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Oil and Gas, Natural Resources, and Energy Journal

VOLUME 8 NUMBER 1

SOVEREIGN IMMUNITY, ENTRENCHED POWER, AND ISOLATIONISM: HOW TO HOLD ERCOT ACCOUNTABLE TO TEXAS RESIDENTS IN THE AFTERMATH OF THE FEBRUARY 2021 WINTER STORM

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Introduction

Our Republic is founded with the idea that the people can hold our government accountable. But what happens when a private entity runs an entire public utility system? In Texas, the majority of citizens are under the electricity grid run and operated by the Electric Reliability Council of Texas (ERCOT), a non-profit entity. It is the only electricity grid in the United States that is immune to much if any federal regulation. The state of Texas has prided itself on creating a self-sufficient electricity grid, disconnected from the other major power grids across the United States. Since the electricity does not ingress or egress outside the bounds of the state, it is able to avoid federal regulation.

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^{1.} Chris Tomlinson, *ERCOT made the February Freeze fiasco worse. Texas electricity needs greater oversight,* Houston Chronicle (Oct. 17, 2021, 9:43 PM), https://www.houston.chronicle.com/business/article/Tomlinson-Grid-manager-made-February-freeze-16168537. php.

Instead, the Texas electricity grid is overseen by a state agency, the Public Utility Commission of Texas (PUCT), which ensures compliance with the Public Utility Regulatory Act, "... adopts and enforces rules... and has oversight and enforcement authority over ERCOT Protocols, Operating Guides, and Other Binding Documents." After years of deregulation and lawsuits, ERCOT continues to run into problems of grid capacity, reliability, and accountability to consumers and the general public. Accountability turns into stacked boards, appointed representation, and industry puppets, with the public's interests being ignored and warnings pushed aside for private profits; in February of 2021 in Texas, this has resulted in nearly 200 deaths with no entity for recourse and accountability.

Public Electricity Regulation

There has long been a history of public electricity regulation; ERCOT is an anomaly.

A Regulatory History

The rest of the country is regulated by one of two federal regulatory commissions: The Federal Energy Regulatory Commission (FERC) or the North American Electric Reliability Corporation (NERC). FERC is an independent agency that regulates interstate transmission of natural gas, oil, and electricity.³ It monitors energy markets and sometimes conducts market abuse investigations.⁴ Although FERC covers the geographic area near Texas, it has limited jurisdiction over ERCOT because the majority of Texas under ERCOT's grid is not connected to the interconnections of other states. The other federal regulatory agency, the North American Electric Reliability Corporation (NERC), draws its membership from the electric industry and sets standards for reliable operation and planning of electrical systems and enforces compliance with federal standards.⁵ Both federal regulatory agencies were created after the largest blackout in United States history, which took place in the Northeastern United States in November of 1965.⁶ NERC was created in response to the 1965 blackouts as a "voluntary membership

^{2.} Compliance in ERCOT, ERCOT (Oct. 17, 2021, 9:46 PM), http://www.ercot.com/mktrules/compliance.

^{3.} The Steering Committee of Cities Served by ONCOR and The Texas Coalition for Affordable Power, *The Story of ERCOT* (Feb. 2011), http://tcaptx.com/downloads/THE-STORY-OF-ERCOT.pdf.

^{4.} *Id*.

^{5.} Id.

^{6.} *Id*.

organization devoted to the creation of standards, guidelines, and criteria to ensure grid security."⁷

Prior to this blackout, grid security was more of a local or regional issue, and federal oversight was a new concept in this industry. In 1935, "[President Franklin D. Roosevelt] signed the Federal Power Act, which tasked a regulatory agency called the Federal Power Commission with overseeing electricity sales that crossed state lines." Subsequently, the electricity industry operations followed criteria and guidelines for reliable operations developed by the North American Power Systems Interconnection Committee (NAPSIC), a utility organization, and other reliability planning guides from other regions throughout the United States. After the blackout, however, the "National Electric Reliability Council (NERC) was established by the electric utility industry... [and] [n]ine regional reliability organizations were formalized under NERC." NAPSIC became part of NERC, bringing the reliability roles of operations and planning together in one organization, and NERC adopted NAPSIC operations criteria and guides. 11

Texas Moves Toward Deregulation

After the Federal Power Act was passed, Texas began taking steps toward deregulation. The legislation had "required the Securities and Exchange Commission (SEC) to break up public utility holding companies into their constituent properties unless they could function as an integrated and more efficient whole." Public utility companies in Texas thus had to decide between electrical integration or autonomy. In light of this reality, "the principle utilities in Texas... elected to isolate their properties from interstate commerce...," thus maintaining their independence and avoiding federal regulation due to interstate commerce. This federal oversight of the electricity industry through the passing of the Federal Power Act, coupled with the subsequent consolidation of federal agencies, led the state of Texas

^{7.} *Id*.

^{8.} Noah Kim, *Why does Texas have its own power grid?*, Houston Chronicle (Oct. 17, 2021, 10:14 PM), https://www.houstonchronicle.com/politics/texas/politifact/article/Fact-check-Why-does-Texas-have-its-own-power-15964085.php.

^{9.} *Milestones: NERC Reliability Standards*, NERC (May 19, 2014), https://www.nerc.com/pa/Stand/Resources/Documents/Milestones NERC Reliability Standards.pdf.

^{10.} Id.

^{11.} *Id*

^{12.} Cudahy, *The Second Battle of the Alamo: The Midnight Connection*, Natural Resources & Environment (Vol.10, No. 1, 1995).

^{13.} *Id*.

to form the Texas Interconnected System ("TIS"), the precursor to ERCOT. LERCOT was created to oversee the Texas grid five years later, in 1970. In 1975, the Public Utilities Commission of Texas was created; until that time, ERCOT had operated without even state oversight. These acts all lead up to the state's ultimate goal of deregulating the electricity industry in Texas. The shift occurred in 1978, when Congress passed the Public Utility Regulatory Policy Act, which "... allowed for competition in the generation of electric power" Consequently, Texas began to consolidate its internal state regulatory agencies; TIS transferred its operating functions to ERCOT in 1981.

The autonomy of public utilities companies in Texas was tested after an incident in 1976 known as the "midnight connection." It all began when an Oklahoma attorney filed a claim with the SEC against Central and Southwestern Corporation (CSW), a public utilities company with constituent properties in both Texas and Oklahoma, among other states in the region.¹⁹ Representing municipal and cooperative electric distribution systems in Oklahoma, the attorney claimed "CSW was not in compliance with the integration requirement of [the Federal Power Act of 1935]," because two of the constituent properties in Texas were disconnected from their Oklahoma counterparts and "operated synchronously with ERCOT." This incident led to highly contested litigation between CSW and Oklahoma public utility interests in the case West Texas Utilities Co. v. Texas Elec. Service in 1979. This case, at its core, dealt with the issue of whether it was in violation of the Sherman Act for an electricity utility "to confine its facilities solely within a single state" under the Federal Power Act.²¹ The court ruled that the Texas utility company, including the group of utility companies acting in concert,

^{14.} The Steering Committee of Cities Served by ONCOR and The Texas Coalition for Affordable Power, *The Story of ERCOT* (Feb. 2011), http://tcaptx.com/downloads/THE-STORY-OF-ERCOT.pdf.

^{15.} Noah Kim, *Why does Texas have its own power grid?*, Houston Chronicle (Oct. 17, 2021, 10:14 PM), https://www.houstonchronicle.com/politics/texas/politifact/article/Fact-check-Why-does-Texas-have-its-own-power-15964085.php.

^{16.} The Steering Committee of Cities Served by ONCOR and The Texas Coalition for Affordable Power, *The Story of ERCOT* (Feb. 2011), http://tcaptx.com/downloads/THE-STORY-OF-ERCOT.pdf.

^{17.} Id.

^{18.} Id.

^{19.} Cudahy, *The Second Battle of the Alamo: The Midnight Connection*, Natural Resources & Environment (Vol.10, No. 1, 1995).

^{20.} Id.

^{21.} West Texas Utilities Co. v. Texas Elec. Service Co., 470 F. Supp. 798, 814 (1979).

was not in violation of the Sherman Act to operate only within the state, but Congress may eliminate the option to not participate in interstate operations under the Federal Power Act if it so desires.²² Since Congress has not acted on this option to change the law, the court found the actions of many Texas utilities legal.²³ Since the court ruled on the validity of these utility companies' intrastate operations, ERCOT and utility companies under its authority have continued to operate under the Federal Power Act without federal oversight.

ERCOT: Its Function and Disfunction

With all the recent attention given to this entity, many Texas residents take for granted the unique function and disfunction of ERCOT and its wholesale energy market that manages their electricity each day.

What Is ERCOT?

ERCOT has created a near monopoly in the management and operations of electricity in the state of Texas. That is because ERCOT manages its own electricity grid within the state of Texas, and thus has an internal interconnection. The majority of the State's electricity grid is outside of the other two major electricity grids in the United States, the Western Interconnection and the Eastern Interconnection, demonstrated in Figure 1.²⁴

^{22.} Id.

^{23.} Id.

^{24.} Maps, ERCOT (Nov. 6, 2021, 3:17 PM), http://www.ercot.com/news/mediakit/maps.

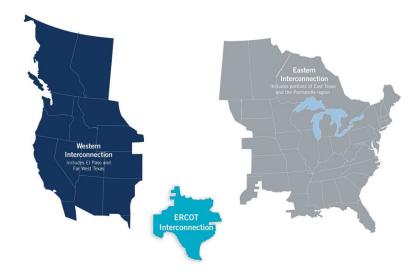


Figure 1. ERCOT electricity grid interconnection in relation to other two interconnections in the United States.²⁵

Only a small portion of the state of Texas is not a part of the ERCOT interconnection, including El Paso and far west Texas, and portions of East Texas and the Panhandle region, as noted in Figure 1.²⁶ Thus, ERCOT manages the flow of electricity for more than 90 percent of the state and supplies to over 26 million customers.²⁷ "ERCOT schedules power on an electric grid that connects more than 46,500 miles of transmission lines and [over] 710[] generation units," and its membership includes "consumers, cooperatives, generators, power marketers, retail electric providers, investorowned electric utilities, transmission and distribution providers and municipally owned electric utilities." "ERCOT's primary job is to manage an algorithm that raises and lowers electricity prices based on supply and demand," thus enabling the majority of Texas's electricity grid to run under

^{25.} Id.

^{26.} Id.

^{27.} About ERCOT, ERCOT (Oct. 17, 2021, 9:48 PM), http://www.ercot.com/about.

^{28.} Id.

what they call a "wholesale energy market." ERCOT was put in charge of the wholesale energy market in 1999.³⁰

The Competitive Wholesale Market and Resiliency

After Rick Perry became Governor of Texas in 2000, he oversaw this transition from the traditional electric utility system to the competitive wholesale market.³¹ The idea behind this system was to allow the market to regulate electricity prices in the state. Customers would get power from these private entities under ERCOT's operations, and when generators were needed in times of energy shortages, the increased prices would incentivize consumers to diminish energy use and thus stabilize the grid.³² The system is built on scarcity; when electricity is in high demand and reaching full capacity, "bonus" power prices kick in, in hopes of disincentivizing power use and conserving energy.³³ To further incentivize reduced electricity use during shortages, such as during the heat of summer or during winter weather outbreaks, ERCOT pays industrial users to cut off their power through contractual agreements.³⁴ Natural gas producers are the biggest energy users in Texas, and thus constitute many of the industrial users which have made these contractual agreements to cut off their power during energy shortages;

^{29.} Chris Tomlinson, *ERCOT made the February Freeze fiasco worse. Texas electricity needs greater oversight,* Houston Chronicle (Oct. 17, 2021, 9:43 PM), https://www.houston.chronicle.com/business/article/Tomlinson-Grid-manager-made-February-freeze-16168537.

^{30.} Chris Tomlinson, *Texas electric grid is an easy fix, if lawmakers will admit their error,* Houston Chronicle (Oct. 17, 2021, 9:50 PM), https://www.houstonchronicle.com/business/columnists/tomlinson/article/Texas-electric-grid-is-easy-to-fix-if-lawmakers-15961 368.php.

^{31.} Chris Tomlinson, *ERCOT made the February Freeze fiasco worse. Texas electricity needs greater oversight,* Houston Chronicle (Oct. 17, 2021, 9:43 PM), https://www.houstonchronicle.com/business/article/Tomlinson-Grid-manager-made-February-freeze-161 68537.php.

^{32.} Id.

^{33.} Shelby Webb, Expect more conservation notices as ERCOT, PUC announces plan to overhaul Texas electricity market, Houston Chronicle (Oct. 17, 2021, 9:53 PM), https://www.houstonchronicle.com/business/energy/article/PUC-ERCOT-announce-plans-to-overhaul-electricity-16332551.php.

^{34.} Chris Tomlinson, *ERCOT made the February Freeze fiasco worse. Texas electricity needs greater oversight,* Houston Chronicle (Oct. 17, 2021, 9:43 PM), https://www.houstonchronicle.com/business/article/Tomlinson-Grid-manager-made-February-freeze-161 68537.php.

but, the grid relies on natural gas to keep working.³⁵ Herein lies the first major problem with how ERCOT is operated.

This issue, however, is nothing new to ERCOT. In fact, ERCOT has ignored thirteen years of warnings from state regulatory authorities.³⁶ Authorities, including the Texas House Select Committee on Electric Generation Capacity and Environmental Effects, had been warning ERCOT of the potential repercussions for not having sufficient backup power if energy shortages arose since a Committee report published in January of 2009.37 "Texas is the only American electricity grid with no rules for resiliency," and relies instead on price incentives to decrease power usage during power shortages.³⁸ The Texas state legislature had appointed an investigative committee over this issue in 2012, but ERCOT continued to ignore its advice to set resiliency standards.³⁹ Even in recent years, the grid has continued to show need for concern. In 2018 and 2019, "Texas's electricity reserve margins dropped below target levels in 2018 and 2019, stirring a lot of debate about reliability and higher prices."40 This resiliency concern for the electricity grid powering most of the state has been anticipated and building for years, and ERCOT has yet to incorporate any of the proposed resiliency rules, which are common for the industry. Other electricity grids throughout the United States, under the regulation of the Federal Energy Regulatory Commission, are required to weatherize pipelines and equipment, as well as have weatherized backup generators, in case of power shortages due to inclement weather. 41 ERCOT has yet to adopt similar standards.

^{35.} *Id*.

^{36.} Chris Tomlinson, *Texas electric grid is an easy fix, if lawmakers will admit their error,* Houston Chronicle (Oct. 17, 2021, 9:50 PM), https://www.houstonchronicle.com/business/columnists/tomlinson/article/Texas-electric-grid-is-easy-to-fix-if-lawmakers-15961 368.php.

^{37.} *Id*.

^{38.} Id.

^{39.} Id.

^{40.} Chris Tomlinson, *Evolving Texas grid marks the beginning of the end of fossil fuel electricity*, Houston Chronicle (Oct. 17, 2021, 9:55 PM), https://www.houstonchronicle.com/business/columnists/tomlinson/article/Evolving-Texas-grid-marks-beginning-of-the-end-158 27233.php.

^{41.} Chris Tomlinson, *Texas electric grid is an easy fix, if lawmakers will admit their error,* Houston Chronicle (Oct. 17, 2021, 9:50 PM), https://www.houstonchronicle.com/business/columnists/tomlinson/article/Texas-electric-grid-is-easy-to-fix-if-lawmakers-15961 368.php.

In fact, ERCOT's system is created to rely not on backup generators and weatherized equipment, but on the free market, and a program called its "emergency response program." The emergency response program was created to balance power demand and supply the electricity grid.⁴² It functions so that "[w]hen demand exceeds supply, ERCOT can call on heavy industrial power users that have signed contracts to reduce electricity consumption," but these statistically constitute many natural gas producers, which are needed to keep the electricity grid functioning.⁴³ Those who have opted in to these contracts, more than 400 heavy power users, are required to "install an automatic circuit switch or manually shut down operations when there are less than 1,750 megawatts of spare power on the grid."44 The issue becomes, when an electricity shortage occurs during something like a winter storm, ERCOT's policy to shut down those industrial powers which have "opted in" to the emergency response program does not take into consideration the kinds of companies which have opted in. Therefore, the natural gas on which the electricity grid relies is unavailable when the grid needs it the most. TXOGA, an oil and gas trade group, "has pushed for enhanced communication between ERCOT and the industry, and called for mapping of critical natural gas facilities," as there are no criteria for those companies participating in the emergency program.⁴⁵ During the winter storm of 2021, "ERCOT forced 67 power plant fuel facilities offline, including five natural gas facilities that later requested they be exempt from power outages because they were critical to Texas' electricity grid," because they do not have protocols in place to identify which facilities they shut off in times of emergency. 46 This has been identified as a major cause of the February 2021 winter storm blackout in Texas.

The February 2021 Winter Storm

Across the country, Americans were astonished to turn on the news and see the devastation that hit the state of Texas in February of 2021. Rolling blackouts in the height of a severe winter storm left Texas residents without electricity, warmth, and safety. The winter storm, however, was not the

^{42.} Paul Takahashi, *ERCOT's emergency response program needs better oversight*, Houston Chronicle (Oct. 17, 2021, 9:56 PM), https://www.houstonchronicle.com/business/texas-inc/article/Insight-ERCOT-s-emergency-response-program-16319739.php.

^{43.} Id.

^{44.} Id.

^{45.} Id.

^{46.} Id.

highlight of the news, but the entity which failed to properly prepare for the storm: ERCOT.

Community Impact

The February 2021 winter storm brought to light the reality of the concerns ERCOT had been warned of and had been ignoring for the last thirteen years, and this has sparked public criticism and calls for change. At the height of the February 2021 winter storm, more than half of the power capacity in the state of Texas went offline, resulting in nearly 200 deaths⁴⁷ "More than 4.5 million customers were without power at one point during the week" of the storm. ⁴⁸ In addition, the blackouts resulted in over \$195 billion worth of property damage. ⁴⁹

Contributing Factors

According to a Report by the University of Texas at Austin's Energy Institute, there was no single cause to trace back to the failure of the electricity and natural gas systems from the February 2021 winter storm. However, the Report's committee was able to isolate several factors that contributed to the blackout. First, the committee determined that not just natural gas, but "all types of generation technologies failed," including coal power, nuclear reactors, wind generation, and solar generation, as shown in Figure 2 below. 51

^{47.} James Osborne, *ERCOT President pushes tough new rules to overhaul Texas power grid, but challenges lie ahead*, Houston Chronicle (Oct. 17, 2021, 9:58 PM), https://www.houstonchronicle.com/business/energy/article/ERCOT-president-pushes-reform-16309949. php.

^{48.} Erin Douglas and Mitchell Ferman, *ERCOT board members who live outside of Texas are resigning in the aftermath of the power outage, winter storm*, Texas Tribune (Oct. 17, 2021, 9:59 PM), https://www.texastribune.org/2021/02/23/ercot-members-resign-texas/.

^{49.} The University of Texas at Austin Energy Institute, *The Timeline and Events of the February 2021 Texas Electric Grid Blackouts* (Nov. 6, 2021, 3:00 PM), https://energy.utexas.edu/ercot-blackout-2021.

^{50.} The University of Texas at Austin Energy Institute, *The Timeline and Events of the February 2021 Texas Electric Grid Blackouts* 7 (Nov. 6, 2021, 4:18 PM), https://energy.utexas.edu/sites/default/files/UTAustin%20%282021%29%20EventsFebruary2021TexasBlackout%2020210714.pdf.

^{51.} The University of Texas at Austin Energy Institute, *The Timeline and Events of the February 2021 Texas Electric Grid Blackouts* 8 (Nov. 6, 2021, 4:18 PM), https://energy.utexas.edu/sites/default/files/UTAustin%20%282021%29%20EventsFebruary2021TexasBlackout%2020210714.pdf.

Net Generator Outages and Derates by Fuel Type (MW)

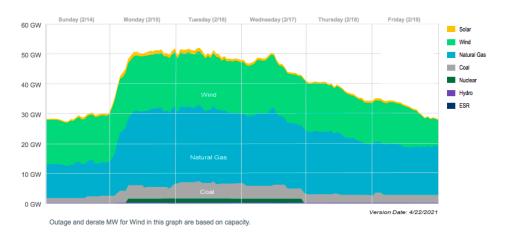


Figure 2. Net capacity outages by fuel type in Texas during the February 2021 winter storm. 52

Natural gas was a major contributor to the failure of the electricity grid, but as indicated in Figure 2, wind generation also significantly contributed to outages. On February 15, 2021, grid conditions deteriorated rapidly, leading to blackouts, and forcing ERCOT to shed load to avoid a total grid blackout. The grid's condition meant that it did not have enough electricity to generate the demand during the severe weather. Because of this, to prevent the grid from becoming overwhelmed and damaged, things such as rolling blackouts, or the kind of opt-in programs present under ERCOT kick in to artificially decrease demand and create grid stability. These rolling blackouts or opt-in programs prove critical to prevent grid breakdown, because grids operate using an alternating current that must run, or alternate, 60 times a

^{52.} ERCOT Public, Update to April 6, 2021 Preliminary Report on Causes of Generator Outages and Derates During the February 2021 Extreme Cold Weather Event, April 27, 2021, http://www.ercot.com/content/wcm/lists/226521/ERCOT_Winter_Storm_Generator_Outages_By_Cause_Updated_Report_4.27.21.pdf.

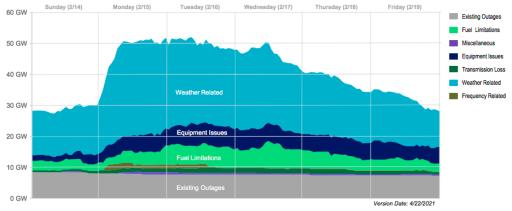
^{53.} The University of Texas at Austin Energy Institute, *The Timeline and Events of the February 2021 Texas Electric Grid Blackouts* 8 (Nov. 6, 2021, 4:18 PM), https://energy.utexas.edu/sites/default/files/UTAustin%20%282021%29%20EventsFebruary2021TexasBlackout%2020210714.pdf.

second, or 60 Hz of frequency to operate efficiently and effectively.⁵⁴ This frequency is what drops and rises as supply and demand shift; they are inversely related.⁵⁵ ERCOT's goal is to shed the load in order to maintain the grid's frequency of 60 Hz and to sustain its maximum capacity without having to shed the load, because it keeps the grid running efficiently while keeping electricity costs steady and profitable for shareholders.

Weather Forecasting and Grid Capacity

In addition to electricity generation failures, the committee cites the weather itself as a significant contributor, as indicated in Figure 3 below.

Net Generator Outages and Derates by Cause (MW) February 14 – 19, 2021



Net generator outages at the beginning of each hour on February 14-19, 2021, by cause category

Figure 3. Net capacity outages in Texas by cause during the February 2021 winter storm. 56

^{54.} Jordan Wirfs-Brock and Leigh Paterson, *IE Questions: What Keeps Our Electricity Grid Humming?* (Oct. 12, 2021, 2:08 PM), http://insideenergy.org/2015/07/10/ie-questions-what-keeps-our-electric-grid-humming/.

^{55.} Id.

^{56.} ERCOT Public, Update to April 6, 2021 Preliminary Report on Causes of Generator Outages and Derates During the February 2021 Extreme Cold Weather Event, April 27, 2021, http://www.ercot.com/content/wcm/lists/226521/ERCOT_Winter_Storm_Generator Outages By Cause Updated Report 4.27.21.pdf.

However, this does not leave ERCOT without fault in the matter. While "weather forecasts failed to appreciate the severity of the storm," ERCOT underestimated demand for severe weather conditions generally. In fact, ERCOT "... underestimated demand relative to what actually happened by about 9,600 MW, about 14%. ERCOT plans for seasonal peak loads to try to prevent blackouts from occurring, but in February 2021, the planned generator outages were higher than the planned scenarios predicted by the controllers. In a single 24-hour period during the February 2021 winter storm, the grid lost 24,600 MW between the major power sources contributing to the grid. Notably, the outages were not significantly higher than predicted. In January of 2021, ERCOT released its extreme weather predictions in a report, ranging from mild to severe weather and a forecast for each year, by comparing the 2011 severe weather scenario to other weather predictions; this forecast includes 2021, shown on Figure 4 below.

^{57.} The University of Texas at Austin Energy Institute, *The Timeline and Events of the February 2021 Texas Electric Grid Blackouts* 8 (Nov. 6, 2021, 4:18 PM), https://energy.utexas.edu/sites/default/files/UTAustin%20%282021%29%20EventsFebruary2021TexasBlackout%2020210714.pdf.

^{58.} Id.

^{59.} Id.

^{60.} Id.

^{61.} Id.

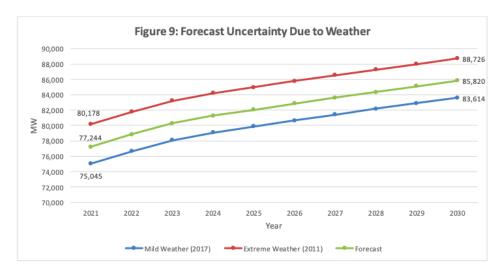


Figure 4. ERCOT Forecast based on yearly weather predictions, including severe weather in 2021. 62

Even in consideration of the most severe weather predictions, the 24,600 MW lost in one 24-hour period during the 2021 February winter storm amounted to about a third of the grid capacity lost in a single day. This lack of grid capacity in large part due to inadequate predictions and planning indicates a lack of grid reliability stemming not just from a lack of weather-related anticipatory planning, but of the system as a whole.

Another factor concerning the weather was that "some power generators were inadequately weatherized," and in fact, "the outage... of several power plants occurred at temperatures above their stated minimum temperature ratings." Therefore, even if the weather was properly anticipated, ERCOT had not adequately weatherized the equipment to sustain even expected winter weather conditions.

Even if ERCOT forecasted its needed capacity more accurately, based on weather patterns and other contributing data, there is a narrow line between

^{62.} ERCOT, 2021 ERCOT System Planning Long-Term Hourly Peak Demand and Energy Forecast (Jan. 8, 2021, 8:02 PM), https://www.ercot.com/files/docs/2021/01/06/2021 LTLF Report.pdf.

^{63.} The University of Texas at Austin Energy Institute, *The Timeline and Events of the February 2021 Texas Electric Grid Blackouts* 9 (Nov. 6, 2021, 4:18 PM), https://energy.utexas.edu/sites/default/files/UTAustin%20%282021%29%20EventsFebruary2021TexasBlackout%2020210714.pdf.

what they generate and what they need, or its supply and demand. This is because, in addition to keeping the needed frequency of 60 Hz, ERCOT runs on a model by which supply and demand's equilibrium is essential economically.

Other Factors

Other factors beyond weather contributed to the blackouts, and "power plants listed a wide variety of reasons for going offline throughout the event," including equipment issues, fuel limitations, transmission and substation outages, and frequency issues.⁶⁴ The fuel limitations primarily concerned failures within the natural gas system. These issues included the direct freezing of equipment and a "fail[ure] to inform utilities of critical electricity-driven components."65 However, even prior to the winter storm, "natural gas was... being curtailed to some natural gas consumers, including power plants."66 Finally, "natural gas in storage was limited," as "underground natural gas storage facilities were operating at... maximum capacity."67 While both natural gas and wind generation were major contributors to the lack of power, it is notable that many natural gas specific issues were identified by the committee's report. According to a Texas Reliability Entity (TRE) report, during the 2021 winter storm event, natural gas was not able to meet demand, but a Federal Energy Regulatory Commission (FERC) and North American Electric Reliability Corporation (NERC) inquiry "concluded that gas shortages were not a significant cause of the generator problems during the event."68 Therefore, between the conclusions drawn by the University of Texas at Austin's committee report and the FERC and NERC inquiry, it seems to be that shortages of natural gas were not as causally linked to the outages as were other issues associated with the use of natural gas.

Prior Texas Blackouts: A Comparison

While the February 2021 winter storm blackouts were a shock to the nation, Texas residents have dealt with this before; despite history's

^{64.} Id.

^{65.} Id.

^{66.} *Id*.

^{67.} Id.

^{68.} The University of Texas at Austin Energy Institute, *The Timeline and Events of the February 2021 Texas Electric Grid Blackouts* 71-2 (Nov. 7, 2021, 2:10 PM), https://energy.utexas.edu/sites/default/files/UTAustin%20%282021%29%20EventsFebruary 2021TexasBlackout%2020210714.pdf.

warnings, the state continues to fail to implement necessary change. In 1989 and as recent as February 2011, winter storms in Texas have led to similar blackouts in the state. In the months leading up to the winter storm in 1989, the Public Utility Commission of Texas (PUCT) "warned [the state] of reliability concerns associated with ERCOT's reliance on natural gas for energy generation, which [at the time] represented 53% of the generation mix "69 This blackout was "smaller in magnitude" than the February 2021 blackouts, and the financial impacts modest in contrast to the 2011 and 2021 events. To However, this event occurred prior to the implementation of the competitive retail market now at play in the state.⁷¹ The February 2011 event, in more recent memory to many Texans, involved less severe weather than the 1989 and 2021 events, but cut off approximately one third of the electricity generation in the grid at its lowest point.⁷² Despite a less severe blackout, Texas residents demanded for change. Therefore, "the 2011 session of the Texas legislature passed a law [now in the Texas Utilities Code] requiring PUCT [the Public Utility Commission of Texas] to analyze the preparedness of power plants for extreme weather event[s]...."73 The law, found in Section 186.007 of the Texas Utilities Code, requires power plants to submit emergency preparedness reports for both the summer and winter seasons, including what the emergency operations plan is based on the upcoming year's forecasted weather patterns and any recommendations for improvements to ensure electricity reliability.⁷⁴ It is notable to consider that "during the 2011

^{69.} The University of Texas at Austin Energy Institute, *The Timeline and Events of the February 2021 Texas Electric Grid Blackouts* 70 (Nov. 7, 2021, 2:00 PM), https://energy.utexas.edu/sites/default/files/UTAustin%20%282021%29%20EventsFebruary 2021TexasBlackout%2020210714.pdf.

^{70.} The University of Texas at Austin Energy Institute, *The Timeline and Events of the February 2021 Texas Electric Grid Blackouts* 71 (Nov. 7, 2021, 2:00 PM), https://energy.utexas.edu/sites/default/files/UTAustin%20%282021%29%20EventsFebruary 2021TexasBlackout%2020210714.pdf.

^{71.} The University of Texas at Austin Energy Institute, *The Timeline and Events of the February 2021 Texas Electric Grid Blackouts* 76 (Nov. 7, 2021, 2:00 PM), https://energy.utexas.edu/sites/default/files/UTAustin%20%282021%29%20EventsFebruary 2021TexasBlackout%2020210714.pdf.

^{72.} The University of Texas at Austin Energy Institute, *The Timeline and Events of the February 2021 Texas Electric Grid Blackouts* 71 (Nov. 7, 2021, 2:00 PM), https://energy.utexas.edu/sites/default/files/UTAustin%20%282021%29%20EventsFebruary 2021TexasBlackout%2020210714.pdf.

^{73.} Id.

^{74.} Public Utility Commission Weather Emergency Preparedness Reports 4 U.C. § 186.007 (2011).

event, the market structure in ERCOT was similar to today's market structure." This market structure has not proven any more effective at providing grid sustainability. In fact, despite legislative change to implement weather preparedness, grid conditions and reliability have worsened.

Financial Interests in the Competitive Wholesale Market

While the cause of this blackout was traced back to ERCOT's refusal to implement resiliency suggestions and weatherize pipelines and backup generators, it is also notable to consider the financial interests at play in the competitive wholesale market system. Energy prices "[d]uring normal operations... are set by the offers of power plants, the level of demand, and any constraints on the system."⁷⁶ In recent years, that price has "averaged in the low tens of dollars per MWh."⁷⁷ Since the market runs on price incentives to decrease energy use during shortages, this means that private companies benefit financially from shortages if the market incentive does not in fact change consumer behavior. Thus, in situations like winter storms, where consumer incentives are not an effective market control, the grid, which is already unstable due to a power shortage, begins to fail. Not only does the grid fail, but the market itself fails consumers. During the February 2021 winter storm event, "the price of electricity spiked to \$9,000 per MWh and stayed there by orders of the PUCT, which suspended some market price setting rules during the electricity blackouts."78 This immense spike in electricity cost for the consumer, deviating from the normal amount per MWh by about \$8,990, while in a safe climate, may incentivize a decrease in energy use among consumers, does not serve the market well when the average consumer must place safety ahead of cost. Therefore, the market cannot reasonably recover in this kind of extreme weather situation, and thus not only fails consumers, but results in widespread blackouts.

^{75.} The University of Texas at Austin Energy Institute, *The Timeline and Events of the February 2021 Texas Electric Grid Blackouts* 76 (Nov. 7, 2021, 2:00 PM), https://energy.utexas.edu/sites/default/files/UTAustin%20%282021%29%20EventsFebruary 2021TexasBlackout%2020210714.pdf.

^{76.} The University of Texas at Austin Energy Institute, *The Timeline and Events of the February 2021 Texas Electric Grid Blackouts* 57 (Nov. 7, 2021, 2:00 PM) https://energy.utexas.edu/sites/default/files/UTAustin%20%282021%29%20EventsFebruary 2021TexasBlackout%2020210714.pdf.

^{77.} *Id*.

^{78.} Id.

When the grid is in an electricity shortage and must rely on backup generators, the system functions so that private companies financially benefit, and consumers are left with the option to either put themselves in dangerous positions or pay skyrocketed fees for electricity use.⁷⁹ Thus, there seems to be built into this market a financial incentive to run the grid on shortages. The emergency response generators' performance was hampered by "supply constraints, refueling issues, and forced outages" according to the University of Texas at Austin's Energy Institute commission.⁸⁰ Other generators were turned off completely during the rolling blackouts, and thus were unable to contribute to the bulk grid. 81 The financial benefits also disincentivizes investment in weatherizing equipment to prevent shortages, because not only is the investment in these improvements needed by private companies, but those same companies have financial incentive to keep the grid working at a more strained capacity. In fact, according to the Public Utility Commission of Texas's data, natural gas prices spiked from less than \$10 per MMBTU to over \$400 per MMBTU. 82 This led to natural gas producers reporting "windfall profits."83 In addition to natural gas producers, the "financial sector firms that operate in [the] ERCOT energy market also reported large profits" in the wake of the February 2021 winter storm event.84 Beyond the competitive market structure itself contributing to the lining of energy producers' pockets, the Public Utility Commission of Texas (PUCT) "... suspended some market price setting rules during the electricity blackouts."85 PUCT claimed this was a necessary measure "to account for load that had been removed due to forced outages from the calculation [of

^{79.} Chris Tomlinson, *ERCOT made the February Freeze fiasco worse. Texas electricity needs greater oversight,* Houston Chronicle (Oct. 17, 2021, 9:43 PM), https://www.houstonchronicle.com/business/article/Tomlinson-Grid-manager-made-February-freeze-161 68537.php.

^{80.} The University of Texas at Austin Energy Institute, *The Timeline and Events of the February 2021 Texas Electric Grid Blackouts* 39 (Nov. 7, 2021, 2:45 PM) https://energy.utexas.edu/sites/default/files/UTAustin%20%282021%29%20EventsFebruary 2021TexasBlackout%2020210714.pdf.

^{81.} Id.

^{82.} The University of Texas at Austin Energy Institute, *The Timeline and Events of the February 2021 Texas Electric Grid Blackouts* 10 (Nov. 7, 2021, 3:12 PM) https://energy.utexas.edu/sites/default/files/UTAustin%20%282021%29%20EventsFebruary2021TexasBlackout%2020210714.pdf.

^{83.} Id.

^{84.} Id.

^{85.} Id.

money owed for services] process" and "... to avoid potentially even higher electricity prices that would result from the high price of natural gas." 86

Financial Impacts on Texans

However, many Texas residents were still charged exorbitant amounts of money on their electricity bills, at a rate of 7,400% above the average. The money on their electricity bills, at a rate of 7,400% above the average. One man reported in the New York Times that he was charged with a \$16,752 electric bill in the aftermath of the 2021 winter storm event. Because of the electric bill in the aftermath of the 2021 winter storm event. In this situation, signed an order to stop companies from sending invoices or bill estimates to customers until they were able to determine what solution to move forward with. In March of 2021, the Texas Attorney General announced that \$29 million in electric bills for consumers across the state would be forgiven in response to this issue, after a major electricity provider in the state, Griddy Energy, filed bankruptcy. In culmination, the February 2021 winter storm blackout proved a few stark realities about the competitive market system and deregulation: the market was unable to self-regulate efficiently, state government was forced to get involved, and three major public utilities were forced to file for bankruptcy.

This issue may, however, be resolved through recent legislation signed in June of 2021. In the aftermath of the February 2021 winter storm, the state

^{86.} Id.

^{87.} Shannon Najmabadi, *Texans blindsided by massive electricity bills await details of Gov. Greg Abbott's promised relief*, Texas Tribune (Nov. 7, 2021, 3:26 PM), https://www.texastribune.org/2021/02/22/texas-pauses-electric-bills/.

^{88.} Giulia McDonnell Nieto del Rio, Nicholas Bogel-Burroughs and Ivan Penn, *His Lights Stayed on During Texas' Storm. Now He Owes \$16,752*, The New York Times (Nov. 7, 2021, 3:32 PM), https://www.nytimes.com/2021/02/20/us/texas-storm-electric-bills.html.

^{89.} Cassandra Pollock, *Texas officials block electricity providers from sending bills, disconnecting utilities for nonpayment*, Texas Tribune (Nov. 7, 2021, 3:36 PM), https://www.texastribune.org/2021/02/21/texas-electric-bill-greg-abbott/.

^{90.} Audrey McNamara, *Texas attorney general says* \$29 million in electric bills will be forgiven, CBS News (Nov. 7, 2021, 3:40 PM), https://www.cbsnews.com/news/texas-electric-bills-29-million-forgiven/.

^{91.} Maria Chutchian, *Brazos Electric seeks bankruptcy court ruling on winter storm energy prices*, Reuters (Nov. 7, 2021, 4:00 PM), https://www.reuters.com/legal/transaction al/brazos-electric-seeks-bankruptcy-court-ruling-winter-storm-energy-prices-2021-10-01/. See also Paula Sambo, *Just Energy Seeks Bankruptcy After Texas Loss*, Bloomberg (Nov. 7, 2021, 4:02 PM), https://www.bloomberg.com/news/articles/2021-03-09/pimco-backed-just-energy-seeks-bankruptcy-after-texas-loss. See also Audrey McNamara, *Texas attorney general says \$29 million in electric bills will be forgiven*, CBS News (Nov. 7, 2021, 3:40 PM), https://www.cbsnews.com/news/texas-electric-bills-29-million-forgiven/.

was under pressure for serious change. Governor Abbott, in response, "... signed into law new legislation that among other things required power plants, natural gas facilities and other infrastructure to better weatherize their systems, with penalties of up to \$1 million for not complying." This will hopefully prove to balance financial incentives at play in the competitive wholesale market, and essentially force the industry's hand to invest in resiliency measures to prevent this kind of situation from happening again. However, this is only one factor in the market, discussed in more detail later, and other incentives may present equal concern.

ERCOT's Board Structure and Incentives

Aside from market incentives, ERCOT features a small board of decisionmakers, each member having their own agenda. ERCOT's board, prior to the subsequent resignations in the political aftermath of the February 2021 blackout, consisted of thirteen members. Nine members were current or former professionals in the energy industry, one member that worked for the Dallas municipal government, one member represents industrial customers of ERCOT, and only one member represents residential consumers—this member representing residential consumers is appointed by the Governor. The last seat was vacant. In addition, In order for ERCOT to maintain its certification as an independent organization, the board, which should consist of 16 members, must include five directors who are completely unaffiliated with any market segment.

While the nonprofit status of the organization keeps it from complete industry control, it is still an issue that ERCOT, a private entity, has an essential monopoly over the electricity grid in Texas. Consumers do not have another option for electricity typically found in other private markets.

^{92.} James Osborne, *ERCOT President pushes tough new rules to overhaul Texas power grid, but challenges lie ahead*, Houston Chronicle (Oct. 17, 2021, 9:58 PM), https://www.houstonchronicle.com/business/energy/article/ERCOT-president-pushes-reform-16309949. php.

^{93.} Chris Tomlinson, *Texas electric grid is an easy fix, if lawmakers will admit their error,* Houston Chronicle (Oct. 17, 2021, 9:50 PM), https://www.houstonchronicle.com/business/columnists/tomlinson/article/Texas-electric-grid-is-easy-to-fix-if-lawmakers-15961368.php.

^{94.} Id.

^{95.} *Id*.

^{96.} Erin Douglas and Mitchell Ferman, *ERCOT board members who live outside of Texas are resigning in the aftermath of the power outage, winter storm*, Texas Tribune (Oct. 17, 2021, 9:59 PM), https://www.texastribune.org/2021/02/23/ercot-members-resign-texas/.

And, unlike a publicly owned electricity grid, accountability mechanisms are minimal. Since ERCOT is a nonprofit organization, and thus a private entity, it is under the governance of a Board of Directors. This is an issue, because Governor Abbott is known to be an advocate of the energy industry. Thus, by making the board member designed to represent the consumers an appointed position, this calls into question whether the general public is adequately represented. Only one person on ERCOT's board is charged with representing 26 million customers. Not only did they have a vacant seat, but many of the members themselves did not even live in the state of Texas.

Many of these board members have since resigned in the aftermath of the February 2021 winter storm. The political fallout of the winter storm led Governor Abbott to call for board member resignations. ¹⁰⁰ Six out-of-state board members resigned, with a seventh member, from Texas, following suit. ¹⁰¹ At the time this comment was written, ERCOT only has four current board members. ¹⁰²

Holding ERCOT Accountable: The Courts Intervene

In the aftermath of the February 2021 winter storm, Texas residents demanded accountability. Not only did 48 million customers lose power, but according to higher estimates, as many as 200 individuals lost their lives. 103104 Over two dozen families attempted to sue ERCOT for the

^{97.} Chris Tomlinson, *Texas electric grid is an easy fix, if lawmakers will admit their error*, Houston Chronicle (Oct. 17, 2021, 9:50 PM), https://www.houstonchronicle.com/business/columnists/tomlinson/article/Texas-electric-grid-is-easy-to-fix-if-lawmakers-15961 368.php.

^{98.} About ERCOT, ERCOT (Oct. 17, 2021, 9:48 PM), http://www.ercot.com/about.

^{99.} Erin Douglas and Mitchell Ferman, *ERCOT board members who live outside of Texas are resigning in the aftermath of the power outage, winter storm*, Texas Tribune (Oct. 17, 2021, 9:59 PM), https://www.texastribune.org/2021/02/23/ercot-members-resign-texas/.

^{100.} Id.

^{101.} Id.

^{102.} Board of Directors, ERCOT (Oct. 17, 2021, 10:06 PM), http://www.ercot.com/about/governance/directors.

^{103.} Erin Douglas and Mitchell Ferman, *ERCOT board members who live outside of Texas are resigning in the aftermath of the power outage, winter storm*, Texas Tribune (Oct. 17, 2021, 9:59 PM), https://www.texastribune.org/2021/02/23/ercot-members-resign-texas/.

^{104.} James Osborne, *ERCOT President pushes tough new rules to overhaul Texas power grid, but challenges lie ahead*, Houston Chronicle (Oct. 17, 2021, 9:58 PM), https://www.houstonchronicle.com/business/energy/article/ERCOT-president-pushes-reform-16309949. php.

wrongful death of a loved one due to "sickness, cold or lack of power for oxygen machines" caused by the power outages. This included the wrongful death suit of an 11-year-old boy from Conroe, Texas. In addition to the human devastation the power outages caused, the economic damages were severe, with property damage estimated in the billions. However, Texas residents quickly discovered that the entity which they believed directly and negligently caused this damage and loss across the state, ERCOT, was not legally able to be held responsible in civil lawsuits. This is because of a ruling from a Texas Court of Appeals case out of Dallas dating back to 2018, *Electric Reliability Council of Texas, Inc. v. Panda Power Generation Infrastructure Fund, LLC*, also known as Panda Power I and II. In Infrastructure Fund, LLC, also known as Panda

Panda Power I and ERCOT's Sovereign Immunity Status

In the Panda Power cases, the Texas Court of Appeals addressed two issues, one of which decided the sovereign immunity status of ERCOT. Sovereign immunity is a legal concept derived from the common law which prevents a government from being sued without its consent. In the United States, sovereign immunity typically applies to the federal government and state government, but not to municipalities. The purpose of sovereign immunity doctrine is to prevent private entities from the right to sue governmental entities for civil matters, because this may hold up taxpayer resources in litigation and prevent its use in the social services or other functions the government entity is designed to do. However, in application to ERCOT, a private non-profit organization operating public electricity utilities in Texas, Texas courts have ruled inconsistently over the last few years on whether or not the organization was considered a "governmental unit" for purposes of sovereign immunity status.

^{105.} Reese Oxner, *ERCOT to argue it is immune from winter storm lawsuits*, Texas Tribune (Nov. 13, 2021, 12:51 PM), https://www.texastribune.org/2021/04/09/ercot-lawsuit-immunity-winter-storm/.

^{106.} Id.

^{107.} Paul Takahashi, *ERCOT's emergency response program needs better oversight*, Houston Chronicle (Oct. 17, 2021, 9:56 PM), https://www.houstonchronicle.com/business/texas-inc/article/Insight-ERCOT-s-emergency-response-program-16319739.php.

^{108.} Electric Reliability Council of Texas, Inc. v. Panda Power Generation Infrastructure Fund, LLC, 552 S.W.3d 297 (2018).

^{109.} Sovereign immunity, Cornell Law School Legal Information Institute (Nov. 13, 2021, 1:54 PM), https://www.law.cornell.edu/wex/sovereign immunity.

^{110.} Id.

In order to qualify for sovereign immunity status, ERCOT must be considered a "governmental unit" since this status applies to government entities. In cases prior to Panda Power, ERCOT had argued it was not a governmental unit. In HWY 3 MHP, LLC v. Electric Reliability Council of Texas, decided in March of 2015 by the Texas Court of Appeals out of Austin, ERCOT argued that it was not a governmental unit for purposes of interlocutory appeal, like in Panda Power, and the court agreed. 111 According to Panda Power, the similarities in reasoning between Panda Power's argument that ERCOT was a governmental unit for purposes of interlocutory appeal and ERCOT's argument in HWY 3 were as follows: the legislature chose an independent organization as opposed to an agency, indicating it "did not intend ERCOT to be a governmental unit," ERCOT was "not fulfilling [the] same role" as a governmental agency and "has not been statutorily defined as being part of a governmental unit," ERCOT "is not statutorily entitled to any services or benefits that a typical governmental unit might receive' and 'does not receive funding from the state," and the financial oversight PUCT has over ERCOT is similar to that of utilities, which are not considered governmental units.112 For these reasons, the Texas Court of Appeals in Austin ruled that for purposes of interlocutory appeal, ERCOT was not a governmental unit, and thus secondarily, ERCOT would be considered outside of the protection of sovereign immunity from civil suits. This particular case dealt with a breach of contract dispute between ERCOT and a utility company, and thus, it was in ERCOT's interest to be designated not a governmental unit under the statute at issue.

In the Panda Power cases, however, ERCOT's interests were to be labeled as a government unit to avoid civil liability, and thus, the organization reversed its position. In Panda Power I, ERCOT argued that it performs a "uniquely governmental function in regulating the electric grid and aspects of the electricity market," and therefore falls within the governmental-unit status in this capacity. In furtherance of this assertion, ERCOT cited *University of the Incarnate Word v. Redus*, which ruled that "... an unambiguously private entity that performed a traditional governmental function was a 'governmental unit' as to that function."

^{111.} HWY 3 MHP, LLC v. Electric Reliability Council of Texas, 462 S.W.3d 204, 212 (2015).

^{112.} Electric Reliability Council of Texas, Inc. v. Panda Power Generation Infrastructure Fund, LLC, 552 S.W.3d 297, 307 (2018).

^{113.} Electric Reliability Council of Texas, Inc. v. Panda Power Generation Infrastructure Fund, LLC, 552 S.W.3d 297, 306 (2018).

Therefore, ERCOT was able to distinguish this case and reconcile its previous position in *HWY 3* to assert a defense against its civil lawsuit with Panda Power. Ultimately, the court ruled that ERCOT was not a governmental unit for purposes of an interlocutory appeal.¹¹⁴

However, despite ruling against ERCOT's governmental unit status, the court in the Panda Power I case still granted ERCOT sovereign immunity status against civil lawsuits. The court first reasoned that in order to "... determine whether an entity is immune, courts should rely on the 'nature and purposes' of sovereign immunity."115 In reference to ERCOT's brief in the case, the court recognizes the following considerations laid out by the Supreme Court which serve as the bases for sovereign immunity as applied to ERCOT: (1) "immunity protects the public fisc.," (2) "separation-ofpowers requires ERCOT's immunity," and (3) immunity would protect critical government services, which may otherwise be "diverted to pay private litigants" if sovereign immunity were denied. 116 Furthermore, even though ERCOT is not a government agency, it is not considered an independent contractor for the state either, which are denied sovereign immunity status in Brown & Gay Engineering v. Olivares. 117 In fact, ERCOT, "unlike any other corporation in Texas, exclusively performs statutory functions "118 This ruling out of the Court of Appeals in Dallas was then appealed by Panda Power via a writ of mandamus to the Supreme Court of Texas, challenging its dismissal of Panda Power's claims.

Panda Power II and Issues of Preemption

In Panda Power II, the Supreme Court of Texas ruled on March 19, 2021, that it lacked the jurisdiction to hear the case, thus calling into question the fate of the multitude of petitions being filed against ERCOT in the aftermath of the February 2021 winter storm. ERCOT argued that the Supreme Court of Texas lacked jurisdiction to hear the case, and in fact, "the Public Utility Commission ha[d] exclusive jurisdiction over Panda's claims." However, when the trial court denied this claim, ERCOT proposed Panda was barred from filing suit against it because it had

^{114.} Id. at 309.

^{115.} Id. at 314.

^{116.} Id.

^{117.} Id. at 310.

^{118.} Id.

^{119.} Electric Reliability Council of Texas, Inc. v. Panda Power Generation Infrastructure Fund, LLC, 619 S.W.3d 628, 632 (2021).

sovereign immunity status.¹²⁰ Ultimately, the court denies ruling on any of the claims. The divided court, in a 5-4 decision, stated the court lacked jurisdiction to hear the case, and it was therefore moot, dismissing the case altogether.¹²¹

Dissenting opinions in the Panda Power II case reiterate the sentiments of many Texans after the ruling was released: the public wants to know whether ERCOT is in fact immune from suit. 122 However, the dismissal of the Panda Power II case for want of jurisdiction thus metaphorically punted the issue of ERCOT's sovereign immunity status for another day. Or, according to Justice Blacklock's concurring opinion in the Panda Power II case, not another day, but another branch; this issue may be avoided altogether in the courts in hopes of a legislative or executory solution to ERCOT's problems. After the Panda Power decisions, ERCOT's status as a governmental unit or not, and thus its sovereign immunity status from civil lawsuits, such as the wrongful death, property damage, and other civil suits filed against ERCOT in the aftermath of the February 2021 winter storm have not been resolved.

Two potential outcomes arise regarding Panda Power II and possible preemption of any future Texas Supreme Court rulings on this issue. First, the Supreme Court may consider a challenge to ERCOT's sovereign immunity status by taking on another case for which it has proper jurisdiction. Given the timing of the Supreme Court's dismissal of Panda Power's claims, just one month after the devastating February 2021 winter storm, it seems unlikely the Supreme Court of Texas would rule on ERCOT's sovereign immunity status that quickly. Furthermore, the concurring opinion indicates even a hesitancy to consider the issue in the court system altogether. However, it is important to consider that the ruling in Panda Power dealt with ERCOT and a power company in dispute over fraud, negligent misrepresentation, and breach of fiduciary duty in the context of a business relationship. Here, the outcome affects not a company, but entire populations reliant on ERCOT's public utilities, both citizens and businesses alike; the stakes are far greater and the loss far more personal. Not only this, but the political fallout after the February 2021 winter storm may play a role in whether the Texas Supreme Court decides to take on this question in the future.

^{120.} Id.

^{121.} Id. at 642.

^{122.} Id. at 643.

The second potential outcome would arise if ERCOT were to operate outside of Texas state lines in order to trigger federal laws that may impact ERCOT's sovereign immunity status. This would trigger preemption issues if there were any existing federal laws which allow ERCOT to be civilly sued. Preemption is a legal doctrine which invalidates state laws, or a lower authority of law, when they conflict with federal laws, or a higher authority of law, in favor of the higher authority law. 123 Since ERCOT is unique in its function as both a public utility commission and a private non-profit entity, in comparison to FERC and NERC, which are governmental entities, it is likely that the federal government would have the opportunity to consider ERCOT's sovereign immunity status. If ERCOT's status were challenged in the context of a federal court case, the outcome of this case would trigger preemption in favor of the federal court's decision if the federal court were to decide ERCOT's sovereign immunity status, or even reverse it if the Texas Supreme Court decides to take on this issue and rules in favor of ERCOT. Therefore, a federal court decision on ERCOT's sovereign immunity status may lead to different outcomes for families and businesses seeking restitution for the damage caused by ERCOT's improper management of the public utility system in February 2021, and any other loss or damage incurred. However, unless ERCOT expands its operations beyond the state of Texas, federal courts lack jurisdiction on this issue, and thus may not trigger preemption to overrule any Texas Supreme Court decision.

Solutions Underway: Are They Enough?

As ERCOT's sovereign immunity status is fought in and out of the court system, there have been some ways residents of Texas and companies harmed in the aftermath of the February 2021 ice storm have sought restitution for the damage and loss they endured.

Judicial Solutions

Some Texans have still sought restitution for their losses due to the February 2021 winter storm's electricity outages within the court system. While the Texas Supreme Court has yet to take on the issue of ERCOT's sovereign immunity status since its dismissal of the Panda Power cases, many have begun to sue other related entities for damages, including other private Texas power companies under ERCOT's management; this includes

^{123.} Legal Information Institute, *Preemption* (Dec. 29, 2021, 11:52PM), https://www.law.cornell.edu/wex/preemption

companies such as CenterPoint Energy, NRG Energy, Oncor, and CPS energy. 124 This is possible because these companies, unlike ERCOT, do not have their lack of sovereign immunity status in question in the court system. However, some plaintiffs are still including ERCOT as defendants alongside these power companies in hopes the Texas Supreme Court may decide to rule on the issue and hold ERCOT accountable. 125 While this may provide some financial restitution for the loss endured by many in aftermath of the February 2021 winter storm, this does not prevent future loss under ERCOT's management, which has faced no civil accountability for its mismanagement of the electric grid.

Legislative Solutions

Texans have further sought to hold ERCOT accountable via legislative change. In June of 2021, after months of mounting political pressure, Texas Governor Greg Abbott signed into law Senate Bill 2 and 3 to address the electric grid failure in the aftermath of the February 2021 winter storm and ERCOT's board structure and governance.

Senate Bill 3 (S.B. 3) addresses the issue of grid failure, and proposes solutions to "preparing for, preventing, and responding to weather emergencies and power outages; increasing the amount of administrative and civil penalties." First, the bill addresses a new power outage alert system, which is to alert Texans "when the power supply in . . . [the] state may be inadequate to meet demand." Likely in hopes of balancing the market incentives, the alert system will let Texans know when to conserve power in order to maintain the needed 60Hz frequency in the electricity grid and prevent power outages.

In addition, S.B. 3 requires electricity operators under ERCOT to enact and report on its "weatherization plans, procedures, and operations" within its facilities to prevent equipment and facilities from being unprepared during future weather emergencies and power outages. This weatherization plan includes "updates for power generators and transmission lines to make them better withstand extreme weather," but

^{124.} Reese Oxner, *ERCOT to argue it is immune from winter storm lawsuits*, Texas Tribune (Dec. 28, 2021, 1:07PM), https://www.texastribune.org/2021/04/09/ercot-lawsuit-immunity-winter-storm/.

^{125.} *Id*.

^{126.} S.B. 3, 2021 Leg., 87th Sess. (Tex. 2021).

^{127.} Id.

^{128.} Id.

these changes will not likely take effect until 2022 or later. ¹²⁹ These measures seek to assure companies place weatherization on their priority lists and keep up with the needed weatherization standards for adequate grid function in times of severe weather.

In order to assure companies comply with these weatherization requirements, S.B. 3 calls for inspections of ERCOT-affiliated facilities, with a penalty of up to \$1 million for non-compliance. However, requirements for oil and gas companies are less severe; weatherization for natural gas companies which supply power to the grid is only required if the power supply is deemed "critical" by regulators. By creating this exception to weatherization measures for the oil and gas industry, this raises a big issue and calls into question the effectiveness of this weatherization measure outlined in S.B. 3. To put this in perspective, figure 5 (also referenced as figure 2 above) shows the net capacity outages by energy source during the February 2021 winter storm.

^{129.} Isabella Zou, Texas power generation companies will have to better prepare for extreme weather under bills Gov. Gregg Abbott signed into law, Texas Tribune (Dec. 29, 2021, 12:51PM), https://www.texastribune.org/2021/06/08/greg-abbott-texas-power-gridercot/

^{130.} S.B. 3, 2021 Leg., 87th Sess. (Tex. 2021).

^{131.} Isabella Zou, Texas power generation companies will have to better prepare for extreme weather under bills Gov. Gregg Abbott signed into law, Texas Tribune (Dec. 29, 2021, 12:51PM), https://www.texastribune.org/2021/06/08/greg-abbott-texas-power-gridercot/

Net Generator Outages and Derates by Fuel Type (MW)

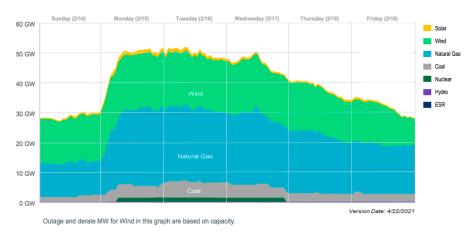


Figure 5. Net capacity outages by fuel type in Texas during the February 2021 winter storm. 132

As figure 5 shows, natural gas was the most significant contributor to generator outages during the February 2021 winter storm. By limiting the requirements for this industry to only "critical" power sources, a subjective and inconsistent standard, this increases the odds of further weatherization breakdowns of generators to supply power during times of severe weather and creates a less effective solution to weatherization issues under S.B. 3.

In addition to attempting to weatherize critical energy sources, S.B. 3 also provides a solution to the previous problem of shutting off the power to locations essential to the health and safety of Texas residents. Under the new program, electricity companies can inform customers how to register facilities such as hospitals or households that need electricity to run medical equipment as "critical," thus preventing the outages of essential health and safety locations for residents without their control or the power companies' knowledge. This measure seeks to provide ERCOT with more specific

^{132.} ERCOT Public, Update to April 6, 2021 Preliminary Report on Causes of Generator Outages and Derates During the February 2021 Extreme Cold Weather Event, April 27, 2021, http://www.ercot.com/content/wcm/lists/226521/ERCOT_Winter_Storm_Generator_Outages_By_Cause_Updated_Report_4.27.21.pdf.

^{133.} Isabella Zou, Texas power generation companies will have to better prepare for extreme weather under bills Gov. Gregg Abbott signed into law, Texas Tribune (Dec. 29, 2021, 12:51PM), https://www.texastribune.org/2021/06/08/greg-abbott-texas-power-gridercot/

data to better trigger controlled outages when needed to maintain grid stability during severe weather.

During the February 2021 winter storm, many critical facilities, including not just residences with essential medical equipment, but energy facilities helping run the grid itself by providing backup generation, were shut down because the buy-in process to shut off energy was not analyzed by ERCOT to determine who had elected into the program. This new program allows customers to buy-out instead of buy-in, in hopes of saving lives in the case of another potentially deadly rolling blackout in the future. While this program provides more data to ERCOT and the power companies under its management, there is still a chance that, without properly informing all customers, many critical locations may still lose power, leading to more fatalities during the next extreme weather scenario.

Another major proposal under S.B. 3 seeks to provide economic stability to ERCOT's wholesale energy market. In the aftermath of the February 2021 winter storm, many Texans lucky enough to have power during even some of the storm were left with exorbitant electricity bills. The Texas government, in passing S.B. 3, attempted to stabilize the market and prevent future skyrocketed consumer prices while providing no financial relief to Texas residents or the electricity companies. S.B. 3 did, however, provide natural gas utilities and electric cooperatives \$6.5 billion ratepayerbacked bonds in return for the state increasing customers' utility bills to pay back the bonds. 134 The state was attempting to provide a safety net to balance out what can be a volatile electricity and energy market during times of severe weather. However, by doing this, the state was protecting the interests of ERCOT and the energy market over consumers. In fact, the state denied providing financial relief for those customers left with electricity bills up to 7,400% above the average amount. 135 The Texas government's solution to provide financial relief for individuals was through S.B. 3, which put a pause on these exorbitant invoices for individuals and instead placed the burden of stabilizing this volatile market on every Texan for years to come. 136 This plan to provide bonds to companies in the energy market under S.B. 3 will raise electricity bills for

^{134.} Id.

^{135.} Shannon Najmabadi, *Texans blindsided by massive electricity bills await details of Gov. Greg Abbott's promised relief*, Texas Tribune (Nov. 7, 2021, 3:26 PM), https://www.texastribune.org/2021/02/22/texas-pauses-electric-bills/.

^{136.} Cassandra Pollock, *Texas officials block electricity providers from sending bills, disconnecting utilities for nonpayment*, Texas Tribune (Nov. 7, 2021, 3:36 PM), https://www.texastribune.org/2021/02/21/texas-electric-bill-greg-abbott/.

consumers "at least a few dollars each month for the next two decades." Therefore, while this plan may contribute to a slightly more stabilized energy market under ERCOT's wholesale energy system, the burden of the market will continue to fall on the backs of consumers and allow the energy market to come out stronger than ever.

While S.B. 3 attempts to provide solutions to ERCOT's wholesale energy market, consumer safety, and weatherization measures in order to prevent future grid collapses in the future due to similar extreme weather conditions, these measures do not get to the root of the issue, and thus provide inadequate solutions for Texas residents.

Board Governance

In addition to S.B. 3, S.B. 2 was passed to address the internal governance concerns surrounding ERCOT and its management of the grid. The Board was created to consist of sixteen members. However, leading up to the February 20201 winter storm, the Board consisted of only twelve members: nine members were current or former professionals in the energy industry, one member that worked for the Dallas municipal government, one member represents industrial customers of ERCOT, and only one member represents residential consumers—this member representing residential consumers is appointed by the governor. S.B. 2 seeks to consolidate the power and decision-making of the Board by reducing its size down to eleven members. Of these members, only nine may vote. Additionally, the selection committee consisting of three people may appoint eight members to the Board. The selection committee is appointed by the governor, lieutenant governor, and the Speaker of the

^{137.} Isabella Zou, Texas power generation companies will have to better prepare for extreme weather under bills Gov. Gregg Abbott signed into law, Texas Tribune (Dec. 29, 2021, 12:51PM), https://www.texastribune.org/2021/06/08/greg-abbott-texas-power-gridercot/

^{138.} Chris Tomlinson, *Texas electric grid is an easy fix, if lawmakers will admit their error,* Houston Chronicle (Oct. 17, 2021, 9:50 PM), https://www.houstonchronicle.com/business/columnists/tomlinson/article/Texas-electric-grid-is-easy-to-fix-if-lawmakers-15961 368.php.

^{139.} S.B. 2, 2021 Leg., 87th Sess. (Tex. 2021).

^{140.} Isabella Zou, Texas power generation companies will have to better prepare for extreme weather under bills Gov. Greg Abbott signed into law, The Texas Tribune (Jan. 2, 2022, 3:02 PM), https://www.texastribune.org/2021/06/08/greg-abbott-texas-power-gridercot/.

^{141.} *Id*.

House. 142 The process would include bringing in an outside consulting firm. 143

By consolidating power on the Board to a select few and decreasing the members on the Board, the bill seeks to put the governance power more in the hands of state government while still maintaining its private sector status and thus maintaining its immunity. This Board structure further prevents Texans from holding ERCOT accountable. Unlike the previous Board structure, which at least maintained one position held for a representative of consumers, this Board structure eliminates this accountability mechanism. Although the state government has more control and influence under this proposed governance structure, there is no direct representation of consumers. This consolidation of power allows ERCOT to continue to function with minimal supervision under the guise of democratic governance and accountability, and will not lead to the change, accountability, and representation needed for Texas residents.

A Flawed System

The United States prides itself on its free market system. Yet, not every system is best designed for the distribution and maintenance of public goods. Every other state in the United States, except for Texas, has its power grid connected across state lines, tapping into other grid networks, and maintaining the necessary 60Hz with much greater ease due to power sharing between grids. Therefore, because the power travels between states, it can fall under the federal oversight of either FERC or NERC. These entities ensure power stability and maintenance of the grid. Texas, however, utilizes a wholesale energy market, avoiding federal regulation, and placing a critical public good, the majority of the state's electricity, in the hands of an idealistic free energy market. The resulting cost is very real for Texas consumers.

What fuels this grid is not public resource allocation, safety, or the public good, but supply and demand. In order to maintain the optimal 60Hz for the grid to function, ERCOT must incentivize consumers via a volatile energy market. These incentives do not take into account that a consumer's use of a public good, energy, may not always be incentivized by money alone. In fact, during times of energy crisis, the market forces consumers to choose between two stark realities: their own safety and security, or their personal finances. And this problem is not new to Texans. In 1989 and in 2011,

^{142.} Id.

^{143.} Id.

Texans dealt with similar outages, with the major difference being the market incentives. The 1989 outage was "smaller in magnitude" than the February 2021 blackouts, and the financial impacts modest in contrast to the 2011 and 2021 events. ¹⁴⁴ The 2011 outage involved less severe weather than the 1989 and 2021 events, but still cut off approximately one third of the electricity generation in the grid at its lowest point. ¹⁴⁵

There have even been power issues during the summer months. Last year, auto-thermostats were installed in many Texas residents' homes. However, unbeknownst to these consumers, electric companies were making auto-adjustments to their electricity usage—not in order to maintain the status of the home, but to maintain the status of the grid itself. The program, called Smart Savers Texas, gave EnergyHub, a company in business with electricity companies, "permission to adjust participants' smart thermostats remotely during times of peak energy demand." In similar style, just like in the case of the opt-in program during winter storms, this program would automatically diminish power for the sake of the grid during extreme weather conditions dangerous for Texas residents. In the summer of 2021, this program would decrease energy usage, such as toward an air conditioning unit of residents' homes, during the middle of a heat wave. 147 As evidenced here, these problems are not going away, and the proposed changes are not going to do enough.

Between unreliable projections and a lack of adequate backup energy, even alternative solutions can be costly without a significant change to the incentive structure of the energy market in Texas. For example, the use of standby generators, while it may offer some temporary stability in times of crisis, generate for investors, whereas public utilities generate for capacity. Even in these alternative solutions, the incentives still shift from public safety and reliability to money in the hands of investors. In addition, the use of "peakers," or plants that burn natural gas and convert the fuel into electric energy, may offer excess energy to be tapped into during times of

^{144.} The University of Texas at Austin Energy Institute, *The Timeline and Events of the February 2021 Texas Electric Grid Blackouts* 71 (Nov. 7, 2021, 2:00 PM), https://energy.utexas.edu/sites/default/files/UTAustin%20%282021%29%20EventsFebruary 2021TexasBlackout%2020210714.pdf.

^{145.} *Id*.

^{146.} Tyler Sonnemaker, *Texas power companies automatically raised the temperature of customers' smart thermostats in the middle of a heat wave*, Business Insider (Jan. 9, 2022, 8:00 PM), https://www.businessinsider.com/texas-energy-companies-remotely-raised-smart-thermostats-temperatures-2021-6.

^{147.} Id.

crisis, but they are generally more expensive, thus continuing to shift the economic burden onto the hands of consumers. There needs to be a better solution.

Proposed Solutions

The energy market in Texas, like all other markets in the economy, is fueled by supply and demand. However, for a public resource such as electricity, the market has been privatized and thus able to thwart accountability mechanisms one would find across the rest of the country. This lack of public accountability has led to a volatile market, spiked prices in times of crisis, energy running at capacity beyond what can be reasonably sustained, and consumers searching for change.

The Ideal Solution

The use of the wholesale energy market is unsustainable. Since the electricity grid must maintain 60Hz to run effectively and prevent blackouts due to grid instability, an incentive structure based on the free market is unstable and inefficient. Furthermore, in times of energy shortage due to extreme weather, an isolated market is inadequately prepared to handle peaks in demand or sustain these demands for any measurable period of time—thus, leading to blackouts across the state of Texas.

The ideal solution for ERCOT is to open the door to federal regulation under FERC or NERC and connect with other electricity grids in neighboring states to utilize as a back-up for energy during extreme weather conditions or other times of high demand. This energy-sharing capability would enable the state to tap into resources of neighboring states that may not have the same extreme weather or have less strain on their grid in order to spread the burden across more energy sources. Instead of relying on standby generators to keep the power on, this would enable widespread resource allocation.

Furthermore, by allowing federal regulation, FERC or NERC may require additional weatherization or other policies by which ERCOT must comply, thus preventing lax regulatory measures and decreasing the risk of equipment failures and such from continuing to contribute to grid outages during extreme weather conditions.

State-Level Solutions

In order to provide efficient and safe energy allocation and maintain effective grid capacity, the incentive structure of the electricity market in Texas cannot rely solely on supply and demand from consumers. The market must be balanced by consumer interests and safety structures. And when the energy market does fail, as it has in February 2021, Texas residents need to have a way to hold ERCOT accountable.

Due to the Texas Supreme Court's refusal to rule on the issue of sovereign immunity, Texas residents are still not able to hold ERCOT accountable for grid outages and the resulting harm to their personal safety and finances. And legislative propositions to change ERCOT's board structure further isolate residents from the center of power by eliminating the one member of the Board which was supposed to represent consumers and consolidating power further into the hands of an entrenched political administration that continues to ignore the public's cries for change.

However, the best state-level solution would be to decentralize the Board's power outside of industry moguls and high-level politicians and give more seats to represent consumer interests. While in theory politicians may represent the people, S.B. 2, for example, would further consolidate the power of the Board down to only three Board members, the three of which are all elected by high-level political officials in the state.¹⁴⁸

In addition to changes in the Board governance structure of ERCOT, bills such as S.B. 3 should be expanded to include oil and gas companies within their weatherization regulations on an equal basis to other energy resources; weatherization for natural gas companies which supply power to the grid is only required if the power supply is deemed "critical" by regulators under the current bill. As mentioned previously, natural gas was the most significant contributor to generator outages during the February 2021 winter storm. Therefore, holding natural gas companies to the same regulatory standards may make a significant impact on how efficient these regulatory changes are in providing a safer grid and more reliable electricity market in the state.

Alternative Energy and a Capacity Market

Heavy reliance on the oil and gas industry permeates every facet of American life. However, energy alternatives may provide some reprieve from energy shortages during times of weather crisis or peak energy usage. In particular, the use of nuclear power has been in decline for years, and only accounts for a small percentage of energy usage in the state. As seen

^{148.} Isabella Zou, Texas power generation companies will have to better prepare for extreme weather under bills Gov. Greg Abbott signed into law, The Texas Tribune (Jan. 8, 2022, 12:09 PM), https://www.texastribune.org/2021/06/08/greg-abbott-texas-power-gridercot/.

^{149.} Id.

below in Figure 6, a 2021 Energy Consumption Estimate, nuclear electric power accounted for only 2,174 MWh (megawatt hour) as opposed to natural gas-fired electricity generation of 19,327 MWh.¹⁵⁰



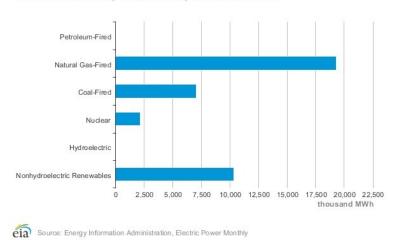


Figure 6. Texas Net Electricity Generation by Source, comparing nuclear and natural gas energy usage. 151

If the state does not utilize the energy resources outside of its borders and does not hold oil and gas companies to the same regulatory standards, diversifying its energy sources by tapping into nuclear energy may provide a safety net for when its primary energy sources cannot meet capacity demands.

In addition to tapping into alternative energy sources, the structure of the market itself may be adjusted to what is called a "capacity market." A capacity market allows grid operators to "direct investment a few years ahead of when electricity needs to be delivered." Like the wholesale energy market, capacity markets function off of supply and demand in order to meet capacity. The big difference, however, is that it offers more reliability. Wholesale energy markets rely on day-to-day supply and

^{150.} U.S. Energy Information Administration, *Texas* (Jan. 18, 2022), https://www.eia.gov/state/?sid=TX#tabs-4.

^{151.} *Id*.

^{152.} *Explainer: How capacity markets work*, Energy News Network (Feb. 2, 2021, 10:09 AM), https://energynews.us/2013/06/17/explainer-how-capacity-markets-work/.

demand, whereas capacity markets bid out capacity years in advance. This enables the management entities to predict what output of energy will be available and better plan for supply and demand, as opposed to the volatile day-to-day market under the wholesale framework. ERCOT "does not use a capacity market to ensure necessary resources will be available. Instead, the state depends on the promise of higher prices to incentivize generation." ¹⁵³

The capacity market may be a practical solution for the state because it allows more market control than a regular energy market but shifts the incentive to capacity instead of price. This would alleviate the primary issue with the wholesale energy market: the assumption that consumers' primary consideration when utilizing an everyday resource is price. Instead, the market itself would regulate its output capacity and "create long-term price signals for all resources." This would allow ERCOT to better manage and plan resource allocation to prevent future blackouts, even in light of unexpected weather conditions.

Conclusion

Texans deserve reliable and affordable electricity. However, a volatile wholesale energy market coupled with ERCOT's mismanagement have left residents seeking answers and accountability. Sadly, the Texas Supreme Court in *Panda Power I* and *II* has punted the issue of the sovereign immunity status of ERCOT, calling to question how Texans may hold ERCOT accountable for the personal and financial damage caused in the aftermath of the February 2021 winter storm. Legislative action has not done enough to hold ERCOT accountable, as it has only sought to further consolidate power and shift that power from industry insiders to high-ranking state officials. And efforts to ensure proper planning is in place for energy producers have not put enough emphasis or incentives for enforcement upon the oil and gas industry.

The energy market in Texas must shift to a different incentive structure to provide the necessary change needed to keep both the electricity grid functioning and residents safe. This includes shifting the power within

^{153.} Robert Walton, *California markets in the Lone Star State? Texas regulators consider 'quasi-capacity' market system*, Utility Dive (Oct. 24, 2021, 9:18 AM), https://www.utilitydive.com/news/california-markets-in-the-lone-star-state-texas-regulators-consider-quasi/608695/#:~:text=Unlike%20other%20grid%20operators%2C%20the,higher%20price%20|to%20|ncentivize%20generation.

^{154.} *Explainer: How capacity markets work*, Energy News Network (Feb. 2, 2021, 10:09 AM), https://energynews.us/2013/06/17/explainer-how-capacity-markets-work/.

ERCOT's Board to include consumer voices, holding all energy markets accountable, dispersing the burden to both resources within the energy grids of other states and by expanding Texas's own energy sources, including nuclear energy, allowing federal regulatory oversight, and finally, moving from a consumer-price-oriented system to a capacity market to ensure grid stability for years to come.