PROJECT NO. 54248

SELECTION OF THE RELIABILITY MONITOR FOR THE ERCOT POWER REGION	**§ § §**	**PUBLIC UTILITY COMMUSSION OF TEXAS**

ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC.'S
2023 Q3 RELIABILITY MONITOR QUARTERLY REPORT

The Public Utility Commission of Texas (PUC/Commission) order directing Electric Reliability Council of Texas, Inc. (ERCOT) to assume the duties and responsibilities of the reliability monitor for the ERCOT power region (ERM) directs ERCOT to file a report summarizing its ERM activities the previous quarter at least once every three months. The ERM hereby provides the following information for the Third Quarter of 2023.

I. Executive Summary

The ERCOT Legal and Compliance Departments are now fully staffed for the ERM role. As of the end of the quarter, the ERM's cumulative performance metrics are as follows:

Priority[1]	No. of Cases	Change	Avg Days Open
Critical	2	-	256
High	43	+4	144
Medium	64	+11	132
Low	29	-	161
Total	138	+15	144

Since November 2022 when ERCOT assumed the ERM role, it has opened an average of 14 Incident Reviews per month.

Status	No. of Cases	Percent of Total
Referred to PUC Enforcement	29	21%
Report Drafted	30	21.7%
Management Review	2	1.4%
Opened/Investigation Started	59	42.8%
Closed	17	12.3%
Hold	1	.7%
Total	138	

[1] The ERM staff assess an event's impact on ERCOT System reliability and categorize events such as the loss of generation, frequency, or voltage excursions, *etc*. as "Critical." The ERM categorizes other events as "High," "Medium," or "Low" depending on such factors as: number and size of the facilities involved, if the event is local versus widespread, whether an issue relates to only an administrative matter, *etc.*

During the past quarter, the ERM has either closed or referred to the Commission 24 Incident Reviews. Thus, the ERM has averaged 4.6 Incident Reviews per month either closed or referred to the Commission since starting in this role last year.

The bulk of Incident Reviews involve:

- Failure to Update Outage Scheduler (Winter Storm Elliott) (30)
- Event Performance Criteria for Emergency Response Service (ERS) (22)
- Weatherization requirements (19)
- Ancillary Service (A/S) and Energy Deployment (19)
- Compliance with Dispatch Instructions (13)

The most significant events on which the ERM is focused involve the accuracy of telemetry data, voltage ride-through issues, high speed data requirements, and voltage support.

II. Changes to Reliability Requirements to Promote Improved Reliability

The ERM is tracking the following revision requests that could impact system reliability:

NPRR1191 Establish registration, interconnection, and operational requirements for Customers with Large Loads – defined in this NPRR as Facilities with an aggregate peak power Demand of 75 MW or more.

NPRR1198 Leverages ERCOT's existing Congestion Management Plan (CMP) by establishing a transparent, predictable, equitable, workable, reliable, scalable process for topology reconfiguration requests that is compatible with existing planning processes.

NPRR1199 Aligns the Protocols with new requirements in the Lone Star Infrastructure Protection Act (LSIPA).

NPRR1203 Establishes Dispatchable Reliability Reserve Service (DRRS) in the suite of Ancillary Services created in alignment with the requirements of House Bill No. 1500 approved by the 88th Texas Legislature.

NOGRR256 Establishes voltage ride-through requirements and Load-shedding processes for Large Loads registered as Registered Curtailable Loads.

NOGRR258 Proposes changes to align with NPRR1198 that adds language to allow the use of Remedial Action Plans (RAPs) and Extended Action Plans (EAPs)

to facilitate the market use of the ERCOT Transmission Grid. NOGRR258 also adds guardrails to ensure that topology reconfiguration requests meet basic reliability and economic criteria, and defines the process for submission, review, and approval of EAPs.

NOGRR259 Aligns Energy Emergency Alert (EEA) language in § 4.5.3.3 with Protocol § 6.5.9.4.2, EEA Levels.

PGRR109 Introduces a new requirement for Interconnecting Entities (IEs) associated with Inverter-Based Resources (IBRs) to undergo a dynamic model review prior to Resource Commissioning.

PGRR111 Creates a new process for studying the reliability impacts of all Large Loads (≥ 75MW) to be interconnected within 24 months.

PGRR112 Establishes requirements for IEs to submit dynamic data models and for Transmission Service Providers to submit final Full Interconnection Studies for approval at least 30 Business Days prior to the quarterly stability assessment deadline.

In addition to the foregoing, the ERM is working with Subject Matter Experts (SMEs) on the following issues to improve ERCOT System reliability:

- Telemetry accuracy;
- Model data accuracy and timeliness; and
- Voltage support.

III. Overall State of ERCOT System Reliability

The overall state of ERCOT System reliability is good. The ERCOT System experienced a Level 2 Energy Emergency Alert (EEA2) event on September 6, 2023. From approximately 7:10 p.m. until approximately 7:25 p.m., ERCOT observed a decline in system frequency from 60 Hz to 59.77 Hz, lower than the target minimum of 59.9 Hz. To access additional generation reserves to restore frequency, ERCOT declared an EEA2 at 7:25 p.m. Due to tight reserve margins, ERCOT deployed Ancillary Services after deploying Emergency Response Service and asking Transmission Operators to implement distribution voltage reduction, if available. As part of the EEA2 declaration, ERCOT deployed Load Resources. At 7:37 p.m., system frequency returned to 60 Hz and ERCOT had to take no additional measures. At 8:27 p.m., ERCOT moved from EEA2 to EEA1 and, at 8:37 p.m., returned to normal operations.

Several factors contributed to abnormal conditions resulting in frequency decline. Most significantly, high temperatures contributed to a very high peak demand during Hour Ending 18:00 (82,705 MWs). Abnormally high demand persisted into the evening, overlapping with solar generation decrease. Limitations on other generation accompanied the decline in solar generation. For example, wind generation remained relatively low across most of the system. Additionally, a high-risk transmission constraint in South Texas restricted the flow of electricity out of that area.

Aside from the EEA event, as mentioned in previous reports, the ERM continues to identify the following areas of concern based on discussions with ERCOT SMEs:

- Voltage control
- Telemetry quality
- Frequency ride-through
- Voltage ride-through
- Fault recording and sequence of events recording data requirements
- Installation of phasor measurement recording equipment
- Data recording, redundancy, retention, and reporting requirements
- Updates to the resource dynamic planning models
- Dynamics data for Generation Resources and Settlement Only Generators
- Dynamic data for equipment owned by Resource Entities

IV. Areas for Future Audit

In the first quarter ERM Quarterly Report, ERM staff anticipated conducting at least one audit this year. The ERM is currently auditing Market Participant compliance with the reactive testing requirements in ERCOT Protocols § 8.1.1.2.1.4, *Voltage Support Service Qualification* and ERCOT Operating Guides § 3.3.2.2, *Reactive Testing Requirements*. The ERM anticipates completing and submitting the audit to the Commission by the end of 2023.

The ERM stands ready to provide any additional information requested by the Commission.

Dated: October 13, 2023

Respectfully submitted,

/s/ Chad V. Seely

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