

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. E-100, SUB 173

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of		
Petition for Investigation Regarding the)	PETITION OF THE
Reliability and Integrity of the Electric)	PUBLIC STAFF
Grid in North Carolina)	

NOW COMES THE PUBLIC STAFF – North Carolina Utilities Commission, by and through its Executive Director, Christopher J. Ayers, and respectfully petitions the Commission pursuant to Gen Stat. § 62-37 to open an investigation regarding the reliability and integrity of the electric grid in North Carolina in light of recent extreme weather events. In support hereof, the Public Staff shows the following:

1. In February of this year, much of the southwestern United States, and especially the state of Texas, experienced record low temperatures, as well as snow and ice . This weather event, Winter Storm Uri, led to a number of outages of generation plants on Texas’s power grid, forcing the Electric Reliability Council of Texas (ERCOT) to begin rolling blackouts, some of which lasted for several days, to avoid catastrophic failure of the grid.

2. All types of thermal generation experienced forced outages, including natural gas, coal, and nuclear plants, as well as utility scale onshore wind. As of February 16, 2021, 30 gigawatts (GW) of thermal resources and 16 GW of renewable energy resources were offline. ERCOT indicated about 48.6%

of generation, 52.3 GW of the Texas grid's 107.5 GW total installed capacity, was forced out of service at one point due to the impacts of various extreme weather conditions.

3. On February 16, 2021, over 4.5 million customers within ERCOT were without power. Sources indicate that at least 111 people died in Texas during the storm.¹ Many people were also without clean water during the storm because of the lack of electricity.

4. The wholesale price of electricity in ERCOT jumped from \$22 per megawatt-hour (MWh) to \$9,000 per MWh, the maximum cap allowed by ERCOT.² Residential customers who had selected an electricity provider that indexed prices to the wholesale price of power saw their monthly bills increase to over \$10,000.

5. Natural gas generating plants and concomitant supply chains were particularly affected by the cold weather due to frozen natural gas wells, frozen plant components, lack of electricity to pump natural gas from wells, refineries with no power, reduced pipeline flows, and little on-site gas storage. Additionally, South

¹ <https://www.texastribune.org/2021/03/25/texas-deaths-winter-storm/>

² See <https://www.texastribune.org/2021/02/18/texas-power-outages-ercot/>; <https://www.texastribune.org/2021/02/16/natural-gas-power-storm/>; <https://powertechresearch.com/texas-power-grid-failure-timeline-of-events-possible-grid-changes-ahead/>; <https://www.eia.gov/todayinenergy/detail.php?id=46836>; <https://www.click2houston.com/news/investigates/2021/02/20/power-failure-what-warnings-did-ercot-send-and-when/>; <https://www.enverus.com/blog/trading-and-risk/ercot-power-grid-outage-what-went-wrong/>; <https://www.powermag.com/ercot-lists-generators-forced-offline-during-texas-extreme-cold-event/>; <https://www.npr.org/2021/02/15/968074622/major-storm-unleashes-ice-snow-and-frigid-temperatures-across-much-of-the-u-s>; <https://www.vox.com/22308149/texas-blackout-power-outage-winter-uri-grid-ercot>; <https://www.texastribune.org/2021/03/16/griddy-bankruptcy-electricity-bills/>

Texas Project Nuclear Unit 1 tripped due to frozen feedwater pumps, and the blades of wind turbines froze.

6. While substantial differences exist between power grids, electricity regulation, and energy markets in North Carolina versus those in Texas, North Carolina has experienced extreme weather events that stress the power grid at an increasing frequency. As the electric utilities modernize their electric grids and diversify their generation portfolios to incorporate more renewable energy and distributed generation, the issues of reliability and integrity of North Carolina's power grid under extreme conditions warrant more careful examination.

7. As a result of the recent events in Texas, the Public Staffs believes that North Carolina's electric grid merits review and investigation into the preparedness and ability of the North Carolina electric and natural gas utilities to withstand extreme weather events. A similar investigation has been opened in South Carolina at the request of Governor Henry D. McMaster, Public Service Commission of South Carolina Docket No. 2021-66-A.³

8. While the Commission does not have jurisdiction over the municipally-owned electric providers and electric membership cooperatives, the Public Staff requests that the Commission invite them to participate in the investigation, as most of these providers receive significant electricity or delivery

³ <https://dms.psc.sc.gov/Attachments/Matter/e368efaf-1c17-41c9-b46d-86196b98be8c>

services from Duke Energy Carolinas, LLC, Duke Energy Progress, LLC, or Dominion Energy North Carolina.

WHEREFORE, the Public Staff respectfully requests that the Commission open an investigation into the reliability and integrity of the systems of electric utilities in North Carolina during extreme weather events.

Respectfully submitted this the 18th day of May, 2021.

PUBLIC STAFF
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Electronically submitted
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CERTIFICATE OF SERVICE

I certify that a copy of this Petition has been served on all parties of record or their attorneys, or both in accordance with Commission Rule R1-39, by United States Mail, first class or better; by hand delivery; or by means of facsimile or electronic delivery upon agreement of the receiving party.

This the 18th day of May, 2021.

Electronically submitted
s/Lucy E. Edmondson
Staff Attorney