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| NOGRR Number | [262](https://www.ercot.com/mktrules/issues/NOGRR262) | NOGRR Title | Provisions for Operator-Controlled Manual Load Shed |
| Date Posted | | March 20, 2024 | |
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| Requested Resolution | | Normal | |
| Nodal Operating Guide Sections Requiring Revision | | 4.5.3, Implementation  4.5.3.4, Load Shed Obligation  8L, Emergency Operations Plan | |
| Related Documents Requiring Revision/Related Revision Requests | | Nodal Protocol Revision Request (NPRR) 1221, Related to NOGRR262, Provisions for Operator-Controlled Manual Load Shed | |
| Revision Description | | This Nodal Operating Guide Revision Request (NOGRR) aligns provisions regarding manual and automatic firm Load shed and clarifies the proper use and interplay of Under-Voltage Load Shed (UVLS), Under-Frequency Load Shed (UFLS), and manual Load shed. | |
| Reason for Revision | | [Strategic Plan](https://www.ercot.com/files/docs/2023/08/25/ERCOT-Strategic-Plan-2024-2028.pdf) Objective 1 – Be an industry leader for grid reliability and resilience  [Strategic Plan](https://www.ercot.com/files/docs/2023/08/25/ERCOT-Strategic-Plan-2024-2028.pdf) Objective 2 - Enhance the ERCOT region’s economic competitiveness with respect to trends in wholesale power rates and retail electricity prices to consumers  [Strategic Plan](https://www.ercot.com/files/docs/2023/08/25/ERCOT-Strategic-Plan-2024-2028.pdf) Objective 3 - Advance ERCOT, Inc. as an independent leading industry expert and an employer of choice by fostering innovation, investing in our people, and emphasizing the importance of our mission  General system and/or process improvement(s)  Regulatory requirements  ERCOT Board/PUCT Directive  *(please select ONLY ONE – if more than one apply, please select the ONE that is most relevant)* | |
| Justification of Reason for Revision and Market Impacts | | North American Electric Reliability Corporation (NERC) Reliability Standards EOP-011-3, Emergency Operations, and EOP-011-4, Emergency Operations, require ERCOT, as a NERC-registered balancing authority, to develop, maintain, and implement operating plan(s) to mitigate capacity emergencies and energy emergencies within its balancing authority area. This NOGRR addresses the requirements in EOP-011-3 and EOP-011-4 that the plan(s) must include provisions for Transmission Operators (TOs) to implement operator-controlled manual Load shed during an emergency that accounts for 1) provisions for manual Load shed capable of being implemented in a timeframe adequate for mitigating the emergency; 2) provisions to minimize the overlap of circuits that are designated for manual Load shed and circuits that serve designated critical loads; 3) provisions to minimize the overlap of circuits that are designated for manual Load shed and circuits that are utilized for UFLS or UVLS; and 4) provisions for limiting the utilization of UFLS or UVLS circuits for manual Load shed to situations where warranted by system conditions.  This NOGRR ensures the required alignment between ERCOT and TOs during an Energy Emergency Alert (EEA) Level 3 Load shed event and ensures ERCOT and TOs understand their respective responsibilities during an EEA Level 3 firm Load shed event.  Once ERCOT issues an operating instruction to shed Load, it is crucial to the reliability of the ERCOT System that Load shed be implemented consistent with the expectations of the ERCOT System operators. These revisions require TOs, Transmission Service Providers (TSPs), and Distribution Service Providers (DSPs), to manually shed firm Load without delay and within a defined timeframe to mitigate an actual emergency. ERCOT plans to continue to conduct the annual winter Load shed survey to obtain each TSP’s most up-to-date firm Load shed capability.  This NOGRR also includes provisions requiring TOs to coordinate with TDSPs to minimize overlap of any critical loads with designated manual firm Load shed circuits and minimize overlap of UFLS/UVLS circuits with designated manual firm Load shed circuits. ERCOT will consider further provisions in the future to address the staggered timeframes within EOP-011-4 that identify and prioritize designated critical natural gas infrastructure loads that are essential to the reliability of the ERCOT System and minimize overlapping of automatic firm Load shed and manual firm Load shed with identified critical loads that are essential to the reliable operation of the ERCOT System.  Pursuant to paragraph (6) of Section 1.3.1, Introduction, an Alignment NOGRR for Section 4.5.3.3, EEA Levels, will be published within five Business Days of the ERCOT Board recommending approval of NPRR1221. | |
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| Market Segment | | Not applicable | |

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| Market Rules Notes |

Please note the following NOGRRs propose revisions to the following sections:

* NOGRR256, Related to NPRR1191, Registration, Interconnection, and Operation of Customers with Large Loads; Information Required of Customers with Loads 25 MW or Greater
  + Section 4.5.3.4

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| Proposed Guide Language Revision |

4.5.3 Implementation

(1) ERCOT shall be responsible for monitoring system conditions, initiating the EEA levels below, notifying all Qualified Scheduling Entities (QSEs) representing Resources and Transmission Operators (TOs), and coordinating the implementation of the EEA conditions while maintaining transmission security limits. QSEs and TOs will notify all the Market Participants they represent of each declared EEA level.

(2) During the EEA, ERCOT has the authority to obtain energy from non-ERCOT Control Areas using Direct Current Tie(s) (DC Tie(s)) or by using Block Load Transfers (BLTs) to move load to non-ERCOT Control Areas. ERCOT maintains the authority to curtail energy schedules flowing into or out of the ERCOT System across the DC Ties in accordance with North American Electric Reliability Corporation (NERC) scheduling guidelines.

(3) ERCOT, at management’s discretion, may at any time issue an ERCOT-wide appeal through the public news media for voluntary energy conservation.

(4) There may be insufficient time to implement all levels in sequence. ERCOT may immediately implement EEA Level 2 when clock-minute average system frequency falls below 59.91 Hz for 15 consecutive minutes. ERCOT may immediately implement Level 3 of the EEA any time the clock-minute average system frequency falls below 59.91 Hz for 20 consecutive minutes or when steady-state frequency falls below 59.8 Hz for any duration of time. ERCOT shall immediately implement Level 3 any time the steady-state frequency is below 59.5 Hz for any duration.

(5) Percentages for Level 3 Load shed will be based on the previous year’s TSP peak Loads, as reported to ERCOT, and will be reviewed by ERCOT and modified annually.

(6) The ERCOT System Operator shall declare the EEA levels to be taken by QSEs and TSPs. QSEs and TSPs shall implement actions under that level (and all above if not previously accomplished) and if ordered by the ERCOT shift supervisor or his designate, shall report back to the ERCOT System Operator when the requested level has been completed.

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| ***[NOGRR177: Replace paragraph (6) above with the following upon system implementation of NPRR857:]***  (6) The ERCOT System Operator shall declare the EEA levels to be taken by QSEs, TSPs, and DCTOs. QSEs, TSPs, and DCTOs shall implement actions under that level (and all above if not previously accomplished) and if ordered by the ERCOT shift supervisor or his designate, shall report back to the ERCOT System Operator when the requested level has been completed. |

(7) During EEA Level 3, ERCOT must be capable of manually shedding sufficient firm Load to arrest frequency decay and to prevent generator tripping. The amount of manual firm Load to be shed may vary depending on ERCOT Transmission Grid conditions during the event. Each TSP will be capable of manually shedding its allocation of firm Load, without delay. The maximum time for the TSP to interrupt firm Load will depend on how much Load is to be shed and whether the Load is to be interrupted by Supervisory Control and Data Acquisition (SCADA) or other, non-SCADA-controlled methods. Since the need for firm Load shed is immediate, interruption by SCADA is preferred. Each TO, TSP, and TDSP and their designated agents will comply with the following requirements when implementing an ERCOT instruction to shed firm Load:

(a) Load interrupted manually by SCADA will be shed without delay upon receipt of a Load shed instruction and in a time period not to exceed 30 minutes after receipt of the Load shed instruction for each Entity’s portion of every Load shed instruction. SCADA-controlled Load shed should be utilized before non-SCADA controlled Load shed when executing a Load shed instruction;

(b) If sufficient amounts of SCADA-controlled Load are not available to fully execute a manual Load shed instruction, the TO and/or TDSP(s) shall complete the remaining manual Load shed through non-SCADA-controlled Load shed methods without delay upon receipt of a Load shed instruction and in a time period not to exceed one hour after receipt of the Load shed instruction; and

(c) After Load is interrupted as described in paragraphs (a) and (b) above, each TO and TDSP should assess its remaining SCADA-controlled Load shed capabilities and, if appropriate and as soon as practicable, shed Load available for manual non-SCADA-controlled Load shed while simultaneously restoring service to an equivalent amount of previously interrupted SCADA-controlled Load as a means of maintaining its portion of SCADA-controlled Load available for Load shed.

(8) Each TSP, or its designated agent, will provide ERCOT a status report of Load shed progress within 30 minutes of the time of ERCOT’s instruction or upon ERCOT’s request.

(9) During EEA Level 2 or 3, for those constraints that meet the criteria identified in paragraph (3)(a) of Section 4.5.3.1, General Procedures Prior to EEA Operations, ERCOT may control the post-contingency flow to within the 15-Minute Rating in Security-Constrained Economic Dispatch (SCED). After Physical Responsive Capability (PRC) is restored to at least 3,000 MW or the Emergency Condition has ended, whichever is later, and ERCOT has determined that system conditions have improved such that the chance of re-entering into an EEA Level 2 or 3 is low, ERCOT shall restore control to the post-contingency flow to within the Emergency Rating for these constraints that utilized the 15-Minute Rating in SCED.

(10) During EEA Level 2 or 3, for those constraints that meet the criteria identified in paragraph (3)(b) of Section 4.5.3.1, ERCOT shall continue to enforce constraints associated with double-circuit contingencies throughout an EEA if the double-circuit failures are determined to be at high risk of occurring, due to system conditions. For all other double-circuit contingencies identified in paragraph (3)(b) of Section 4.5.3.1, ERCOT will enforce only the associated single-circuit contingencies during EEA Level 2 or 3. ERCOT shall resume enforcing such constraints as a double-circuit contingency after PRC is restored to at least 3,000 MW or the Emergency Condition has ended, whichever is later, and ERCOT has determined that system conditions have improved such that the chance of re-entering into an EEA Level 2 or 3 is low. For constraints related to stability limits that are not IROLs, ERCOT may elect not to enforce double-circuit contingencies during EEA Level 3 only.

4.5.3.4 Load Shed Obligation

(1) Each TO shall take and direct actions to ensure that ERCOT Load shed instructions are effectuated. Each DSP shall comply with any reasonable instruction given by its TO to effectuate Load shed obligations.

(2) Load shed obligation percentages for ERCOT EEA Level 3 Load shed will be determined by calculating each TO’s Load as a percentage of the ERCOT System summer and winter peak 15 minute Demand interval. For the purposes of this paragraph, TO Load will be the amount of Load being served by all of the TDSPs that the TO represents. The calculations for summer and winter Load shed obligation percentage are as follows:

(a) The calculated Load shed obligation percentage for the summer Season will be based on the single highest coincident ERCOT System peak 15 minute Demand interval for the summer months of June through September as reflected in the 4-Coincident Peak (4-CP) data submitted by ERCOT to the Public Utility Commission of Texas (PUCT) for that year. Anticipated revisions to the summer Load shed table shall be posted as described in paragraph (4) below no later than March 31st of each year based on data from the previous calendar year.

(b) The calculated Load shed obligation percentage for the winter Season will be based on the single highest coincident ERCOT System peak 15 minute Demand interval for the winter months of December through February as reflected at the time that ERCOT extracts the Load data for the winter Season from its settlement system. Anticipated revisions to the winter Load shed table shall be posted as described in paragraph (4) below no later than August 31st of each year based on data from December of the previous calendar year and January through February of the current year.

(3) The summer Load shed table will be used during a hot weather Load shed event and the winter Load shed table will be used during a cold weather Load shed event. ERCOT will determine, in its sole discretion, whether an EEA event will be treated as a hot weather or cold weather Load shed event based on the weather conditions. The summer and winter Load shed time periods will be published annually with the updated obligation tables in paragraph (2) above. In addition, if ERCOT issues an Operating Condition Notice (OCN), it will notify Market Participants which Load shed table would apply to the potential Load shed event. When ERCOT directs TOs to shed Load, it will specify which Load shed table applies for the Load shed event. ERCOT shall use the same Load shed table for the duration of a Load shed event.

(4) ERCOT shall maintain the Seasonal Load shed tables reflecting each TO’s total Load shed obligation on the ERCOT website. The Load shed obligation percentages will be reviewed by ERCOT and revised as described above, or as otherwise deemed appropriate by ERCOT, to reflect any new or changed TO designation by a DSP. Adjustments to the Load shed obligations due to changes in TO designations will be performed using the same Load data upon which the table was based. Following ERCOT’s Seasonal peak Load reviews or ERCOT’s receipt of any new or changed TO designation, ERCOT shall post any anticipated revisions to the Load shed tables on the ERCOT website. ERCOT shall issue a Market Notice announcing the posting of the revisions at least ten days prior to the effective date of the revisions or as soon as practicable if ERCOT determines there is a need to correct the Market Notice less than ten days before the effective date.

(5) Each TO shall coordinate with each TDSP it represents to:

(a) Minimize overlap of circuits that are designated for manual firm Load shed with circuits that serve designated critical Loads; and

(b) Minimize overlap of circuits that are designated for manual firm Load shed with circuits that are utilized for UFLS and UVLS.

**ERCOT Nodal Operating Guides**

**Section 8**

**Attachment L**

**Emergency Operations Plan**

**TBD**

This attachment provides a template to be used by each Transmission Operator (TO) for the development of its emergency operations plan to mitigate operating emergencies, as required by the applicable North American Electric Reliability Corporation (NERC) Reliability Standard. The emergency operations plan can be made up of multiple parts and does not need to be a single document. When multiple parts are used, the TO shall include documentation describing the location of each element required by the applicable NERC Reliability Standard. Each plan should include each of the elements listed below:

I. PURPOSE – The purpose statement will address the TO’s operations plan to mitigate operating emergencies.

II. SCOPE – The scope statement shall provide, in a brief summary, the boundaries of the emergency operations plan and to whom the emergency operations plan applies.

III. DEFINITIONS – Definitions of terms that are used in the TO emergency operations plan that are not common to the ERCOT Region. Define what is considered an operating emergency.

IV. KEY PERSONNEL ROLES AND RESPONSIBILITIES – Identify roles and responsibilities of key personnel that are responsible for activating the plan.

V. PROCESSES TO PREPARE FOR AND MITIGATE EMERGENCIES – Include the following:

A. Notification to ERCOT to include current and known projected Real-Time conditions, when experiencing an operating emergency;

B. Cancellation of Transmission Facility Outages;

C. Transmission system reconfiguration;

D. Operator-controlled manual Load shed during an Emergency Condition that accounts for each of the following:

1. Provisions for manual Load shed capable of being implemented in a timeframe adequate for mitigating the emergency;

2. Provisions to minimize the overlap of circuits that are designated for manual Load shed and circuits that serve designated critical loads;

3. Provisions to minimize the overlap of circuits that are designated for manual Load shed and circuits that are utilized for Under-Frequency Load Shed (UFLS) or Under-Voltage Load Shed (UVLS); and

4. Provisions to limit the utilization of UFLS or UVLS circuits for manual Load shed to situations where such use is consistent with the ERCOT Nodal Protocols and ERCOT Nodal Operating Guide and is warranted by system conditions.

E. Provisions to determine reliability impacts of:

1. cold weather conditions; and

2. extreme weather conditions.