



Filing Receipt

Filing Date - 2024-04-18 10:20:40 AM

Control Number - 55999

Item Number - 28

PROJECT NO. 55999

REPORTS OF THE ELECTRIC
RELIABILITY COUNCIL OF TEXAS

§
§
§

PUBLIC UTILITY COMMISSION
OF TEXAS

**ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC.'S UPDATE
ON THE WEATHERIZATION AND INSPECTION PROGRAM**

In support of its responsibilities as assigned in 16 Texas Administrative Code (TAC) § 25.55, Electric Reliability Council of Texas, Inc. (ERCOT) submits this update regarding progress made in winter weatherization efforts. No Public Utility Commission of Texas (PUC/Commission) action is requested; the purpose is to provide an overview of the Weatherization and Inspection (W&I) Program.

WEATHERIZATION INSPECTIONS

Since the W&I Program inception in December 2021 and as of February 29, 2024, ERCOT has completed 2,117 weatherization inspections of Generation Resources and transmission switchyards and substations. As the table below reflects, ERCOT has surpassed its end of year 2024 goal.

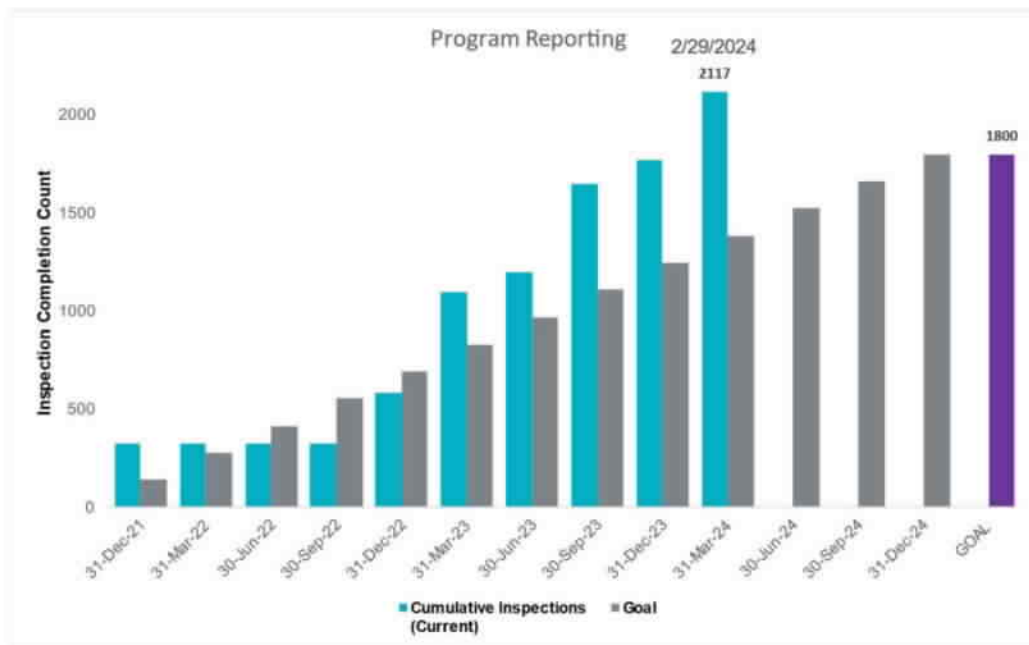


Figure 1: W&I Program Reporting

The following table provides additional timing and inspection details.

Inspections	Resources	TSP Facilities	Total
Winter '21-'22	302	22	324
Winter '22-'23	634	140	774
Summer '23	208	342	550
Winter '23-'24	340	129	469
Total to Date	1484	633	2117

Figure 2: Inspections by Season

Because the Commission adopted Phase II of 16 TAC § 25.55 in late 2022, the summer requirements established at that time first applied in summer 2023. Winter inspections have consequently made up 74% of ERCOT weatherization inspections to date. To meet the requirement to inspect each Generation Resource at least once every three years, ERCOT has emphasized Generation Resource inspections, which make up 70% of the total to-date.

INSPECTOR TRAINING

To enhance the expertise of its inspectors, ERCOT developed a comprehensive training program for inspectors culminating in seven employees achieving Certified Weatherization Inspector (CWI) status.

CURE PERIODS

As required by Phase II of the PUC Substantive Rule, ERCOT provided Market Participants reasonable periods to cure identified compliance deficiencies. Many resolved minor compliance deficiencies in a few days (sometimes on the day of the inspection). If corrected within three Business Days of the inspection, ERCOT notes these short-lived compliance deficiencies in the inspection report as “resolved” and, because the Market Participant resolved them so quickly, ERCOT assigned no formal cure period. This practice has motivated Market Participants to resolve issues quickly.

The Commission’s inclusion of cure periods has provided a valuable tool for ERCOT to oversee remedial efforts to correct compliance deficiencies. Because ERCOT must report to Commission Staff whenever a Market Participant does not remedy its compliance deficiency(ies) within the cure period, Market Participants have diligently and expeditiously pursued appropriate remedies.

From W&I Program inception, ERCOT has issued 106 cure periods as detailed below:

Cure Periods	Resources	TSP Facilities	Total
Winter '21-'22	10	6	16
Winter '22-'23	20	49	69
Summer '23	12	4	16
Winter '23-'24	4	1	5
Total to Date	46	60	106

Figure 3: Cure Period Count

All cure periods are closed and complete except three from Winter '23-'24 which remain in the remedy process.

SHARING BEST PRACTICES

Prior to the past winter season, ERCOT held a Winter Weather Workshop for Generation Entities and another for Transmission Service Providers. In the first workshop, two Generation Resource representatives shared some of their best practices. The first shared examples of seasonal heat sources; seasonal shelters and wind barriers; preventive maintenance procedures; critical equipment lists with identified single points of failure; insulation inspection processes; chemical and materials inventory monitoring; instrument air monitoring and maintenance; transmitter protection; heat tracing inspections; inspection round sheets and record-keeping; staffing plans; continuous improvement processes; issue tracking; and communication of lessons-learned. The second Generation Resource representative reviewed late fall preparation processes and their Resource Entity-wide monitoring strategy. It shared a procedure that required increasing levels of oversight and action for four levels of storm severity. A novel data analytics approach using an existing data historian was presented that compared model predicted values on key pressure, flow, *etc.* variables with current actual plant instrument values. When deviations occurred between the predicted and actual values, plant staff were alerted of potential problems.

ERCOT also shared a presentation summarizing material derived from more than a decade of experience communicating winter weatherization preparation best practices for generation resources.

Similarly, the TSP workshop highlighted the best practices of one of the larger TSPs, which included using cross-functional teams to establish cold weather critical components lists

and how to protect them, as well as a review/revise cycle for procedures, training, and practices.

Copies of these presentations are available online in the Winter 2023-2034 folder at:

<https://www.ercot.com/gridinfo/generation/winterready>

LESSONS LEARNED

Some Market Participants requested clarification on the reporting requirement for design cold temperatures and wind speeds which were, for the first time, required as part of the Declaration of Winter Weather Preparedness due by December 1, 2023. Market Participants now have a better understanding of the 95th percentile 72-hour wind chill temperature portions of the rule [16 TAC §§ 25.55(c)(1)(B) and (f)(1)(B)] after many on-site and follow-up conversations.

ERCOT has identified an opportunity to clarify the PUC Substantive Rule language by requiring Generation Entities to include in their list of cold weather critical components all high-voltage electrical components under their control (*e.g.*, generator step-up transformers and associated breakers). While some Generation Entities noted these components are used for the transmission of electricity and therefore are not viewed as covered by the parts of the rule applicable to Generation Entities, those companies own those components, which are critical to maintain electric delivery.

WINTER STORM HEATHER PERFORMANCE

The cumulative magnitude of forced outages and forced derates recorded in the ERCOT Outage Scheduler during the cold weather event from January 14, 2024 to January 17, 2024 (Winter Storm Heather) appear in the graph below.

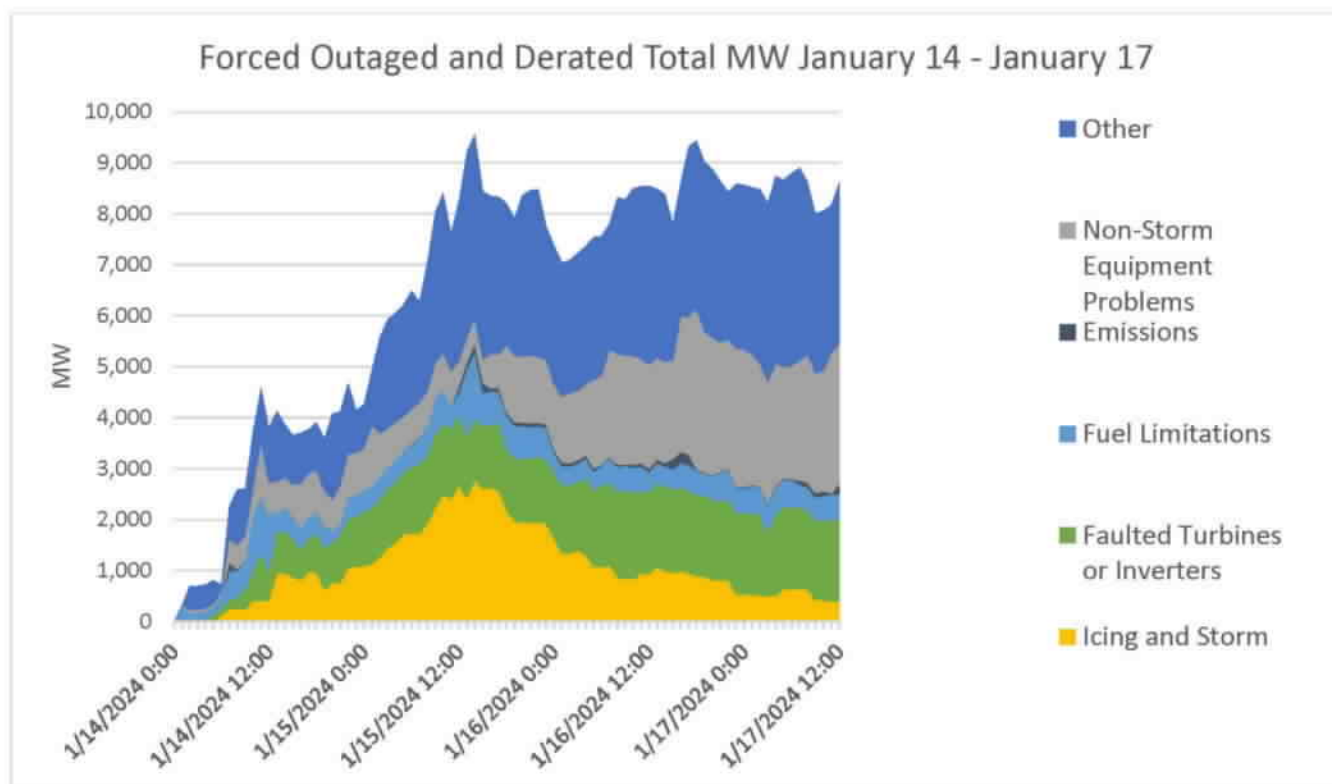


Figure 4: Forced Outages and Derates during Winter Storm Heather

ERCOT surpassed the previous winter peak demand record (74,525 MW set on December 23, 2022) when it reached a peak demand of 78,134 MW on the morning of January 16, 2024. Generation capacity met the record level of demand with the lowest Physical Responsive Capacity (PRC) never falling below 5,091 MW during this storm.

The level of outages experienced during Winter Storm Heather demonstrates continued improvement in system reliability as shown in the following comparison of Non-Intermittent Renewable Resource (IRR) outages during Winter Storms Uri, Elliot, and Heather, which occurred in February 2021, December 2022, and January 2024 respectively.

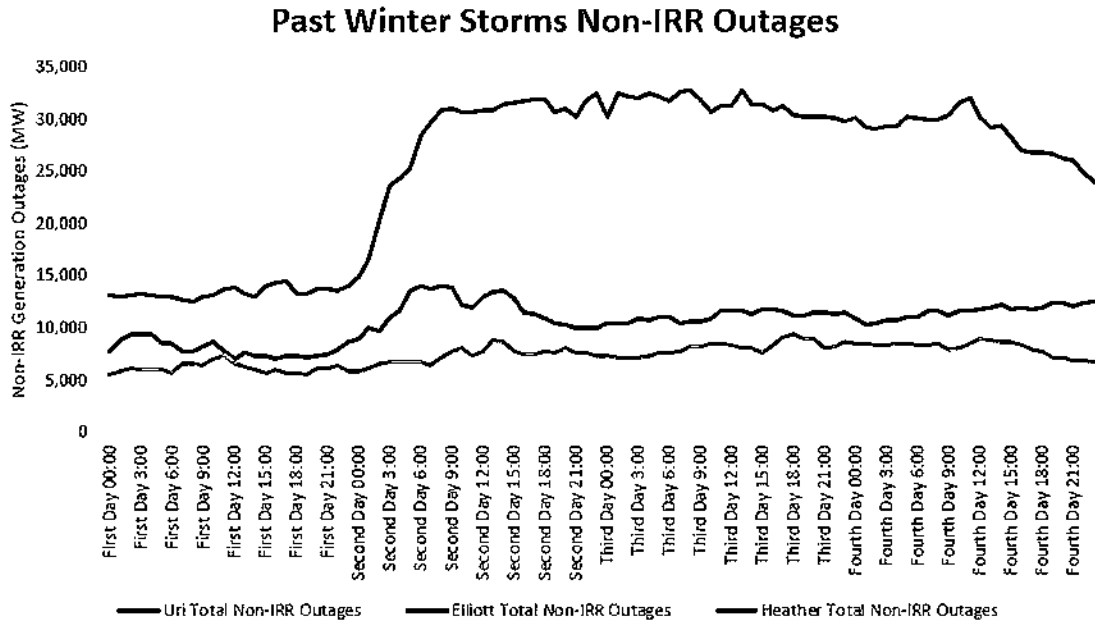


Figure 5: Past Winter Storms Non-IRR Outages

The relative strength of each storm becomes relevant when comparing outage levels. The next graph demonstrates the relative severity of several of ERCOT's most significant winter storms.

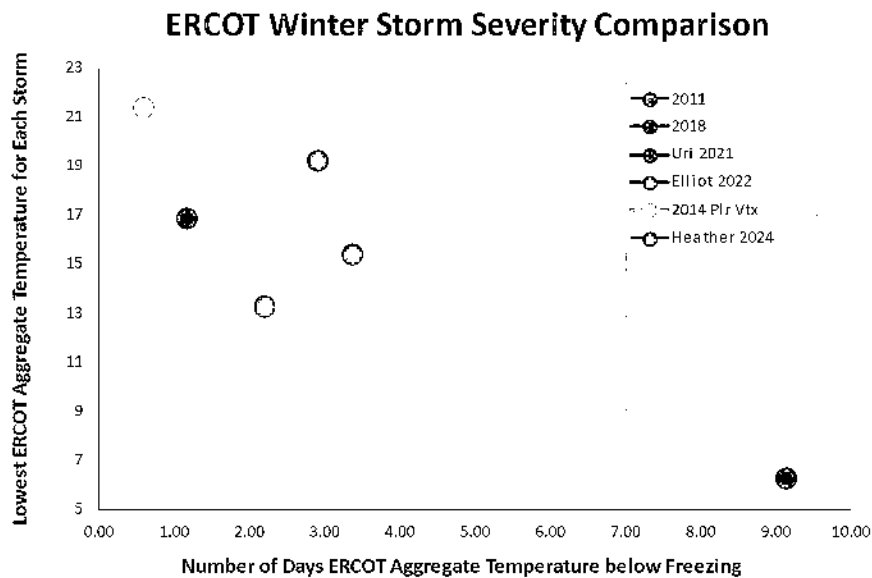


Figure 6: ERCOT Winter Storm Severity Comparison

Winter Storm Uri continues to be an outlier in terms of both lowest aggregate temperature and duration below freezing. Winter Storms Elliot and Heather were more similar to each other with Elliot slightly colder and Heather lasting longer.

ADDITIONAL WINTER STORM HEATHER FOLLOW-UP

After Winter Storm Heather, as part of its regular event analysis process, ERCOT issued Requests for Information (RFIs) to Generation Entities (or their Qualified Scheduling Entity) and TSPs associated with 190 generation sites and 24 transmission sites regarding forced outages and forced derates reported to ERCOT via the Outage Scheduler. ERCOT is evaluating all the outages and derates contributing to the lost generation levels in Figure 4 regardless of the cause of the outage or derate. Among those Generation Resources were:

- 102 Wind
- 57 Natural Gas
- 17 Solar
- 3 Other (Batter Energy Storage Systems)
- 3 Coal
- 3 Waste Heat
- 2 Hydroelectric
- 2 Lignite
- 1 Biomass

ERCOT contacted TSPs due to transmission line issues, transformer issues, or outages recorded in system operator logs.

ERCOT continues processing the RFI responses and will follow-up with individual Market Participants if warranted to the extent any outages relate to the PUC Substantive Rule.

LOOKING AHEAD

ERCOT has developed a Weatherization Customer Service Management (wCSM) software platform for Market Participants to use starting on May 1, 2024. The software will be available via a new “ERCOT Weatherization and Inspection Market Participant Portal,” which will serve as a “one stop shop” for all required interactions between ERCOT and Market Participants associated with weatherization matters. ERCOT held an in-person and virtual training session on April 11, 2024 and a virtual only training session on April 15, 2024. ERCOT plans to host three additional virtual-only training opportunities on April 19, 22, and 25.

ERCOT has scheduled an in-person and virtual summer weatherization workshop for April 26, 2024 and plans to inspect a minimum of 600 facilities (including Generation Resources and transmission substations/switchyards) during the summer 2024 season.

ERCOT will provide the Commission any additional information it may need in response to this program update.

Respectfully submitted,

/s/ A. Andrew Gallo

Chad V. Seely
Senior Vice President and General Counsel
Texas Bar No. 24037466
(512) 225-7035 (Phone)
chad.seely@ercot.com

Brandon Gleason
Deputy General Counsel
Texas Bar No. 24038679
(512) 275-7442 (Phone)
brandon.gleason@ercot.com

A. Andrew Gallo
Assistant General Counsel – Regulatory
Texas Bar No. 07592500
(512) 225-7010 (Phone)
andrew.gallo@ercot.com

ERCOT
8000 Metropolis Drive, Bldg. E, Suite 100
Austin, Texas 78744
(512) 225-7079 (Fax)

ATTORNEYS FOR ELECTRIC RELIABILITY
COUNCIL OF TEXAS, INC.