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| NOGRR Number | [238](https://www.ercot.com/mktrules/issues/nogrr) | NOGRR Title | Alignment Changes for December 17, 2021 Nodal Operating Guide – NPRR1094, NPRR1105, NPRR1106 |
| Date Posted | December 10, 2021 |
| Status | Alignment Change |
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| Nodal Operating Guide Sections Requiring Revision  | 4.5.3.3, EEA Levels |
| Related Documents Requiring Revision/Related Revision Requests | Nodal Protocol Revision Request (NPRR) 1094, Allow Under Frequency Relay Load to be Manually Shed During EEA3NPRR1105, Option to Deploy Distribution Voltage Reduction Measures Prior to Energy Emergency Alert (EEA)NPRR1106, Deployment of Emergency Response Service (ERS) Prior to Declaration of Energy Emergency Alert (EEA) |
| Revision Description | This Nodal Operating Guide Revision Request (NOGRR) aligns Energy Emergency Alert (EEA) language in Section 4.5.3.3 with Protocols Section 6.5.9.4.2, EEA Levels. On December 10, 2021, the ERCOT Board approved NPRR1094, NPRR1105, and NPRR1106, all of which modified language in Protocols Section 6.5.9.4.2. Paragraph (6) of Section 1.3.1, Introduction, provides that ERCOT may make changes to the Nodal Operating Guide to maintain duplicate language between the Protocols and Nodal Operating Guide, and requires that Section 4.5.3.3 be modified only by an Alignment NOGRR. |
| Reason for Revision |  Addresses current operational issues. Meets Strategic goals (tied to the [ERCOT Strategic Plan](http://www.ercot.com/content/news/presentations/2013/ERCOT%20Strat%20Plan%20FINAL%20112213.pdf) or directed by the ERCOT Board). Market efficiencies or enhancements Administrative Regulatory requirements Other: Alignment NOGRR*(please select all that apply)* |
| ERCOT Market Impact Statement | ERCOT Staff has reviewed NOGRR238 and believes the market impact for NOGRR238 aligns the Nodal Operating Guide with current Protocols. |

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| Proposed Guide Language Revision |

4.5.3.3 EEA Levels

(1) ERCOT will declare an EEA Level 1 when PRC falls below 2,300 MW and is not projected to be recovered above 2,300 MW within 30 minutes without the use of the following actions that are prescribed for EEA Level 1:

(a) ERCOT shall take the following steps to maintain steady state system frequency near 60 Hz and maintain PRC above 1,750 MW:

(i) Request available Generation Resources, that can perform within the expected timeframe of the emergency, to come On-Line by initiating manual HRUC or through Dispatch Instructions;

(ii) Use available DC Tie import capacity that is not already being used;

(iii) Issue a Dispatch Instruction for Resources to remain On-Line which, before start of emergency, were scheduled to come Off-Line; and

(iv) Instruct QSEs to deploy undeployed Emergency Response Service (ERS)-10 and ERS-30.

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| [NOGRR221: Insert item (v) below upon system implementation of NPRR1010:](v) At ERCOT’s discretion, manually deploy, through Inter-Control Center Communications Protocol (ICCP), available RRS and ERCOT Contingency Reserve Service (ECRS) capacity from Generation Resources having a Resource Status of ONSC and awarded RRS or ECRS. |

(b) QSEs shall:

(i) Ensure COPs and telemetered High Sustained Limits (HSLs) are updated and reflect all Resource delays and limitations; and

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| [NOGRR221: Replace paragraph (i) above with the following upon system implementation of NPRR1010:](i) Ensure COPs and telemetered HSLs, Normal Ramp Rates, Emergency Ramp Rates, and Ancillary Service capabilities are updated and reflect all Resource delays and limitations; and |

(ii) Suspend any ongoing ERCOT-required Resource performance testing.

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| ***[NOGRR216 and NOGRR229: Insert applicable portions of paragraph (iii) below upon system implementation of NPRR1002 for NOGRR216; or upon system implementation of NPRR995 for NOGRR229:]***(iii) Ensure that each of its ESRs and Settlement Only Energy Storage Systems (SOESSs) suspends charging until the EEA is recalled, except under the following circumstances:(A) The ESR has a current SCED Base Point Instruction, Load Frequency Control Dispatch Instruction, or manual Dispatch Instruction to charge the ESR; (B) The ESR or SOESS is actively providing Primary Frequency Response; or (C) The ESR or SOESS is co-located behind a Point of Interconnection (POI) with onsite generation that is incapable of exporting additional power to the ERCOT System, in which case the ESR may continue to charge as long as maximum output to the ERCOT System is maintained.  |

(2)ERCOT may declare an EEA Level 2 when the clock-minute average system frequency falls below 59.91 Hz for 15 consecutive minutes. ERCOT will declare an EEA Level 2 when PRC falls below 1,750 MW and is not projected to be recovered above 1,750 MW within 30 minutes without the use of the following actions that are prescribed for EEA Level 2:

(a) In addition to the measures associated with EEA Level 1, ERCOT shall take the following steps to maintain steady state system frequency at a minimum of 59.91 Hz and maintain PRC above 1,430 MW:

(i) Instruct TSPs and Distribution Service Providers (DSPs) or their agents to reduce Customer Load by using existing, in-service distribution voltage reduction measures that have not already been implemented. A TSP, DSP or their agent shall implement these instructions if distribution voltage reduction measures are available and already installed. If the TSP, DSP, or their agent determines in their sole discretion that the distribution voltage reduction would adversely affect reliability, the voltage reduction measure may be reduced, modified, or otherwise changed from maximum performance to a level of exercise that has no negative impact to reliability.

(ii) Instruct TSPs and DSPs to implement any available Load management plans to reduce Customer Load.

(iii) Instruct QSEs to deploy RRS supplied from Load Resources (controlled by high-set under-frequency relays). ERCOT shall issue such Dispatch Instructions in accordance with the deployment methodologies described in paragraph (iv) below.

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|  ***[NOGRR186: Replace paragraph (iii) above with the following upon system implementation of NPRR863:]***(iii) Instruct QSEs to deploy ECRS or RRS (controlled by high-set under-frequency relays) supplied from Load Resources. ERCOT may deploy ECRS or RRS simultaneously or separately, and in any order. ERCOT shall issue such Dispatch Instructions in accordance with the deployment methodologies described in paragraph (iv) below. |

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 (iv) ERCOT shall deploy RRS capacity supplied by Load Resources (controlled by high-set under-frequency relays) in accordance with the following:

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| ***[NOGRR186: Replace paragraph (iv) above with the following upon system implementation of NPRR863:]***(iv) Load Resources providing ECRS that are not controlled by high set under-frequency relays shall be deployed prior to Group 1 deployment. ERCOT shall deploy ECRS and RRS capacity supplied by Load Resources (controlled by high-set under-frequency relays) in accordance with the following: |

(A) Instruct QSEs to deploy half of the RRS that is supplied from Load Resources (controlled by high-set under-frequency relays) by instructing the QSE representing the specific Load Resource to interrupt Group 1 Load Resources providing RRS. QSEs shall deploy Load Resources according to the group designation and will be given some discretion to deploy additional Load Resources from Group 2 if Load Resource operational considerations require such. ERCOT shall issue notification of the deployment via XML message. ERCOT shall follow this XML notification with a Hotline VDI, which shall initiate the ten-minute deployment period;

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| ***[NOGRR186 and NOGRR198: Replace applicable portions of paragraph (A) above with the following upon system implementation of NPRR863 or NPRR939, respectively:]***(A) Instruct QSEs to deploy RRS with a Group 1 designation and all of the ECRS that is supplied from Load Resources (controlled by high-set under-frequency relays) by instructing the QSE representing the specific Load Resources to interrupt Group 1 Load Resources providing ECRS and RRS. QSEs shall deploy Load Resources according to the group designation and will be given some discretion to deploy additional Load Resources from any of the groups not designated for deployment if Load Resource operational considerations require such. ERCOT shall issue notification of the deployment via XML message. ERCOT shall follow this XML notification with a Hotline VDI, which shall initiate the ten-minute deployment period;  |

(B) At the discretion of the ERCOT Operator, instruct QSEs to deploy the remaining RRS that is supplied from Load Resources (controlled by high-set under-frequency relays) by instructing the QSE representing the specific Load Resource to interrupt Group 2 Load Resources providing RRS. ERCOT shall issue notification of the deployment via XML message. ERCOT shall follow this XML notification with a Hotline VDI, which shall initiate the ten-minute deployment period;

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| ***[NOGRR198: Replace paragraph (B) above with the following upon system implementation of NPRR939:]***(B) At the discretion of the ERCOT Operator, instruct QSEs to deploy RRS that is supplied from Load Resources (controlled by high-set under-frequency relays) by instructing the QSE representing the specific Load Resource to interrupt additional Load Resources providing RRS based on their group designation. ERCOT shall issue notification of the deployment via XML message. ERCOT shall follow this XML notification with a Hotline VDI, which shall initiate the ten-minute deployment period;  |

(C) The ERCOT Operator may deploy both of the groups of Load Resources providing RRS at the same time. ERCOT shall issue notification of the deployment via XML message. ERCOT shall follow this XML notification with a Hotline VDI, which shall initiate the ten-minute deployment period; and

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| ***[NOGRR186 and NOGRR198: Replace applicable portions of paragraph (C) above with the following upon system implementation of NPRR863 or NPRR939, respectively:]***(C) The ERCOT Operator may deploy Load Resources providing only ECRS (not controlled by high-set under-frequency relays) and all groups of Load Resources providing RRS and ECRS at the same time. ERCOT shall issue notification of the deployment via XML message. ERCOT shall follow this XML notification with a Hotline VDI, which shall initiate the ten-minute deployment period; and |

(D) ERCOT shall post a list of Load Resources on the MIS Certified Area immediately following the Day-Ahead Reliability Unit Commitment (DRUC) for each QSE with a Load Resource obligation which may be deployed to interrupt under paragraph (A), Group 1 and paragraph (B), Group 2. ERCOT shall develop a process for determining which individual Load Resource to place in Group 1 and which to place in Group 2. ERCOT procedures shall select Group 1 and Group 2 based on a random sampling of individual Load Resources. At ERCOT’s discretion, ERCOT may deploy all Load Resources at any given time during EEA Level 2.

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| ***[NOGRR198 and NOGRR221: Replace applicable portions of paragraph (D) above with the following upon system implementation of NPRR939 or NPRR1010, respectively:]***(D) ERCOT shall post a list of Load Resources on the MIS Certified Area immediately following the DRUC for each QSE with a Load Resource RRS or ECRS award, which may be deployed to interrupt under paragraph (A) and paragraph (B). ERCOT shall develop a process for determining which individual Load Resource to place in each group based on a random sampling of individual Load Resources. At ERCOT’s discretion, ERCOT may deploy all Load Resources at any given time during EEA Level 2.  |

(vi) Unless a media appeal is already in effect, ERCOT shall issue an appeal through the public news media for voluntary energy conservation; and

(vii) With the approval of the affected non-ERCOT Control Area, TSPs, DSPs, or their agents may implement transmission voltage level BLTs, which transfer Load from the ERCOT Control Area to non-ERCOT Control Areas in accordance with BLTs as defined in the Operating Guides.

(b) Confidentiality requirements regarding transmission operations and system capacity information will be lifted, as needed to restore reliability.

(3) ERCOT may declare an EEA Level 3 when the clock-minute average system frequency falls below 59.91 Hz for 20 consecutive minutes. ERCOT will declare an EEA Level 3 when PRC cannot be maintained above 1,430 MW or when the clock-minute average system frequency falls below 59.91 Hz for 25 consecutive minutes. Upon declaration of an EEA Level 3, ERCOT will implement any measures associated with EEA Levels 1 and 2 that have not already been implemented.

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| ***[NOGRR216 and NOGRR229: Insert applicable portions of paragraph (a) below upon system implementation of NPRR1002 and renumber accordingly for NOGRR216; or upon system implementation of NPRR995 for NOGRR229:]***(a) ERCOT shall instruct ESRs and SOESSs to suspend charging. For ESRs, ERCOT shall issue the instruction via a SCED Base Point, or, if otherwise necessary, via a manual Dispatch instruction. An ESR or SOESS shall suspend charging unless providing Primary Frequency Response or LFC issues a charging instruction to an ESR that is carrying Regulation Down Service (Reg-Down). However, an ESR or SOESS co-located behind a POI with onsite generation that is incapable of exporting additional power to the ERCOT System may continue to charge as long as maximum output to the ERCOT System is maintained. |

(a) When PRC falls below 1,000 MW and is not projected to be recovered above 1,000 MW within 30 minutes, or when the clock-minute average frequency falls below 59.91 Hz for 25 consecutive minutes, ERCOT shall direct all TOs to shed firm Load, in 100 MW blocks, distributed as documented in these Operating Guides in order to maintain a steady state system frequency at a minimum of 59.91 Hz and to recover 1,000 MW of PRC within 30 minutes.

(b) TOs and TDSPs may shed Load connected to under-frequency relays pursuant to an ERCOT Load shed directive issued during EEA Level 3 so long as each affected TO continues to comply with its Under-Frequency Load Shed (UFLS) obligation as described in Nodal Operating Guide Section 2.6.1, Automatic Firm Load Shedding, and its Load shed obligation as described in Nodal Operating Guide Section 4.5.3.4, Load Shed Obligation.