SNOWPOCALYPSE 2021

Why Texas shivered in the dark for days

BY JORDAN A. MILLER

illie Nelson said it best:

"Turn out the lights, the party's over They say that 'all good things must end' Let's call it a night, the party's over And tomorrow starts the same old thing again."

Texas has been partying on its own since the 1930s, operating a power grid confined to its borders to avoid federal regulation authorized by President Franklin Delano Roosevelt in the Federal Power Act of 1935 over electricity sales that cross state lines.

25

Texas has celebrated this independence for decades. But "all good things must end." Is it time to call it a night? Is the party over? If you ask Texas (and me), federal oversight is certainly not the answer, but "The Times, They Are A-Changin'," and Texas must sift through the ashes (more like snow and ice), figure out what went wrong and fix it with smart policy, not political gamesmanship and expediency.

For days that felt like weeks, millions across Texas started the same old thing again — no lights, no heat, no clean water, empty shelves at the grocery store, burst pipes, significant property damage and according to the Texas Department of State Health Services, the tragic loss of over 100 deaths.

What started as snowflakes became a snowball, and soon, an avalanche was raging out of control.

What caused it?

"No snowflake in an avalanche ever feels responsible." — Voltaire

A Perfect Storm

There are plenty of snowflakes to blame for Snowpocalypse 2021 beyond the literal snow, ice and freezing temperatures.

Let's start with the snowflake with the most fingers pointed its direction — the Electric Reliability Council of Texas (ERCOT). As Kate Galbraith wrote in February 2021 for Houston Public Media, ERCOT was formed five years after a 1965 blackout shut down much of the northeast United States and was tasked with managing grid reliability in accordance with national standards established by the North American Electric Reliability Corporation (NERC).

ERCOT acts as the air traffic controller for electricity to about 75 percent of the land area of Texas — covering more than 26 million Texans — and is responsible for balancing the load between demand and capacity. According to its website, ERCOT schedules power on a grid connecting 46,500 miles of transmission lines and 680+ generation units. As some electricity generators failed (i.e., wind turbines freezing), ERCOT arguably waited too long to respond. Power plants that rely on natural gas and coal tripped offline (just like a circuit breaker trips at your house) as the load began to overwhelm the grid, and ERCOT was forced to initiate "rolling blackouts." It was too late for many plants.

Bill Magness, former president and chief executive officer of ERCOT, who was fired on March 3, 2021, reported in an online presentation to ERCOT's board on February 24, 2021, that nearly half of the power generating units - approximately 48.6 percent — in the state shut down at the height of the outages. Even in good weather, these units take time to restart or come online. Dan Woodfin, ERCOT senior director of system operations, explained in a call to reporters on February 16, 2021, that many of those plants suffered sub-freezing-related damages as well — freezing pipelines and valves, freezing moisture in instrumentation lines, diversion of natural gas from power plants to homes, problems with trucked-in deliveries and even icy water, which briefly took a nuclear plant in south Texas offline. Magness acknowledged in his presentation on February 24, 2021, that Texas was four minutes and 37 seconds away from a blackout that could have lasted months.

No snowflake in an avalanche ever feels responsible. – Voltaire



Another responsible snowflake is the Public Utility Commission (PUC), which oversees ERCOT and regulates the Texas electricity, telecommunication, water and sewer utilities. The PUC's three members are appointed by the governor of Texas. As its website explains, "the PUC's mission and focus have shifted from regulation of rates and services to oversight of competitive markets and compliance enforcement of statutes and rules for the electric and telecommunication industries." The PUC enforces the statutes passed by the Texas legislature as well as its own rules and regulations, but there are no Texas statutes or rules establishing mandatory winterization requirements for power plants or related infrastructure. Whether winterization is the main culprit is an issue that will surely be debated over the coming months.

That brings us to the next snowflake — the Texas legislative and executive branches. While fingers have been firmly pointed at ERCOT, the PUC and even the Texas Railroad Commission (RRC), it is Texas's legislature and executives that can directly address the issues that caused the Snowpocalypse, be it poor planning and operation by ERCOT and/or others, insufficient winterization of facilities, inadequate generation during the winter months, etc. Whether Texas is subjected to another avalanche or keeps the lights on and the party going will largely be determined by its elected leaders.

Ignoring the Forecast

If legislators decide that additional winterization of facilities is the answer, the Federal Energy Regulatory Commission (FERC) and NERC provided a clear roadmap in 2011. After the February 2011 winter storm swept the southwestern region of the United States, FERC and NAERC issued a 357-page report available on FERC's website which set forth the task force's key findings as well as 26 recommendations for the electric industry and six recommendations for the natural gas industry that the task force believed, if implemented, "could significantly contribute to preventing a recurrence of the rolling blackouts and natural gas curtailments experience in the Southwest during the February 2011 cold weather event."

In short, the task force recommended that ERCOT "consider preparation for the winter season as critical as preparation for the summer peak season" and that Texas and New Mexico lawmakers should determine whether natural gas production shortages during extreme cold weather events "can be effectively and economically mitigated through the adoption of minimum, uniform standards for the winterization of natural gas production and processing facilities." The "Key Findings and Recommendations" provided in pages 195-217 of this report will sound eerily familiar.

Magness, the former ERCOT executive, described during a press conference on February 18, 2021, how the system was supposed to work: high peak prices provide the incentive for producers to keep operating in all weather. Generators that can't produce power when it is most-needed risk missing out

27

on windfalls. Magness explained, "[T]he way the ERCOT market works, the failure to supply when you have committed can have very serious financial consequences when our scarcity pricing mechanism is in effect. So there's a very strong financial incentive, and to the extent that generators are not able to deliver on their commitments, they'll face financial consequences in the marketplace, as well as any potential regulatory."

So, companies were never required to winterize to ensure they could continue operations during extreme cold and therefore, didn't break any rules. They just missed out on the profits that were supposed to incentivize safeguarding their equipment from severe winter weather.

Weathering the Storm

The Texas Railroad Commission (RRC), which regulates the oil and gas industry, got swept up by the avalanche as well when it began (necessary) natural gas curtailments. On February 12, 2021, the RRC issued an emergency order amending Rule 2 of Order 489, prioritizing natural gas disposition to (A) "residences, hospitals, schools, churches and other human needs customers," (B) electric generation facilities, (C) small industrials and regular commercial loads, (D) large users of gas for fuel or as raw materials where an alternate cannot be used and operation and plant production would be curtailed or shut down completely when gas is curtailed, (E) large users of gas for boiler fuel or other fuel users where alternate fuels can be used and (F) natural gas sales that the seller has discretion under contract to interrupt or curtail. Without this step, many more Texans would have been shivering in their homes.

Note that providing electric power for oil field operations is not classified as a "human need," and as power was lost in the field, the ability to produce, process and compress gas was diminished. Texas Governor Greg Abbott acknowledged as much when he announced a ban on natural gas exports out of Texas between February 17-21 during a news conference in Austin on February 17, 2021. In response, RRC Commissioner Jim Wright publicly questioned whether the RRC had authority to prevent companies from exporting natural gas because they have contracts to honor. "I'm not sure we have authority to mess with that, nor do I really want to," Wright added in a February 18, 2021, interview with Reuters. These types of reactionary measures are what Texas and the right of way industry should work to avoid in the future. Solutions must be proactive, not reactive.

Even with this diminished capacity, natural gas was substantially responsible for heating homes and generating large volumes of electric power. Former state senator and current head of the Texas Oil & Gas Association, Todd Staples, explained on February 26, 2021, in testimony before the joint hearing of the Committees on State Affairs and Energy Resources that natural gas provided "more than two-thirds of the energy mix" at the height of the arctic blast, despite accounting for only about 19 percent of the electricity produced for Texas's grid right before the storm. Staples and Grant Rueckle, Energy Transfer Partners' vice president for Government Affairs, explained that pipelines are naturally insulated as they rest in the ground and that companies use special equipment and techniques to warm what's flowing. "Our (Energy Transfer) pipelines never stopped operating during the winter storm as of last week," said Rueckle at the February 26, 2021, committee hearing. Essentially, the natural gas industry already utilizes effective winterization methods to protect its infrastructure, as is apparent in the graph provided on the next page depicting power generation by energy source from February 7, 2021, to February 17, 2021.

Throwing Caution to the Wind

This leads us to the next snowflake in February's avalanche — the growing insistence and reliance on renewable energy. These forms of energy are substantially weather dependent. Without wind moving turbines, sunlight fueling solar panels, etc., those energy sources often provide little help in severe winter weather. While wind, solar and other renewable energy certainly have their place, Texas's growing dependence on these forms of energy come with risks, especially when contingencies in place to address these shortcomings are inadequate or nonexistent during weather extremes. The Snowpocalypse demonstrated that natural gas, coal power plants and other "conventional" power generation sources are reliable and predictable and may very well be the answer to preventing future avalanches.

The last, and perhaps most controversial, of the snowflakes that contributed to the Snowpocalypse disaster are those who oppose new projects and infrastructure necessary for a growing Texas. According to U.S. Census Bureau data provided on its website, approximately 1,000 people move to Texas every day. The demand for not only electricity and gas, but also water and other utilities will only grow larger. Cities, developers, landowners and other stakeholders need to support these efforts, not celebrate when they snuff them out as, for example, the City of Allen, Texas, did in 2018 when it successfully convinced the PUC to deny Brazos Electric Power Cooperative Inc.'s effort to build a substation and transmission line within the City. Of course, those whose land is taken for new public projects are constitutionally guaranteed just compensation, and we all respect private property rights, but the antiinfrastructure mindset exemplified by the Allen-Brazos dispute that many have must change if Texas is to keep up with the basic human necessities of its growing population. Right of way professionals have the ability to change the way people view infrastructure projects. For example, IRWA Course 225 — Social Ecology teaches the skills necessary to improve community engagement.

It is worth noting that Brazos, Texas's largest and oldest generation and transmission cooperative and the wholesale energy provider for its 16 memberowner distribution cooperatives and one municipal system serving more than 1.5 million Texans across 68 counties, filed for Chapter 11 bankruptcy (reorganization) on March 1, 2021, after receiving an approximately \$1.8 billion bill from ERCOT. As Brazos explained in its March 1, 2021, news release, "As a cooperative whose costs are passed through to its members, and which are ultimately borne by Texas retail consumers served by its [m]ember cooperatives, Brazos Electric determined that it cannot and will not foist this catastrophic financial event on its members and those consumers."

A Snowball's Chance

There are many other snowflakes that contributed in their own special way to February's avalanche, but "every snowflake is special, until you need to make a snowball." — T.R. Darling, "Quite Pine Trees."



The snowballs are flying, and if Texas has a snowball's chance at avoiding another avalanche of power outages and natural gas curtailments, its leaders and energy industry must prepare for winter as they do for summer.

So far, the Texas legislature is off to a good start. More than 200 bills have been filed in response to this winter weather disaster. These bills address increased government oversight, winterization of facilities, rates, natural gas and electric generating capacity, excluding certain facilities from load-shedding participation, reliability standards, alert systems, energy storage, the adequacy of reserve power to prevent blackout conditions and other measures to avoid another December 1989, February 2011, and February 2021. Power generators, transmitters, distributers and other industry players will be tasked with safeguarding against future catastrophic, weather-related failures during the winter months.

Texas can keep the lights on and the party going, and right of way professionals can and must play an integral role. At the root of this issue is one thing — infrastructure. IRWA members and other industry professionals will play a key role in advising, planning, communicating, facilitating and executing these fixes as existing facilities and rights of way undergo necessary maintenance and improvements and new facilities and rights of way face heightened scrutiny to ensure they can do the job twelve months a year. The snowflakes will keep on falling, even in Texas, and right of way professionals will play a key role in preventing future avalanches.

The views, thoughts and opinions expressed in this article belong solely to the author — Jordan A. Miller — and not necessarily to the author's law firm or its clients, or any organization, committee or other group of which the author is a member.



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29