



From Prep to Pass: Navigating ERCOT Weatherization Inspections

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Why Do Weatherization Inspections Matter?

Weatherization isn't just a rule—it's a readiness check.

- Texas weather can be unpredictable.
 - Inspections ensure your facility is prepared to operate safely and reliably during extreme conditions.
- ERCOT inspections are part of a regulatory process to support compliance with the *Public Utility Commission of Texas (PUCT) Weather Emergency Preparedness Rule, 16 Texas Administrative Code (TAC) §25.55*.
- Weatherization inspections help identify gaps early—before they become problems—and give you the opportunity to correct them.
- Weatherization requirements apply to Resource Entities (REs) and Transmission Service Providers (TSPs) operating in ERCOT.

The goal:

To help you succeed, stay compliant, and contribute to a more resilient grid.

Key Takeaway: Weatherization inspections safeguard reliability, ensure compliance with §25.55, and prepare facilities for unpredictable Texas weather.

Maintain Your Weather Critical Component List

Per §25.55(b)(11), (c)(1)(E), (c)(2)(E), (c)(2)(A), (f)(1)(E), (f)(2)(E)

Weather Critical Components

- **Definition**

- Components that could **fail in extreme weather (heat or cold)** and **impact operations**.
- Includes any component whose failure may cause:
 - A trip
 - A derate >5%
 - A failure to start

- **Helpful Reference**

- [Cold Weather Critical Components \(CWCC\) Sample Lists](#)
- [Hot Weather Critical Components \(HWCC\) Sample Lists](#)
- These lists are not mandatory, but useful for understanding what ERCOT considers “weather critical”.

- **Annual Review Requirement**

- Create and maintain a Weather Critical Component list (required since 2023).
- Review and update this list annually before the start of each season (summer and winter).

Key Takeaway: Maintain and annually review your Weather Critical Component lists to comply with §25.55 and prevent operational failures.

Who Gets Inspected and When?

Per §25.55(d)(1), (g)(1), (a)(2), (b)(9), (b)(14)

- **Generating Resources and Transmission Facilities in ERCOT are subject to inspection during the winter and summer seasons.**
- **New or repowered resources** must comply with weatherization requirements **before the site's commissioning date** established in the ERCOT interconnection process.
- **ERCOT inspects:**
 - Every resource at least once every 3 years
 - At least 10% of substations and switchyards once every 3 years
 - More frequently if **certain factors** are present:
 - History of **weather-related outages** or **derates**
 - **Failure to start** during past extreme weather events
 - **Critical grid role** (e.g., black start units)
 - **Late or missing Declarations of Weather Preparedness**
 - **Repeated compliance deficiencies**

Key Takeaway: All ERCOT resources are inspected at least once every 3 years, with increased frequency for high-risk sites or compliance issues.

How are inspections communicated to Market Participants?

Per §25.55(d)(1)(A), (g)(1)(A)

- **Written Notice of Inspection (NOI)**

- ERCOT provides a written NOI at least 72 hours before the inspection date.
- The NOI email is sent from ercot@servicenowservices.com to the GE's Authorized Representative (AR) and Backup Authorized Representative (BAR).
 - Add ercot@servicenowservices.com to your safe sender's list to prevent the NOI from going to a junk or spam folder.
 - Consider utilizing an email rule to route all correspondence from ercot@servicenowservices.com to additional internal email inboxes for plant management or compliance personnel.

- **Acknowledging the Notice**

- Upon receiving an NOI, you have a strict 24-hour deadline to acknowledge it using the unique link provided in the email.
- Acknowledgement requires a representative with a digital certificate and the portal manager role, SN_M_W_MGR_ECEII.
- The notice must be acknowledged using the unique link provided in the NOI email.
 - The **NOI is not accessible** directly on the portal.

Key Takeaway: Respond to ERCOT's Notice of Inspection within 24 hours using the portal link; ensure ercot@servicenowservices.com is whitelisted.

What does ERCOT look for?

Per §25.55(c)(1), (c)(2), (f)(1), (f)(2), (d)(2)(A), (g)(2)(A)

Documentation Validation: All materials collected or reviewed are treated as **confidential**.

- **Preparation Records**

- Implement & maintain weather emergency measures (e.g., insulation, freeze protection, cooling systems, fuel/chemical readiness).
- Maintain & annually update weather critical component lists.
- Review staffing plans and training records of personnel responsible for the site.
- Compliance with 95th percentile 72-hour temperature thresholds (ERCOT study).

- **Site Walkthrough Focus**

- Physical protections (insulation, enclosures, waterproofing, cooling systems)
- Wind breaks for exposed equipment
- System functionality (freeze protection, cooling, instrument air moisture prevention)
- Operational readiness (fuel delivery, cooling, storage, monitoring systems)

Key Takeaway: ERCOT reviews documentation, inspects weather critical components, and validates readiness against 72-hour temperature thresholds.

Communicating and Preparing for Inspection Day

Per §25.55(d)(1)(A)-(B), (g)(1)(A)-(B), (d)(2)(B)-(D), (g)(2)(B)-(D)

- **Before the Inspection**

- Use the inspection work order in the portal to message your assigned inspector.
- Upload documents in advance: weather critical component list, training logs, maintenance records.
- Confirm site access, safety protocols, and contact information provided to ERCOT inspector(s).

- **What to Expect on Inspection Day**

- **Arrival:** Inspector checks in and reviews safety procedures.
- **Review:** On-site review of documentation and portal submissions.
- **Walkthrough:** Visual inspection of weather-critical components and staff interviews.
- **Wrap-up:** Summary of findings and next steps before departure.

- **After the Inspection**

- ERCOT issues a written report on compliance.
- If a compliance deficiency is identified: ERCOT sets a reasonable cure period based on risk and complexity.
- Entities may request an extension with supporting documentation.
- Unresolved issues must be referred to the Commission for enforcement.

Key Takeaway: Preparation, clear communication, and timely document uploads streamline inspections and minimize compliance risks.

Common Seasonal Deficiencies

Per §25.55(c)(1)(A)-(D), (c)(2)(A)-(D), (f)(1)(A)-(D), (f)(2)(A)-(D)

- **Protection Gaps**

- Incomplete maintenance of weather protection systems.
- No monthly verification during the applicable season.
- Fuel delivery/cooling systems not included in protection scope.

- **Monitoring & Controls**

- No active monitoring of weather critical components.
- Circuitry for protection systems not verified.

- **Training & Documentation**

- Missing or outdated training logs.
- Staff not trained on seasonal prep procedures.

- **Transmission Facility Issues**

- Sulfur Hexafluoride (SF₆) gas pressure/temp not verified in breakers/meters.
- Transformer heaters, oil levels, nitrogen pressure not inspected.
- Oil quality not confirmed for winter conditions.

- **Other Common Issues**

- Missing or outdated weather critical component lists.
- Poor insulation, cooling, or heater functionality.
- Late or missing declarations/forms

Key Takeaway: Most deficiencies are preventable through routine verification, training, and documentation.

Case Example: Generator Step-Up (GSU) Load Tap Changer (LTC) Conservator Tank – Low Oil Trip

Missed CWCC Designation and Alarm Response Gaps

Incident Summary (Feb 2025):

- GSU was not listed as a Cold Weather Critical Component (CWCC).
- Low oil alarm received by ROC on 2/19/2025; trip occurred on 2/20/2025. Oil level was “Low” at time of trip; ambient temperature outside design threshold.

Key Issues:

- Critical alarms were not telemetered for immediate operator response.
- CWCC list did not include LTC.
- Outage documentation lacked timely, specific cause updates.

ERCOT Recommendations:

- Add GSU and LTC to CWCC list.
- Telemeter low oil alarms to the Remote Operations Center (ROC).
- Train ROC staff on alarm monitoring and response.
- Update outage scheduler notes as details become known.



Picture 1: Day of trip 2/20/2025



Picture 2: Normal Oil Level

Key Takeaway: Designate critical components, monitor, and timely response to alarms can prevent avoidable outages.

Case Example: GSU Main Tank Low False Oil Trip

Calibration Oversight Leading to False Trip

Incident Summary (Feb 19, 2025, at 08:07):

- GSU tripped due to false low oil level reading.
- Micro switches on oil level gauge were not properly calibrated.
- Cold weather caused actual oil level drop, but trip was triggered prematurely.

Key Issues:

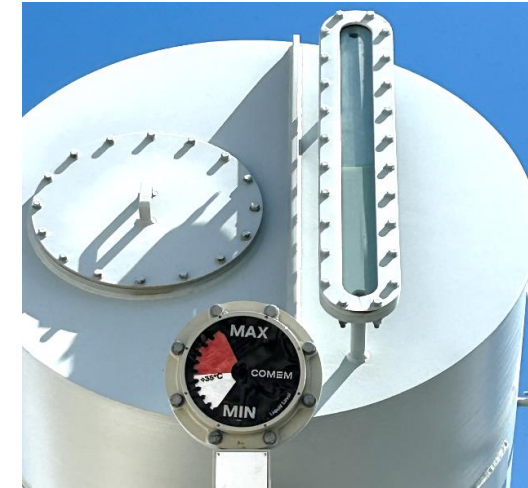
- Sensor calibration was not verified during commissioning or routine maintenance.
- No warning signal was sent to SCADA before the trip, resulting in immediate outage.

ERCOT Recommendations:

- Calibrate and validate oil level sensors during commissioning and after maintenance.
- Communicate lessons learned and sensor adjustments to operations and outage scheduling teams.



Picture 1: Oil Level Time of Trip



Picture 2: Normal Oil Level



Picture 3: Micro switches out of calibration

Key Takeaway: Designate critical components, monitor, and timely response to alarms can prevent avoidable outages.

Best Practices to Pass a Seasonal Inspection

Per §25.55(d)(1), (g)(1), (c)(1)(D)-(E), (c)(2)(D)-(E), (f)(1)(D)-(E), (f)(2)(D)-(E)

- **Use ERCOT's Seasonally-specific Inspection Checklists to self-assess your site's readiness**
 - Helps ensure all required weather emergency measures are in place before ERCOT arrives.
 - [Generation Entity Winter Inspection Checklist](#)
 - [Generation Entity Summer Inspection Checklist](#)
 - [TSP Winter Inspection Checklist](#)
 - [TSP Summer Inspection Checklist](#)
- **Upload documents before the inspection for efficiency**
 - Uploading weather critical component lists, training logs, and maintenance records via the NOI portal significantly improves inspection efficiency and reduces time spent on-site.
- **Communicate early and often**
 - Respond to the Notice of Inspection (NOI) within 24 hours.
 - Coordinate access and logistics with inspector(s) via the portal.
- **Train your team and walk the site**
 - Ensure staff are familiar with weather protection systems and procedures.
- **Maintain and review weather critical component lists annually.**

Key Takeaway: Early preparation, thorough documentation, and staff training ensure inspection success.

Key Takeaways and Closing

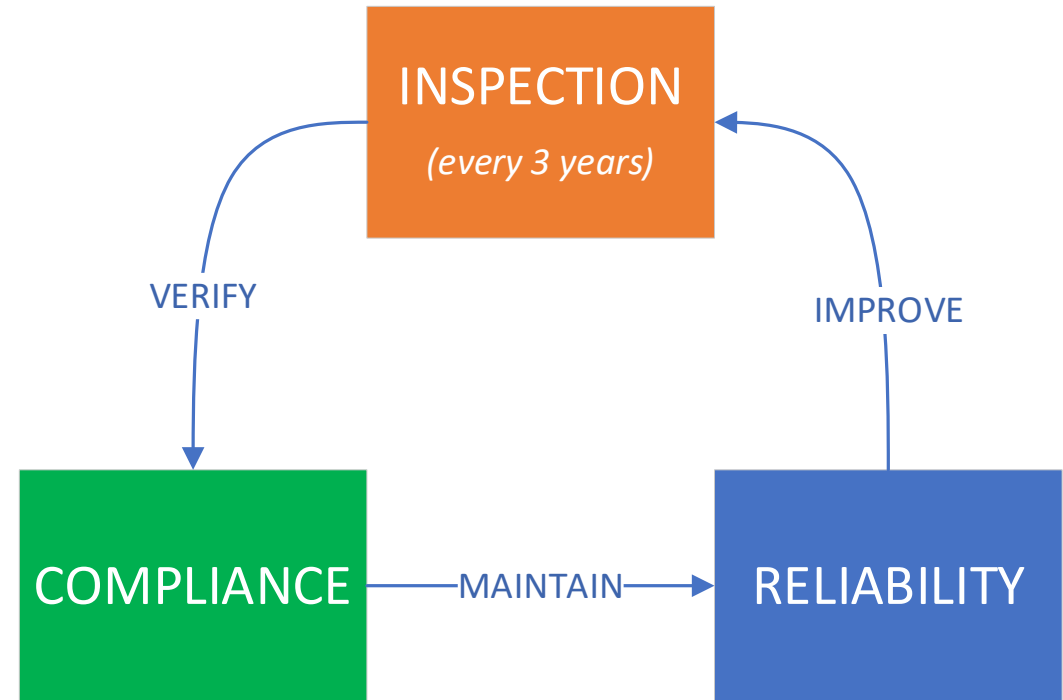
Weatherization = Reliability



Preparation = Compliance



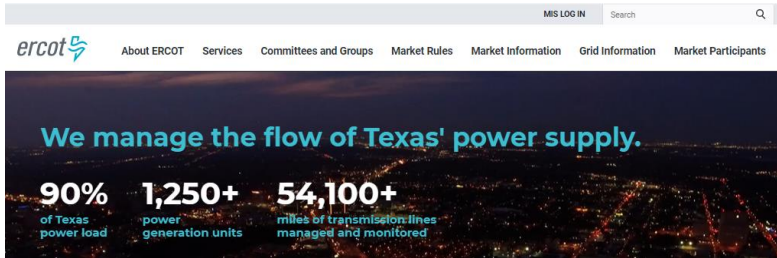
Collaboration = Success



Questions?

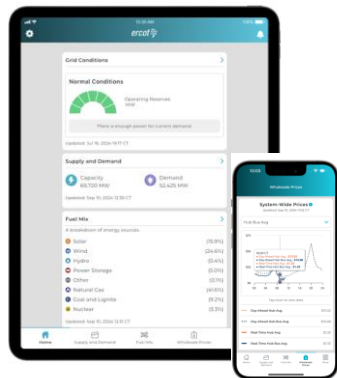


ERCOT Communication Channels



ERCOT website www.ercot.com

- Today's outlook and grid conditions
- Daily and seasonal weather
- Market information, prices and more



New ERCOT mobile app

- Real-time updates
- Wholesale pricing
- Information sharing

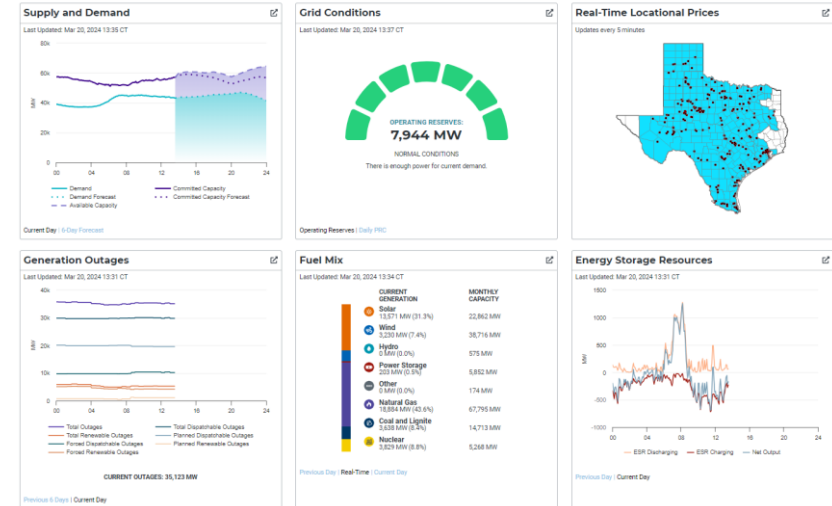


Grid and Market Conditions

These dashboards offer a snapshot of current conditions in the ERCOT system. The timestamp on each indicates when the information was last updated. Click the Full View link on a dashboard for an expanded display.

*Note: The 6-Day Forecast graph should only be used as a relative indication of future system conditions. Due to uncertainties associated with the longer-term nature of the forecasts used, both the Available Seasonal Capacity and Demand Forecast may adjust significantly as the Operating Day approaches.

*Note: Capacity available from demand response programs is not reflected in the Current Day and the 6-Day Forecast graphs unless these programs have been deployed.



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