

Congress of the United States

House of Representatives

COMMITTEE ON OVERSIGHT AND REFORM

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March 3, 2021

Mr. Bill Magness
President and Chief Executive Officer
Electric Reliability Council of Texas
7620 Metro Center Drive
Austin, Texas 78744

Dear Mr. Magness:

The Subcommittee on Environment requests information and documents regarding the lack of preparation by the Electric Reliability Council of Texas (ERCOT) for the recent winter storm that caused millions of power outages across the state. The Subcommittee also seeks information regarding ERCOT's response to the winter storm and its preparedness for future storms.

Extreme winter weather events in Texas have occurred repeatedly over decades and ERCOT has been unprepared for them. ERCOT's own consultant has predicted that such extreme winter weather events will continue to occur every decade. The Subcommittee is concerned that the loss of electric reliability, and the resulting human suffering, deaths, and economic costs, will happen again unless ERCOT and the State of Texas confront the predicted increase in extreme weather events with adequate preparation and appropriate infrastructure.

Extreme Winter Weather and Power Outages in 2021

Public reporting indicates that generation sources in the state were unprepared for the low temperatures in February. The cold spell drove power generators offline, shrinking the available supply while demand spiked.¹ Moisture in uninsulated gas pipelines caused them to freeze. The pumps and diesel engines needed to power them could not start. A reactor at a nuclear power plant went offline because frozen pipes prevented operation of its cooling system.² Despite false claims from Texas officials that the power outages were attributable to renewable sources like wind turbines, the vast majority of the dip in electricity supply came from fossil fuel generation

¹ Energy Information Administration, *Extreme Winter Weather is Disrupting Energy Supply and Demand, Particularly in Texas* (Feb. 19, 2021) (online at www.eia.gov/todayinenergy/detail.php?id=46836).

² *The Texas Grid Got Crushed Because Its Operators Didn't See the Need to Prepare for Cold Weather*, Washington Post (Feb. 16, 2021) (online at www.washingtonpost.com/business/2021/02/16/ercot-texas-electric-grid-failure/).

sources.³ Renewable sources of energy only make up roughly 10% of power in Texas, while over half of the energy comes from fossil fuels such as power plants fired by natural gas.⁴

Low-income and minority communities were disproportionately affected by power outages. Neighborhoods with predominately Black and Latinx residents have reportedly been among the first to lose power. Vulnerable communities have less resources to relocate or deal with increased electricity bills. In past disasters, these areas also take longer to fully recover.⁵

The failures of ERCOT and the State of Texas were costly. Dozens of Texans have died and the number of confirmed deaths continues to grow.⁶ At least 4.5 million people experienced power outages.⁷ There has been a sudden increase in cases of carbon monoxide poisoning.⁸ Homeowners, renters, and businesses face steep expenses to fix damage from frozen and burst pipes, with the Texas Insurance Council estimating that claims could be more than \$20 billion.⁹ The total economic losses in Texas could reach \$50 billion when factoring in property and infrastructure damage, lost wages, business and crop losses, and medical costs.¹⁰

ERCOT has limited ability to import electricity from outside of the state because it operates as its own interconnection independent from the rest of the United States. Nearby areas outside of ERCOT's region, such as El Paso, experienced the same extreme temperatures but fewer disruptions.¹¹

³ *Gov. Greg Abbott and Other Republicans Blamed Green Energy for Texas' Power Woes. But the State Runs on Fossil Fuels*, The Texas Tribune (Feb. 17, 2021) (online at www.texastribune.org/2021/02/17/abbott-republicans-green-energy/).

⁴ Energy Information Administration, *Texas State Profile and Energy Estimates* (online at www.eia.gov/state/analysis.php?sid=TX) (accessed Feb. 19, 2021).

⁵ *Texas Blackouts Hit Minority Neighborhoods Especially Hard*, New York Times (Feb. 16, 2021) (online at www.nytimes.com/2021/02/16/climate/texas-blackout-storm-minorities.html).

⁶ *Many Texans Have Died Because of the Winter Storm. Just How Many Won't Be Known for Weeks or Months*, Texas Tribune (Feb. 19, 2021) (online at www.texastribune.org/2021/02/19/texas-power-outage-winter-storm-deaths).

⁷ *Id.*

⁸ *Id.*

⁹ *Insurance Claims Pile Up After Texas' Devastating Winter Storm*, The Dallas Morning News (Feb. 22, 2021) (online at www.dallasnews.com/business/2021/02/22/insurance-claims-pile-up-after-texas-devastating-winter-storm).

¹⁰ *AccuWeather Estimates Economic Impact of Winter Storms to Approach \$50 Billion*, AccuWeather (Feb. 17, 2021) (online at www.accuweather.com/en/winter-weather/accuweather-estimates-economic-impact-of-winter-storms/902563).

¹¹ *'Those in Power Have Failed Us': Twitter Reacts As El Paso Escapes Outages, but Texas Suffers*, El Paso Times (Feb. 17, 2021) (online at www.elpasotimes.com/story/news/2021/02/17/el-paso-escapes-texas-power-grid-outage-blackouts-twitter-reacts/6779111002/).

Extremely Cold Winters Were Predicted, So Why Was ERCOT Not Prepared?

This is not the first or even second time in recent history that an extreme winter weather event has caused electricity blackouts in Texas.

In 1989, cold weather also disrupted electric reliability, causing outages of 56 generating units and capacity loss of 16,805 Megawatts. Increased demand combined with the generation failures required ERCOT to implement system-wide blackouts for the first time in its history. The Public Utilities Commission of Texas (PUCT) examined the cause of generator outages and recommended that new power facilities be built to withstand extreme temperatures, and that producers needed to annually review generators to ensure that they could operate in the cold, maintain insulation and heat tracing systems in working order, and train plant personnel on cold weather procedures.¹²

In February 2011, 210 generating units experienced some disruption during extremely cold temperatures and deprived reliable electricity to about 3.2 million customers within ERCOT's region.¹³ The outages caused two hospitals in Dallas to lose power, even as the Dallas Cowboys stadium stayed online to prepare for the Super Bowl.¹⁴ Consumers were asked to start conserving power between 6:00 a.m. and 9:00 a.m. The blackouts left almost 1 million households without heat, created traffic jams as traffic lights went down, and forced schools and businesses to close.¹⁵

Following the 2011 event, the Federal Energy Regulatory Commission (FERC) and North American Electric Reliability Corporation (NERC) conducted an investigation, which found disturbing similarities between the power disruptions in 1989 and 2011. The report stated:

Despite the recommendations issued by the PUCT in its report in the 1989 event, the majority of the problems generators experienced in 2011 resulted from failures of the

¹² North American Electric Reliability Corporation, *Report on Outages and Curtailments During the Southwest Cold Weather Event of February 1-5, 2011* (Aug. 2011) (online at www.nerc.com/pa/trm/ea/February%202011%20Southwest%20Cold%20Weather%20Event/SW_Cold_Weather_Event_Final.pdf); see also Public Utility Commission of Texas, *Electric Utility Response to the Winter Freeze of December 21 to December 23, 1989: An Evaluation of the Actions Taken by Texas Utilities to Correct Technical Plant Equipment Problems* (Nov. 1990) (online at <https://lrl.texas.gov/scanned/archive/1990/15303.pdf>).

¹³ North American Electric Reliability Corporation, *Report on Outages and Curtailments During the Southwest Cold Weather Event of February 1-5, 2011* (Aug. 2011) (online at www.nerc.com/pa/trm/ea/February%202011%20Southwest%20Cold%20Weather%20Event/SW_Cold_Weather_Event_Final.pdf).

¹⁴ *Super Bowl in Super Weather Mess: Dallas Hit with Bitter Cold, Ice*, ABC News (Feb. 3, 2011) (online at <https://abcnews.go.com/US/dallas-hit-bitter-cold-ice-super-bowl/story?id=12832352>).

¹⁵ *Texas Weathers Rolling Blackouts as Mercury Drops*, Reuters (Feb. 2, 2011) (online at www.reuters.com/article/us-ercot-rollingblackouts/texas-weather-rolling-blackouts-as-mercury-drops-idUSTRE71213420110203).

very same type of equipment that failed in the earlier event. And in many cases, these failures were experienced by the same generators.¹⁶

Not only did the FERC/NERC report find that lessons learned from the 1989 winter weather event were either not implemented or not maintained, but also that ERCOT's own weather consultant observed that extreme winter weather in Texas was predictable: "The 2011 winter weather event has been determined by at least one weather service to be a one in 10 year occurrence for some regions of Texas, in terms of low temperatures and duration."¹⁷

It appears that lessons learned (again) in 2011 were not implemented either, leaving Texas vulnerable to extreme winter weather again in 2021.

Increased Extreme Weather Events are Connected to Climate Change

The consensus view among climate scientists is that the Earth is warming due to human-caused activities and that extreme weather events are the predictable result. The extreme winter weather experienced by Texas is a known risk of global warming.¹⁸

The average global surface temperature has already risen by 1.84 degrees Fahrenheit from the pre-industrial average.¹⁹ Greenhouse gas emissions, primarily caused by the burning of fossil fuels, trap heat in the atmosphere, causing the average temperature of the earth to rise.²⁰ The effects are being felt in Texas, which is vulnerable to both hurricanes and extreme winter weather. Hurricane Harvey, which hit Texas in 2017, was the second most expensive tropical cyclone to ever hit the United States, causing flooding in over 300,000 structures, 336,000 customers to lose power, and was directly responsible for the deaths of at least 68 Texans.²¹ But it was far from the only major hurricane to affect Texas. In the last 30 years, 13 tropical

¹⁶ North American Electric Reliability Corporation, *Report on Outages and Curtailments During the Southwest Cold Weather Event of February 1-5, 2011* (Aug. 2011) (online at www.nerc.com/pa/trm/ea/February%202011%20Southwest%20Cold%20Weather%20Event/SW_Cold_Weather_Event_Final.pdf).

¹⁷ *Id.* See for instance: "This cold weather event was thus unusual in terms of temperature, wind, and duration. It was not, however, entirely without precedent. The Southwest experienced other cold weather events in 1983, 1989, 2003, 2006, 2008, and 2010. In fact, two of those years, 1983 and 1989, had lower temperatures than 2011."

¹⁸ National Aeronautics and Space Administration, *The Effects of Climate Change* (online at <https://climate.nasa.gov/effects/>) (accessed Feb. 25, 2021); see also Judah Cohen, Karl Pfeiffer, and Jennifer A. Francis, *Warm Arctic Episodes Linked With Increased Frequency of Extreme Winter Weather in the United States* (Mar. 13, 2018) (online at www.nature.com/articles/s41467-018-02992-9).

¹⁹ National Aeronautics and Space Administration, *Global Temperature* (online at <https://climate.nasa.gov/vital-signs/global-temperature/>) (accessed Feb. 23, 2021).

²⁰ National Aeronautics and Space Administration, *Climate Change: How Do We Know?* (online at <https://climate.nasa.gov/evidence/>) (accessed Feb. 23, 2021).

²¹ National Oceanic and Atmospheric Administration, National Hurricane Center, *National Hurricane Center Tropical Cyclone Report: Hurricane Harvey* (May 9, 2018) (online at www.nhc.noaa.gov/data/tcr/AL092017_Harvey.pdf).

cyclones made landfall in Texas at hurricane strength. In the 30 years before that, just five hurricanes hit Texas.²²

A recent study linked warming in the Arctic to more frequent severe winter weather in the United States. As the average global temperature has risen in the past two to three decades, there have been more cold spells and heavy snowfalls during winters in North America.²³

The risk of increased extreme winter weather events in the United States underscores the need for adequate preparation. ERCOT and the State of Texas are well-aware of the weather predictions, yet you have failed to prepare adequately for them. It is the hope of the Subcommittee that greater public attention and accountability will cause this cycle to change.

Request for Information and Documents

In order determine why Texans have endured decades of blackout events and compromised electric reliability during the extreme winter weather events, the Subcommittee requests the following information by March 17, 2021:

1. All documents relating to preparations, from 2010 to the present, for an extreme winter weather event, including but not limited to:
 - a. communications with the PUCT;
 - b. communications with state officials and employees;
 - c. communications with technical and scientific advisory committees and task forces;
 - d. internal communications among ERCOT Board members, senior executives and members, including cooperatives, independent generators, independent power marketers, independent retail electric providers, investor-owned utilities, municipals, cooperatives and adjunct members;
 - e. ERCOT Board meeting minutes; and
 - f. communications about how extreme weather or climate change affects electric reliability; and

2. With respect to the disruption of electric supply in the extreme winter weather event of February 13 to 17, 2021, a description of every power generation unit that experienced failure, including for each:
 - a. the cause and duration of failure;
 - b. the generation unit's age, temperature design parameters, and type of fuel;
 - c. all modifications implemented to withstand extreme winter weather;

²² National Oceanic and Atmospheric Administration, *Historical Hurricane Tracks* (online at <https://coast.noaa.gov/hurricanes/#map=4/32/-80>) (Accessed Feb. 25, 2021).

²³ Judah Cohen, Karl Pfeiffer, and Jennifer A. Francis *Warm Arctic Episodes Linked With Increased Frequency of Extreme Winter Weather in the United States* (Mar. 13, 2018) (online at www.nature.com/articles/s41467-018-02992-9).

- d. the generation unit's capacity and whether it is used for base or peak demand; and
 - e. if the generation unit also experienced disruption during any other extreme winter weather event, including those in 2011 and 1989; and
3. With respect to the disruption of electric supply in the extreme winter weather event of February 13 to 17, 2021, all communications referring or relating to causes of the disruption and/or preparations for future extreme weather events between ERCOT and:
 - a. PUCT;
 - b. Governor Greg Abbott; and
 - c. any other state or federal employee or official; and
4. All documents relating to decisions on where and when to implement rolling blackouts related to the extreme winter weather event of February 13 to 17, 2021;
5. All documents relating to the winter 1989 disruption in electric reliability, including, but not limited to:
 - a. any documents provided to FERC and/or NERC in connection with the 1989 disruption;
 - b. all reports and analyses by the PUCT, ERCOT and any other entity about the causes of the disruption;
 - c. all communications, analyses and plans relating to recommendations made by the PUCT;
 - d. all communications with federal, state, and local officials, including Governors Bill Clements and Ann Richards;
 - e. all communications with corporations, academics, and non-governmental organizations;
 - f. all communications among ERCOT's Board members, senior executives, and members, including cooperatives, independent generators, independent power marketers, independent retail electric providers, investor-owned utilities, municipals, cooperatives and adjunct members; and
 - g. ERCOT Board meeting minutes; and
6. All documents relating to the winter 2011 disruption in electric reliability, including, but not limited to:
 - a. all documents provided to FERC and/or NERC in connection with their investigation into the 2011 disruption;
 - b. all communications, analyses and plans relating to the 26 recommendations made by FERC and NERC in their report, "Report on Outages and Curtailments During the Southwest Cold Weather Event of February 1-5, 2011";

- c. all communications with federal, state and local officials and employees, including Governor Rick Perry;
- d. all communications from corporations, academic, non-governmental organizations;
- e. all communications among ERCOT's Board members, senior executives, and members, including cooperatives, independent generators, independent power marketers, independent retail electric providers, investor-owned utilities, municipals, cooperatives and adjunct members; and
- f. ERCOT Board meeting minutes.

The Committee on Oversight and Reform is the principal oversight committee of the House of Representatives and has broad authority to investigate "any matter" at "any time" under House Rule X. An attachment to this letter provides additional instructions for responding to the Committee's request. If you have any questions regarding this request, please contact Subcommittee staff at (202) 225-5051.

Sincerely,

A handwritten signature in black ink that reads "Ro Khanna". The signature is written in a cursive style with a long horizontal stroke at the end.

Ro Khanna
Chairman
Subcommittee on Environment

Enclosure

cc: The Honorable Ralph Norman, Ranking Member
Subcommittee on Environment