fiscal years 2020 and 2021.

[1] All citations to Texas statutes are as they appear on http://www.statutes.legis.texas.gov/. Section 325.011(9)(B), Texas Government Code.

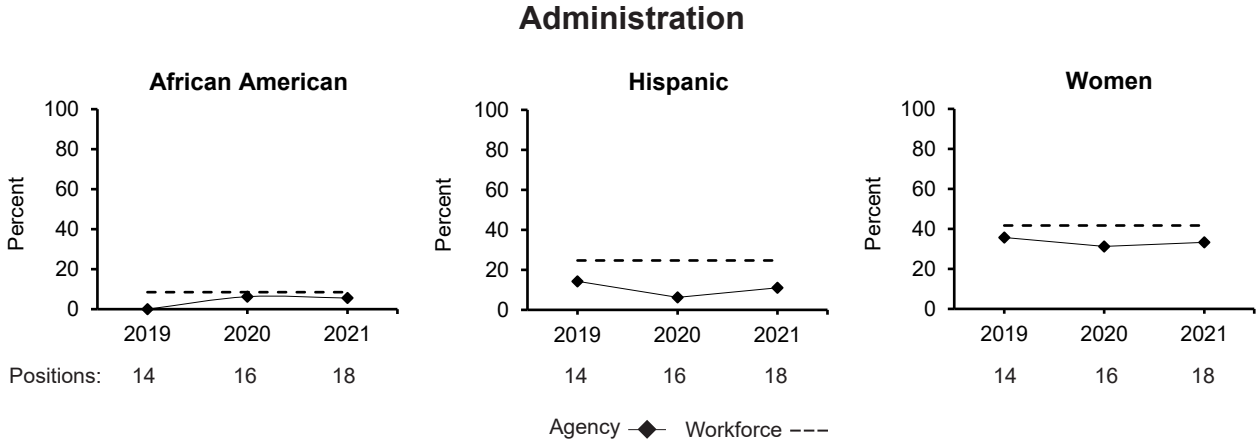
[2] Chapter 2161, Texas Government Code.

Appendix C

Public Utility Commission Equal Employment Opportunity Statistics, FYs 2019-21

In accordance with the requirements of the Sunset Act, the following material shows trend information for the employment of minorities and women in all applicable categories by the Public Utility Commission of Texas.[1] The agency maintains and reports this information under guidelines established by the Texas Workforce Commission.[2] In the charts, the dashed lines represent the percentages of the statewide civilian workforce for African Americans, Hispanics, and women in each job category.[3] These percentages provide a yardstick for measuring agencies' performance in employing persons in each of these groups. The diamond lines represent the agency's actual employment percentages in each job category from fiscal years 2019-21.

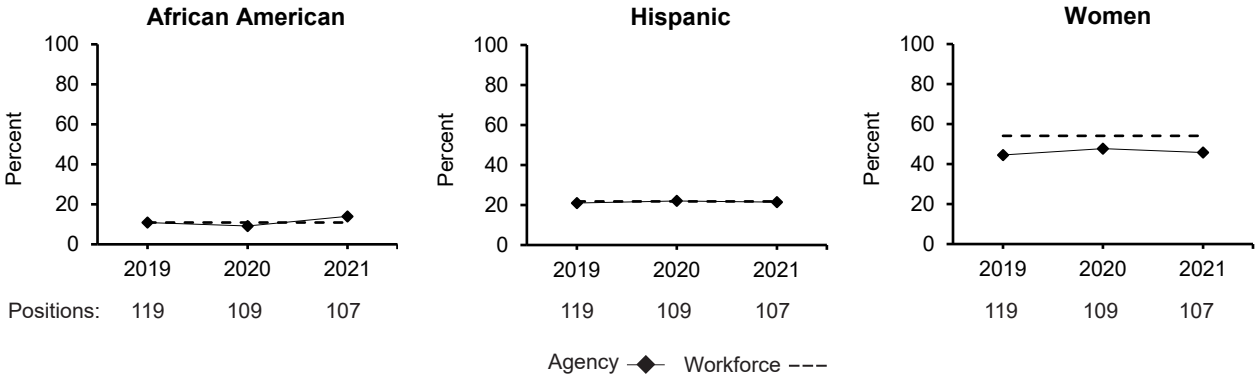
In each of the last three fiscal years, the agency fell short of statewide civilian workforce percentages for African Americans in the administration and technical categories but nearly met or exceeded the percentage in the professional and administrative support categories. The agency fell short of statewide civilian workforce percentages for Hispanics in the administration and technical categories but nearly met or exceeded the percentages in the professional and administrative support categories. The agency fell short of statewide civilian workforce percentages for women in the administration, professional, and technical categories but exceeded the percentages in administrative support. The agency did not have any employees in the service/maintenance, skilled craft, or protective services categories.



The agency fell short of civilian workforce percentages in all three categories in each of the last three fiscal years. However, the agency had few employees in this category.

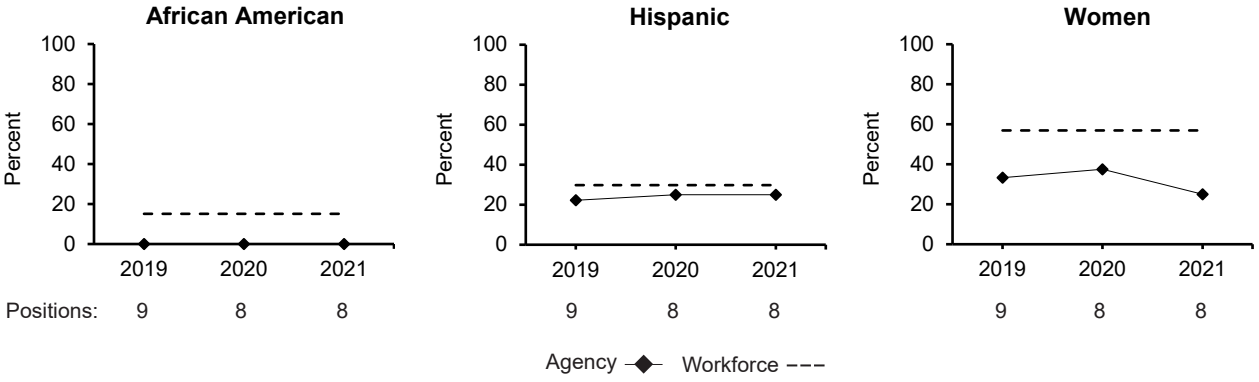
Appendix C

Professional



The agency nearly met or exceeded civilian workforce percentages for African Americans and Hispanics in each of the last three fiscal years but fell short of the percentage for women in the same period.

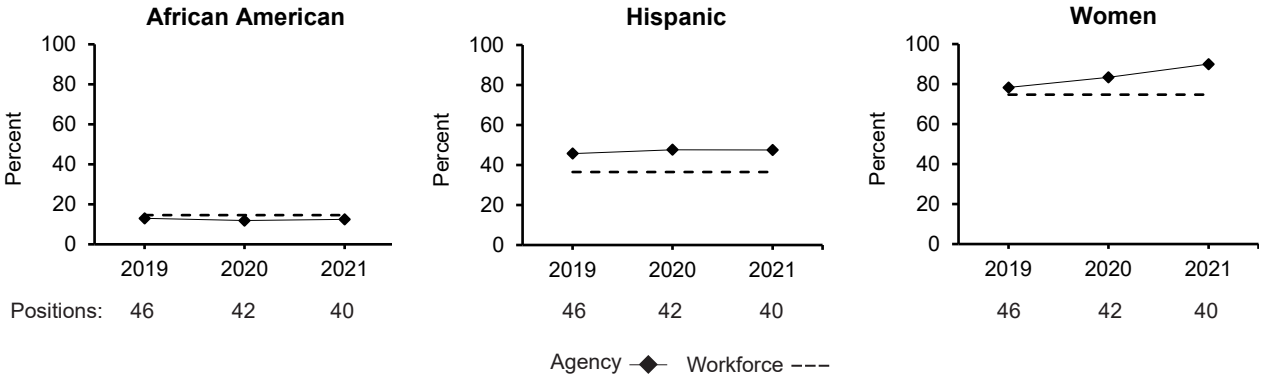
Technical



The agency fell short of the civilian workforce percentages in all three categories in each of the last three fiscal years. However, the agency had very few employees in this category.

Appendix C

Administrative Support



The agency nearly met or exceeded civilian workforce percentages in all three categories in each of the last three fiscal years.

1 All citations to Texas statutes are as they appear on http://www.statutes.legis.texas.gov/. Section 325.011(9)(A), Texas Government Code.

2 Section 21.501, Texas Labor Code.

3 Based on the most recent statewide civilian workforce percentages published by the Texas Workforce Commission.

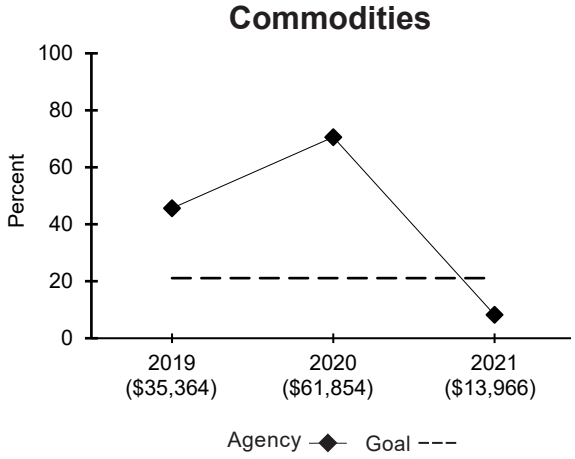
Appendix D

Office of Public Utility Counsel Historically Underutilized Businesses Statistics, FYs 2019-21

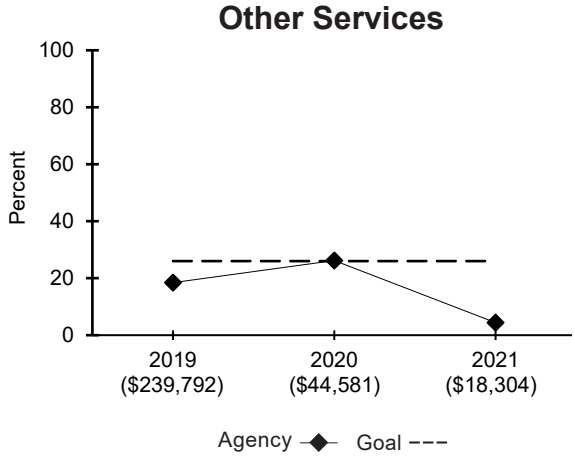
The Legislature has encouraged state agencies to increase their use of historically underutilized businesses (HUBs) to promote full and equal opportunities for all businesses in state procurement. The Legislature also requires the Sunset Commission to consider agencies' compliance with laws and rules regarding HUB use in its reviews.[1]

The following material shows trend information for the Office of Public Utility Counsel's use of HUBs in purchasing goods and services. The agency maintains and reports this information under guidelines in statute.[2] In the charts, the dashed lines represent the goal for HUB purchasing in each category, as established by the comptroller's office. The diamond lines represent the percentage of agency spending with HUBs in each purchasing category from fiscal years 2019-21. Finally, the number in parentheses under each year shows the total amount the agency spent in each purchasing category.

The agency did not spend any funds in the heavy construction, building construction, special trade, or professional services categories, and does not include contracts with expert witnesses in its HUB reporting. The agency met state goals for HUB spending in the commodities category in two of the last three fiscal years but only once in the other services category. However, the agency has minimal overall spending in both categories.



The agency met the state goal in the commodities category in two of the last three fiscal years. The agency did not meet the goal in fiscal year 2021, but its spending was minimal.



The agency met the state goal in the other services category only once in the last three fiscal years. However, the agency's spending in the category is declining.

Appendix D

[1] All citations to Texas statutes are as they appear on http://www.statutes.legis.texas.gov/. Section 325.011(9)(B), Texas Government Code.

[2] Chapter 2161, Texas Government Code.

Appendix E

Winter Storm Uri and Legislative Response

The purpose of this appendix is to briefly recap Winter Storm Uri and key actions the Legislature took in response to the storm's impact on the Texas electric grid. The appendix does not describe all the events leading up to the storm or evaluate the causes of blackouts and other problems, which state and federal entities have analyzed extensively.

Winter Storm Uri

On February 10, 2021, temperatures across Texas began to drop as a cold front moved in. By the time Valentine's Day arrived, each of the state's 254 counties was under a winter storm and hard freeze warning, which had never before happened.[1] Demand for electricity set winter records as people stayed indoors and their heaters worked overtime.[2] The next morning, February 15, brought the coldest temperatures ever recorded in some areas of the state.[3]

Throughout the cold weather event, several of the state's electricity generators had been failing due, in large part, to problems resulting from the freezing temperatures, and this trend accelerated during the early morning of the 15th. Just after 1:20 a.m., the Electric Reliability Council of Texas (ERCOT) initiated controlled outages — a process called load shed — to match the supply and demand for electricity. Despite shedding load, the electric grid hit a crucial threshold at around 1:50 a.m. To ensure the integrity of the grid, ERCOT significantly expanded the scale of the outages. The electric grid did not return to normal operations until the morning of February 19.[4] A University of Houston study describes the scale of the natural disaster:

> "More than two out of three (69 percent) Texans lost electrical power at some point [during] February 14-20, for an average of 42 hours, during which they were without power on average for one single consecutive bloc of 31 hours, rather than for short rotating periods. Almost half (49 percent) of Texans lost access to running water during this week period, with the average Texan who lost running water without it for 52 hours. During this same timeframe, the average Texan with running water could not drink it for an average of 40 hours.[5]"

As highlighted in the accompanying textbox, Winter Storm Uri's human toll was significant and the storm exposed needed improvements to the electric grid's reliability.[6] The Legislature responded by passing numerous reforms during the 2021 regular legislative session, several of which are summarized on the following pages.

The Human Toll of Winter Storm Uri

The Texas Department of State Health Services confirmed 246 deaths related to Winter Storm Uri, which included victims ranging from less than 1 year old to 102 years old. Hypothermia was the primary cause of the death for 161 people. The storm and power outages also exacerbated pre-existing illnesses, leading to the deaths of 25 people like the 83-year old Katy resident who lost power to the respirator he needed to live. With poor road conditions, 22 people died in motor vehicle accidents, including six people killed in the massive pileup on I-35 in Fort Worth. State researchers linked 19 deaths to carbon monoxide exposure, and emergency services in Harris County received more calls about carbon monoxide incidents than they could track. A grandmother and her three grandchildren likely numbered among the 10 Texans who died due to fires when attempts to warm their home ended in tragedy. The remaining nine deaths resulted from other causes, such as falls and slips on ice.

Appendix E

Senate Bill 2

Senate Bill 2 overhauled the governance structure of the ERCOT Board of Directors.[7] Prior to the Legislature passing SB 2, half of ERCOT's 16-member board represented stakeholders in the electric market, meaning those board members had a direct financial stake in the decisions they voted on.[8] SB 2 replaced this structure and created a new 11-member board with greater independence from the electric market it oversees. The governor, lieutenant governor, and speaker of the House of Representatives appoint members to a three-person committee, which now selects eight of the 11 ERCOT board members.[9] Among other requirements, these eight members must have no fiduciary duty or assets in the electric market in the ERCOT region, and all board members must reside in Texas.[10] SB 2 also strengthened the Public Utility Commission of Texas' (PUC) oversight role by requiring the commission to review and approve all ERCOT protocol revisions.[11]

Senate Bill 2154

Senate Bill 2154 made similar adjustments to PUC's governance structure. The bill increased the number of full-time commissioners from three to five and changed the eligibility requirements to allow three commissioners to come from fields outside of public utility regulation — such as engineering and finance — to broaden the commission's expertise.[12] SB 2154 also required all commissioners to reside in Texas.[13]

Senate Bill 3

Senate Bill 3 was an omnibus bill that included several distinct reform efforts aimed at preparing for, preventing, and responding to weather emergencies and power outages.[14] The bill requires PUC to adopt rules requiring generation companies and electric utilities in the ERCOT region to weatherize their assets and includes new restrictions on planned generation outages to ensure the electric grid is better prepared for future extreme weather events.[15] To improve public communication during emergencies, SB 3 requires the Texas Department of Public Safety, in cooperation with PUC and other agencies, to develop an emergency alert system when power supply may be inadequate to meet demand.[16] The storm also highlighted areas for improvement in coordination between state regulatory agencies, so the Legislature created and formalized new interagency committees and councils like the Texas Energy Reliability Council and the Texas Electricity Supply Chain Security and Mapping Committee.[17] Additionally, the legislature directed PUC to review ancillary services and the grid's dispatchable generation needs, an effort the agency is currently undertaking through its Wholesale Electric Market Design project.[18]

Securitization[19]

The price of electricity increased dramatically during Winter Storm Uri, resulting in several market participants defaulting on payments to ERCOT. Under normal circumstances, ERCOT would pass these default costs on to the market, which would ultimately be passed on to retail customers.[20] The Legislature passed two key bills extending the use of a debt financing tool known as securitization to address the financial aftermath of the extreme weather event.[21] The *Securitization in Texas* textbox on the following page briefly describes securitization and previous examples when the state has relied on it in the electric market.

Appendix E

Securitization in Texas

Securitization can be highly complex but is somewhat akin to taking out a mortgage with a low interest rate and a long repayment term. The state comptroller's office explains securitization as "the practice of issuing low-interest bonds funded by small fees charged to customers over an extended period…as an alternative to passing on the costs to customers all at once."

1999: As part of the restructuring of the electric market, Senate Bill 7 authorized securitization to make utilities whole for investments they made under the previous regulatory structure.

2005: In the aftermath of Hurricane Rita, House Bill 163 authorized securitization to recover costs related to the storm.

2009: Senate Bill 769 authorized securitization for costs relating to system restoration after natural disasters.

2021: Several bills authorized securitization to manage certain costs incurred during Winter Storm Uri.

- House Bill 4492 authorized the use of two different securitizations to finance certain costs and expenses associated with Winter Storm Uri. The bill authorized around $3 billion in financing, $800 million of which came from the Economic Stabilization Fund (also known as the Rainy Day Fund).[22] Together, these securitizations stabilized the ERCOT market by allowing market participants who accrued "extraordinary" charges during the storm to collect payments from customers' bills over the course of 30 years rather than all at once. Based on current information available on PUC's Power to Choose website, the impact to residential customers is less than $1 per month based on an average monthly electricity use of 1,000 kilowatt-hours.

- Senate Bill 1580 specifically authorized electric cooperatives to securitize their expenses incurred during the storm. Neither PUC nor ERCOT play a significant role in any securitization a cooperative chooses to implement.[23]

Appendix E

[1] Zamora-Nipper, Briana, "Timeline: Inside the 2021 winter storm, power crisis," Click 2 Houston, accessed online September 25, 2022, https://www.click2houston.com/features/2022/02/15/timeline-inside-the-2021-winter-storm-power-crisis/.

[2] Federal Energy Regulatory Commission (FERC), "The February 2021 Cold Weather Outages in Texas and the South Central United States", p. 15, accessed online September 25, 2022, https://www.ferc.gov/media/february-2021-cold-weather-outages-texas-and-south-central-united-states-ferc-nerc-and/.

[3] Zamora-Nipper, Briana, "Timeline: Inside the 2021 winter storm, power crisis;" FERC, *The February 2021 Cold Weather Outages in Texas and the South Central United States*, pp. 12-13.

[4] University of Texas at Austin, *The Timeline and Events of the February 2021 Texas Electric Grid Blackouts*, p.15-28, accessed online September 25, 2022, https://www.puc.texas.gov/agency/resources/reports/UTAustin_(2021)_EventsFebruary2021TexasBlackout_(002)FINAL_07_12_21.pdf.

[5] University of Houston Hobby School of Public Affairs, "Winter Storm 2021 and the Lifting of COVID-19 Restrictions in Texas," accessed online September 25, 2022, https://uh.edu/hobby/winter2021/.

[6] Texas Department of State Health Services, *February 2021 Winter Storm-Related Deaths - Texas*, accessed online September 25, 2022, https://www.dshs.texas.gov/news/updates/SMOC_FebWinterStorm_MortalitySurvReport_12-30-21.pdf; FERC, *The February 2021 Cold Weather Outages in Texas and the South Central United States*, pp. 8-9; Zamora-Nipper, Briana, "Timeline: Inside the 2021 winter storm, power crisis,"; Mycah Hatfield, "Grandma and 3 children die in Sugar Land house fire, officials say," ABC 13, accessed online October 5, 2022, https://abc13.com/house-fire-sugar-land-fatal-father-and-two-children/10344031/.

[7] Chapter 425 (SB 2), Acts of the 87th Texas Legislature, Regular Session, 2021; Senate Research Center, *Bill Analysis S.B. 2 - ERCOT Board Reform*, accessed online September 25, 2022, https://capitol.texas.gov/tlodocs/87R/analysis/pdf/SB00002F.pdf#navpanes=0.

[8] Sunset Advisory Commission, *Public Utility Commission of Texas, Electric Reliability Council of Texas, and Office of Public Utility Counsel - Sunset Final Report*, 2011, p.55, accessed online September 25, 2022, https://www.sunset.texas.gov/public/uploads/files/reports/PUC%2C%20ERCOT%2C%20OPUC%20Staff%20Report%202011%2082nd%20Leg.pdf.

[9] The remaining three board members are the chief executive officer of the Electric Reliability Council of Texas (ERCOT), chair of the Public Utility Commission of Texas, and public counsel of the Office of Public Utility Counsel (OPUC), who serve in an ex-officio capacity. The public counsel of OPUC is a voting member of the board.

[10] All citations to Texas statutes are as they appear on http://www.statutes.legis.texas.gov/, Section 39.151(g), Texas Utilities Code; Texas Comptroller of Public Accounts, Spencer Grubbs, "Winter Storm Uri 2021 - The 87th Legislature Takes on Electricity Reform," October 2021, accessed online September 25, 2022, https://comptroller.texas.gov/economy/fiscal-notes/2021/oct/winter-storm-reform.php.

[11] Senate Research Center, *Bill Analysis S.B. 2 - ERCOT Board Reform*, accessed online September 25, 2022, https://capitol.texas.gov/tlodocs/87R/analysis/pdf/SB00002F.pdf#navpanes=0; Section 39.151(d), Texas Utilities Code.

[12] Sections 1(a) and 2(a), Chapter 1052 (SB 2154), Acts of the 87th Texas Legislature, Regular Session, 2021.

[13] Section 2(a)(3), SB 2154, 2021.

[14] Chapter 426 (SB 3), Acts of the 87th Texas Legislature, Regular Session, 2021; Texas Comptroller of Public Accounts, Spencer Grubbs, "Winter Storm Uri 2021 - The 87th Legislature Takes on Electricity Reform."

[15] Section 35.0021, Texas Utilities Code; Section 38.075, Texas Utilities Code.

[16] Section 411.301, Texas Government Code.

[17] Section 418.301, Texas Government Code; Section 38.201, Texas Utilities Code.

[18] Section 35.004, Texas Utilities Code; Section 39.159, Texas Utilities Code.

[19] Explanations of the technical details of how securitized bonds are created and sold fall outside the scope of this appendix.

[20] Texas Comptroller of Public Accounts, Spencer Grubbs, "Winter Storm Uri 2021 - The 87th Legislature Takes on Electricity Reform."

[21] The Legislature also passed SB 1520 to authorize securitization for the natural gas market.

[22] Chapter 908 (HB 4492), Acts of the 87th Texas Legislature, Regular Session, 2021.

[23] Chapter 950 (SB 1580), Acts of the 87th Texas Legislature, Regular Session, 2021.

Appendix F

PUC and ERCOT Reporting Requirements

Report Title	Legal Authority	Description	Author	Recipient	Frequency	Sunset Evaluation
Statutorily Required Reports						
1. Biennial Agency Report	Section 12.203, Texas Utilities Code	Reports on the electric, water and wastewater, and telecommunications utilities regulated by PUC and provides recommendations for modification and improvement of the agency's statutory authority and for the improvement of utility regulation in general.	PUC	Legislature	Biennial	Continue and clarify that water and wastewater utility regulation is part of the reporting requirement The two individual Scope of Competition reports for electric and telecommunications markets would be consolidated into this report
2. Report on Scope of Competition in Electric Markets	Section 31.003, Texas Utilities Code	Reports on the scope of competition in electric markets, including an assessment of the effect of competition on the rates and availability of electric services for residential and small commercial customers, and PUC action related to competition in the regulated market. Provides legislative recommendations to promote the public interest in the context of a partially competitive electric market.	PUC	Legislature	Biennial	Consolidate into *Biennial Agency Report*
3. Report on Scope of Competition in Telecommunications Markets	Section 52.006, Texas Utilities Code	Reports on the scope of competition in regulated telecommunications markets, including the rates and availability of telecommunications services for residential and business customers, PUC action related to competition in the regulated markets, and effects of competition on universal telecommunications services and on customers in competitive and noncompetitive markets, including rural areas. Provides legislative recommendations to promote the public interest in the context of a partially competitive telecommunications market.	PUC	Legislature	Biennial	Consolidate into *Biennial Agency Report*

Report Title	Legal Authority	Description	Author	Recipient	Frequency	Sunset Evaluation
4. ERCOT Performance Report	Section 39.151(d-3), Texas Utilities Code	Reports on ERCOT's performance.	PUC	Lieutenant Governor, Speaker of the House, appropriate legislative committees	At the time PUC approves ERCOT's budget	Continue
5. Report on Constraints and Needs	Section 39.155(b), Texas Utilities Code	Identifies existing and potential transmission and distribution constraints and system needs within the ERCOT region, and alternatives and recommendations for meeting those needs.	ERCOT	PUC	Annual	Consolidate into a new *Electric Industry Report*
6. Grid Reliability Assessment	Section 39.159, added by SB 1281 (87R), Texas Utilities Code	Assesses the grid's reliability in extreme weather scenarios, considering the impact of different levels of thermal and renewable generation available. Recommends transmission projects that may increase the grid's reliability in extreme weather scenarios.	ERCOT	None specified	Biennial	Consolidate into a new *Electric Industry Report*
7. Report on Need for Increased Transmission and Generation Capacity (also known as Long Term System Assessment Report)	Section 39.904(k), Texas Utilities Code	Reports on the need for increased transmission and generation capacity throughout the state over a 15-year planning horizon and provides legislative recommendations.	PUC, ERCOT	Legislature	Biennial	Consolidate into a new *Electric Industry Report*
8. Report on Competitive Renewable Energy Zones	Section 39.904(j), Texas Utilities Code	Reports on PUC's implementation of Competitive Renewable Energy Zones, including estimated costs of transmission improvements per zone and an evaluation of the effects additional renewable generation has on system reliability.	PUC	Legislature	Biennial	Abolish
9. Weather Emergency Preparedness Report	Section 186.007, Texas Utilities Code	Reports on emergency operations plans filed with PUC, the ability of the electric grid to withstand extreme weather events, and legislative recommendations for improving emergency operations plans.	PUC	Legislature, Lieutenant Governor, Speaker of the House	Biennial	Continue

Report Title	Legal Authority	Description	Author	Recipient	Frequency	Sunset Evaluation
10. Report on the Usage of the Texas No-Call List	Section 304.201, Texas Business and Commerce Code	Reports on the number of telephone numbers included on the no-call list, telemarketing complaints received by PUC, and enforcement actions taken by PUC. Provides legislative recommendations.	PUC	Lieutenant Governor, Speaker of the House	Biennial	Abolish
11. Rules Governing Conflicts of Interest	Non-codified provision of SB 3 (87R)	Reports on the effects of statutes, rules, protocols and bylaws that apply to conflicts of interest for PUC commissioners and ERCOT board members, including the effect these have on the ability of PUC and ERCOT to fulfill their duties.	PUC, ERCOT	Legislature	Annual	Continue and codify in statute
Non Statutorily Required ERCOT Reports						
12. Seasonal Assessment of Resource Adequacy Report	PUC Rule 25.362(i)(2)(H); ERCOT Nodal Protocols Section 3.2	Assesses the impact of several variables in a range of risk scenarios, including extreme weather, that may affect the ability of generation capacity to meet peak demand on the grid during a particular season.	ERCOT	PUC, market participants, and stakeholders	Seasonal	ERCOT review in coordination with PUC
13. Capacity, Demand, and Reserves Report	PUC Rule 25.505; ERCOT Nodal Protocols Section 3.2.6	Provides 10-year forecast of peak demand, generation capacity, and Planning Reserve Margins for summer and winter seasons. The Planning Reserve Margin represents the ability of generation capacity to meet higher-than-expected peak demand.	ERCOT	PUC, market participants, and stakeholders	Biannual	ERCOT review in coordination with PUC
14. Regional Transmission Plan Report	ERCOT Nodal Protocols Section 3.11	Evaluates transmission system needs within ERCOT over a six-year planning horizon.	ERCOT	PUC, market participants, and stakeholders	Annual	ERCOT review in coordination with PUC

Appendix G

PUC Water and Wastewater Jurisdiction

Entity	PUC Jurisdiction and Regulatory Role[1]
Investor-Owned Utility (IOU)[2] Water or wastewater utility owned by an individual, partnership, corporation, or homeowners association	• PUC has original jurisdiction over retail rates outside a city • PUC has appellate jurisdiction over retail rates inside a city if the lesser of 10 percent or 10,000 customers protest the rate, or a party to a rate case before the city appeals the city's decision to PUC • PUC issues certificates of convenience and necessity (CCNs), which allow an entity to operate within a defined service area and which IOUs must obtain • PUC has original jurisdiction over the tariff and customer service policies of IOUs, unless the IOU is within a city and the city has original jurisdiction over the IOU tariff and service policies • PUC conducts financial, managerial, and technical reviews of IOUs • PUC approves sales, transfers, and mergers involving IOUs • PUC may review IOU audits, financials, and revenue reports
Municipally Owned Utility (MOU)[3] Water or wastewater utility owned by a city, county, village, or other similar entity	• PUC has appellate jurisdiction over retail rates if the lesser of 10 percent or 10,000 customers outside a city protest the rate • PUC issues CCNs, which MOUs may, but are not required to, obtain; if the MOU has a CCN it may, but is not required to, request PUC approval of a sale, transfer, or merger • MOUs approve their own tariff and customer service policies
Water and/or Sewer District Local governmental entity, such as a municipal utility district, water control and improvement district, special utility district, fresh water supply district, or river authority	• PUC has appellate jurisdiction over retail rates if the lesser of 10 percent or 10,000 customers protest the rate • PUC issues CCNs, which districts have the option to obtain; PUC may approve a sale, transfer, or merger if the district has a CCN • PUC tariff and customer service policies do not apply
Water Supply Corporation (WSC)[4] Nonprofit water supply or sewer service corporation owned and controlled by its members	• PUC has appellate jurisdiction over retail rates if 10 percent or more of customers protest • PUC issues CCNs, which WSCs must obtain • WSC boards set their own tariff and customer service policies, but must file their tariffs with PUC • PUC approves sales, transfers, and mergers involving WSCs
Affected County County within 50 miles of the U.S.-Mexico border with statutory authority to provide water or sewer utility service	• PUC has appellate jurisdiction over retail rates if the lesser of 10 percent or 10,000 customers protest the rate • PUC issues CCNs, which affected counties must obtain • Affected counties must file their tariffs with PUC • PUC approves sales, transfers, and mergers involving affected counties

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[1] Original jurisdiction refers to circumstances where the Public Utility Commission of Texas (PUC) has authority to review and approve or modify the rates an entity charges. Appellate jurisdiction refers to circumstances where PUC has the authority to review and approve or modify the ratemaking decision of another entity after receiving an appeal from affected customers or parties. This appendix reflects PUC's jurisdiction over retail rates and does not reflect that it has appellate jurisdiction over wholesale water and wastewater rates charged by one retail public utility to another.

[2] An investor-owned water utility (IOU) with fewer than 15 potential service connections, known as an "exempt IOU," is not required to get a certificate of convenience and necessity (CCN). The exemption does not apply to wastewater utilities. PUC has appellate jurisdiction over the rates of these exempt IOUs if 50 percent of customers protest the rate.

[3] Other types of municipally owned utilities include a municipal water district, town sanitary district, utility district, public inland lake and rehabilitation district, or a federal, state, county or municipally owned institution for congregate care or correction.

[4] A water supply corporation (WSC) with fewer than 15 potential service connections, known as an "exempt WSC," is not required to get a CCN. The exemption does not apply to wastwater utilities. PUC does not have appellate jurisdiction over the rates of these exempt WSCs.

Appendix H | Glossary of Terms

This glossary is intended to provide an overview of key terms commonly used in the industries PUC oversees, but is not meant to be exhaustive and may not reflect the statutory definitions of these terms. Words in italics reference other definitions within the glossary.

Aggregator — a person registered with PUC that aggregates multiple customers for the purpose of negotiating or contracting electricity rates with a *retail electric provider*.

Ancillary service — a broadly used term to refer to any market service that is designed to ensure the continuous balance of electricity supply and demand. For example, a company might bid into the market that it has a certain amount of electricity available to meet a sudden shortfall in supply.

Automatic Dial Announcing Device (ADAD) — a device that automatically dials a telephone number and then plays a recorded message or leaves a recorded message on voicemail.

Basic local exchange service — residential or business local telephone service. Includes primary directory listings, tone dialing service, access to operator services, access to directory assistance services, access to 911 service, the ability to report service problems seven days a week, and Lifeline and TexasRelay services.

Broker — a person registered with PUC that provides advice or acts on behalf of a customer regarding the selection of or a product or service offered by *a retail electric provider*.

Cable or video service provider — a company that provides video service to customers through cable, fiber optics, or phone lines.

Capacity market — a type of *competitive wholesale electric market* under which *power generation companies* receive compensation for reserving generation capacity in addition to compensation for electricity produced. See also energy-only market.

Certificate of Convenience and Necessity (CCN) — a certificate issued by PUC granting a water or wastewater utility, *electric utility*, or *telecommunications carrier* the authority to operate in a specific service area, including expansion or construction within that area such as the construction of new electric transmission lines.

Certificate of Franchise Authority — a certificate issued by PUC granting a *cable* or *video service provider* the authority to construct and operate a cable or video services network in the public rights-of-way.

Certificate of Operating Authority (COA) — a certificate issued by PUC granting a *competitive local exchange carrier* the authority to operate in a specific service area, with an obligation to offer basic local service to each customer in that area.

Competitive local exchange carrier (CLEC) — a *telecommunications carrier* that competes with other CLECs or *incumbent local exchange carriers* in providing telephone service in a service area.

Competitive retail area — areas within the *ERCOT region* where customers may purchase electric service from a *retail electric provider*.

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Competitive retail electric market — an economic system for the sale of electricity to end-users (customers) that relies on competition among *retail electric providers* to set retail electricity rates. Since *retail electric providers* do not own transmission or distribution infrastructure, they must purchase delivery service from a *transmission and distribution utility* to move electricity purchased from generators to customers.

Competitive wholesale electric market — an economic system for the production and sale of wholesale electricity relying on competitive forces of supply and demand rather than PUC regulation to set wholesale electricity rates in the ERCOT region. Load serving entities negotiate with power generation companies to purchase electricity for a particular price to meet most of their customers' demand.

Congestion — a condition when a transmission line's capacity is limited, reducing the amount of electricity it can carry. Congestion acts as a chokepoint for electricity, limiting the supply of electricity to some areas and driving up the price as demand increases.

Congestion revenue right — a financial instrument *market participants* can use for hedging or speculation in the electric market.

Congestion revenue right account holder — a *market participant* that meets certain ERCOT requirements and is certified by ERCOT to purchase *congestion revenue rights* from ERCOT.

Direct current (DC) tie — An interconnection of transmission between ERCOT and neighboring electric grids. DC ties are non-synchronous, meaning the two sides of the DC tie operate independently, and only provide power to one another on demand. Several DC ties connect the *ERCOT grid* with outside grids in the U.S. and Mexico.

Deregulated exchange — a *telecommunications exchange* that meets certain PUC criteria and as a result is deregulated.

Distributed renewable generation (DRG) — customer-owned electricity generation from a small renewable energy source located on-site, such as solar panels on a rooftop, that replaces some portion of the electricity received from large, centralized facilities such as coal, nuclear, and gas powered plants.

Distribution system — a network of distribution power lines and equipment for delivering electricity to homes and businesses; distribution lines are power lines that carry less than 60 kilovolts.

Distribution service provider — see *transmission and/or distribution service provider*.

Electric cooperative (co-op) — a private, nonprofit *electric utility* owned and operated by the customers it serves, typically in rural areas. A co-op may register with ERCOT as a *load serving entity*, *transmission and/or distribution service provider*, and/or *power generation company*.

Electric grid — a network of power lines and equipment, moving electricity from generators to customers. An electric grid includes a *transmission grid* **and** a *distribution system*.

Electric utility — a *transmission and distribution utility* or an *investor-owned utility*. Although statute does not define *municipally owned utilities* and *electric cooperatives* as electric utilities, they may be considered electric utilities in that they furnish or provide electricity to customers.

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Energy-only market — a type of *competitive wholesale electric market* under which *power generation companies* receive payments only for the electricity they produce. See also capacity market.

ERCOT, Inc. — Electric Reliability Council of Texas; the nonprofit corporation that operates and manages the *transmission grid* within the *ERCOT region*.

ERCOT grid — the *transmission grid* wholly within Texas borders that is largely physically separated from the rest of the country. Carries about 90 percent of the state's electricity.

ERCOT protocols — procedures and processes used by ERCOT and electric *market participants* to operate the *ERCOT grid* and the competitive electric markets.

ERCOT region — the geographic footprint of the *ERCOT grid*.

Exempt wholesale generator — a wholesale generator that sells electricity in the wholesale market, but does not own transmission infrastructure. Registers with PUC as *a power generation company*, and registers with ERCOT as a *resource entity*.

Federal Communications Commission (FCC) — the independent U.S. federal agency that regulates interstate and international communications by radio, television, wire, wireless, satellite, and cable.

Federal Energy Regulatory Commission (FERC) — the independent U.S. federal agency that regulates the interstate production, transmission, and sale of electricity and natural gas, and establishes and enforces reliability standards for operating a transmission grid. See also *North American Electric Reliability Corporation*.

Generation company — see *power generation company*.

Incentive regulation — a policy that allows *telecommunications carriers* to operate under less restrictive rate regulation in exchange for meeting certain requirements, such as putting additional infrastructure in place.

Incumbent local exchange carrier (ILEC) — a telecommunications carrier that owns a telephone network in a geographical area and that obtained a *certificate of convenience and necessity* to provide telecommunications voice service before September 1, 1995.

Independent Market Monitor (IMM) — an independent organization with authority from PUC and paid for by ERCOT to monitor and detect market manipulation, market rule violations, and market power abuses in the *competitive wholesale electric market*. The IMM reports potential violations to PUC, who has enforcement authority.

Independent system operator (ISO) — See *transmission organization*. ERCOT is the ISO for the *ERCOT grid*.

Investor-owned utility (IOU) — a private, for-profit utility owned by investors. In the electric industry, an IOU is an *electric utility* that operates outside the *ERCOT region*; owns all aspects of electricity production, including generation, transmission and distribution, and retail service; and is sometimes called a vertically integrated investor-owned utility. In the water and wastewater industry, a *retail public utility* owned by an individual, partnership, corporation or homeowners association.

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Interexchange carrier — a *telecommunications carrier* that provides long-distance service.

Lifeline — a program funded by the *Texas Universal Service Fund* that provides low-income customers discounts on their telephone bills.

Load serving entity (LSE) — a company or *electric utility* registered with ERCOT that provides electricity to retail and wholesale customers.

Load shed — the condition when there is not enough electric generation available to serve all demand, and ERCOT instructs *electric utilities* to turn off power to consumers to balance supply and demand.

Market participant — a person, company, or *electric utility* that participates in the state's competitive retail or wholesale electric market. Includes *resource entities*, *transmission and/or distribution service providers*, *load serving entities*, and *qualified scheduling entities*.

Megawatt (MW) — a measure of electric power; 1,000 kilowatts (kW) or 1,000,000 watts. One megawatt is enough electricity to power 1,000 average homes.

Megawatt-hour (MWh) — a measure of the amount of electric power, expressed in megawatts, used over one hour.

Municipally owned utility (MOU) — a nonprofit electric or water utility owned and operated by the municipality it serves. Electric MOUs may register with ERCOT as a *load serving entity*, *transmission and/or distribution service provider*, and/or *power generation company*.

Nodal protocol revision request (NPRR) — a formal proceeding at ERCOT initiated by a member of the public, *market participants*, the *Independent Market Monitor*, the *Texas Reliability Entity*, PUC staff, or ERCOT staff to change *ERCOT protocols*.

North American Electric Reliability Corporation (NERC) — an international nonprofit corporation with authority delegated from the *Federal Energy Regulatory Commission* to develop and enforce federal reliability standards in the U.S. for operating a transmission grid.

Power generation company (PGC) — a company registered with PUC that owns and operates electric generation assets or storage facilities to sell wholesale electricity. Registers with ERCOT as a *resource entity*.

Power marketer — a person registered with PUC that purchases and sells electric power but does not own any generation assets or transmission or distribution infrastructure. Registers with ERCOT as a *qualified scheduling entity*.

Power to Choose — the website (www.powertochoose.org) PUC established and maintains to provide residential and small business customers with information about the *competitive retail electric market* and information to compare rate plans among retail electric providers.

Provider of last resort (POLR) — in the electric industry, a designated *retail electric provider* required under the Public Utility Regulatory Act, Section 39.106, to provide a standard retail electric service package to any requesting customer in its area. In most cases, customers are served by the POLR for limited periods when the person's chosen retail electric provider goes out of business.

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Public utility gross receipts assessment — a fee of one-sixth of 1 percent on gross receipts from electric and telephone rates charged to customers in Texas and imposed on each public utility, *retail electric provider*, and *electric cooperative* within the jurisdiction of PUC.

Qualified scheduling entity (QSE) — a company registered with ERCOT to represent *power generation companies*, *retail electric providers*, or large consumers in the periodic, daily scheduling of power production in the *competitive wholesale electric market*.

Regional transmission organization (RTO) — see *transmission organization*.

Relay Texas — a program funded by the *Universal Service Fund* that allows individuals who are hearing-impaired or speech-impaired to use specialized telecommunications devices to communicate with others who do not have such devices.

Renewable energy credit generators — a *power generation company* that meets certain PUC requirements, is certified by PUC, and registered with ERCOT to earn renewable energy credits. One credit represents one megawatt-hour of renewable energy.

Resource entity — a *power generation company*, *self generator*, or *electric utility* that registers with ERCOT and owns or controls generation assets, or customers that meet ERCOT requirements and are capable of changing their power consumption in response to an ERCOT instruction.

Retail electric provider (REP) — a company certified by PUC and registered with ERCOT as a *load serving entity*. Provides billing and electric service to retail customers in *competitive retail areas* in the *ERCOT region*. REPs do not own transmission or distribution infrastructure and must purchase delivery service from *transmission and distribution utilities* in the *ERCOT region*.

Retail public water utility — any person, corporation, public utility, water supply or wastewater service corporation, municipality, political subdivision or agency operating, maintaining, or controlling facilities for providing potable water service or wastewater service, or both, for compensation.

Self generator — a company registered with PUC and ERCOT that owns or controls an electric generation asset or facility that is not a *power generation company*. Includes commercial businesses like grocery stores and refineries.

Service Provider Certificate of Operating Authority (SPCOA) — a certificate issued by PUC granting a *competitive local exchange carrier* the authority to operate in a service area without an obligation to offer basic local service to each customer in its area.

State-issued Certificate of Franchise Authority (SICFA) — a PUC program that provides a standardized process for issuing *certificates of franchise authority* to cable and video service providers.

System administration fee — a fee to fund most of ERCOT's operations, assessed on certain wholesale buyers of electricity based on the customer demand they serve.

Tariff — the set of documents filed by a water or wastewater utility, *electric utility*, or *telecommunications carrier* describing its rates and charges.

Technical Advisory Committee (TAC) — an advisory committee to the ERCOT Board of Directors that makes recommendations regarding *ERCOT protocols*, policies, and procedures.

Appendix H

Telecommunications carrier — a telephone company.

Telecommunications exchange — a geographic area established by a telecommunications carrier for the administration and pricing of telecommunications services. Sometimes referred to as "wire centers," an exchange consists of one or more central offices and their associated facilities usually within a city or town. Small metropolitan areas or a collection of towns often share a single area exchange.

Texas Reliability Entity (TRE) — a state nonprofit corporation with authority delegated from the *North American Electric Reliability Corporation* to monitor and enforce compliance with federal reliability standards for *power generation companies* and their assets and *electric utilities* in the *ERCOT region*.

Texas Universal Service Fund (USF) — a fund outside the state treasury that supports programs to provide low-income and hearing- and speech-impaired customers with access to telecommunications services, and to provide basic landline telephone service at affordable rates to high-cost and rural areas of the state. Every telecommunications provider with access to the fund's customer base pays a surcharge on the voice service component of its taxable receipts.

Transmission and distribution utility (TDU) — a private, for-profit electric utility in the *ERCOT region* that is owned by investors. TDUs own transmission and/or distribution infrastructure and only provide transmission service and/or distribution service regulated by PUC, which may be purchased by *retail electric providers* to deliver electricity to customers. Registers with ERCOT as a *transmission and/or distribution service provider*.

Transmission and/or distribution service provider — an *electric utility*, *municipally owned utility*, or *electric cooperative* registered with ERCOT that owns or operates equipment or infrastructure used for the transmission and/or distribution of electricity in the *ERCOT region*.

Transmission grid — a network of transmission lines and equipment for carrying electricity across long distances. Transmission lines are power lines rated to carry 60 kilovolts or more.

Transmission organization — an independent organization responsible for managing a transmission grid to maintain reliability and ensure equitable access for all wholesale buyers and sellers of electricity. Transmission organizations do not own generation assets or transmission infrastructure. Also referred to as a *regional transmission organization* or an *independent system operator*.

Voice over internet protocol (VoIP) — a technology that allows a customer to make voice calls by breaking down the voice sound into digital data, transmitting that data over a network, and reassembling it into sound for the end user. Different from traditional landline voice communication, which uses an analog rather than a digital system.

Water district — a local, governmental entity that provides limited services to its customers and residents. Examples of water districts include municipal utility districts, water control and improvement districts, special utility districts, and river authorities.

Water supply or sewer corporation — a member-owned and member-controlled nonprofit corporation that provides potable water or wastewater service.

Appendix I | Staff Review Activities

During the reviews of the Public Utility Commission of Texas (PUC), Electric Reliability Council of Texas (ERCOT), and Office of Public Utility Counsel (OPUC), Sunset staff engaged in the following activities that are standard to all Sunset reviews. Sunset staff worked extensively with agency personnel; attended commission and board meetings; met with staff from key legislative offices; conducted interviews and solicited written comments from interest groups and the public; reviewed agency documents and reports, state statutes, legislative reports, previous legislation, and literature; researched the organization and functions of similar state agencies and entities in other states; and performed background and comparative research.

In addition, Sunset staff also performed the following activities unique to these entities:

- Toured ERCOT's Taylor, Texas campus and facilities
- Toured the control room of a transmission and distribution utility
- Toured a generation company's facilities
- Visited a Class D water utility
- Attended PUC stakeholder workshops
- Attended OPUC's annual meeting in Abilene, Texas
- Attended meetings of the State Energy Plan Advisory Committee
- Attended two virtual public forums hosted by stakeholder groups
- Attended the Gulf Coast Power Association's fall conference
- Attended the Texas Telephone Association's Universal Service Fund Lunch and Learn presentation
- Interviewed members of PUC's and ERCOT's governing bodies
- Interviewed staff from the Comptroller of Public Accounts, Department of Information Resources, Legislative Budget Board, Railroad Commission of Texas, Texas Commission on Environmental Quality, and Texas Division of Emergency Management

Sunset Staff Review of the

Public Utility Commission of Texas

Electric Reliability Council of Texas

Office of Public Utility Counsel

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