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| NOGRR Number | [232](http://www.ercot.com/mktrules/issues/NOGRR232) | NOGRR Title | Related to NPRR1093, Load Resource Participation in Non-Spinning Reserve |
| Date Posted | | September 1, 2021 | |
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| Requested Resolution | | Urgent – Urgent status is necessary to allow ERCOT to explore temporary work-arounds to allow Load Resources that are not Controllable Load Resources to participate in Non-Spinning Reserve (Non-Spin) so that additional capacity is available to ERCOT Operators for the upcoming winter and summer 2022. | |
| Nodal Operating Guide Sections Requiring Revision | | 2.3, Ancillary Services  2.3.2.1, Additional Operational Details for Non-Spinning Reserve Service Providers | |
| Related Documents Requiring Revision/Related Revision Requests | | Nodal Protocol Revision Request (NPRR) 1093, Load Resource Participation in Non-Spinning Reserve  Other Binding Document Revision Request (OBDRR) 032, Non-Spin Changes Related to NPRR1093, Load Resource Participation in Non-Spinning Reserve  OBDRR033, ORDC Changes Related to NPRR1093, Load Resource Participation in Non-Spinning Reserve | |
| Revision Description | | This Nodal Operating Guide Revision Request (NOGRR) aligns the Nodal Operating Guide with revisions from NPRR1093 to allow Load Resources that are not Controllable Load Resources to provide Non-Spinning Reserve (Non-Spin) Ancillary Service. | |
| Reason for Revision | | Addresses current operational issues.  Meets Strategic goals (tied to the [ERCOT Strategic Plan](http://www.ercot.com/content/wcm/lists/144926/ERCOT_Strategic_Plan_2019-2023.pdf) or directed by the ERCOT Board).  Market efficiencies or enhancements  Administrative  Regulatory requirements  Other: (explain)  *(please select all that apply)* | |
| Business Case | | Alignment between Protocols and the Nodal Operating Guide is necessary and proper. | |

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| Market Segment | Not applicable |

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| Proposed Guide Language Revision |

2.3 Ancillary Services

(1) The types of Ancillary Services required by ERCOT are described below:

| **ANCILLARY SERVICE TYPE** | **DESCRIPTION** | **ERCOT AUTHORITY ACTION** |
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| Regulation Down Service (Reg-Down)  and  Regulation Up Service (Reg-Up)  (for Generation Resources)  ***Reference: Protocol Section 2, Definitions and Acronyms*** | Resource capacity provided by a Qualified Scheduling Entity (QSE) from a specific Generation Resource to control frequency within the system which is controlled second by second, normally by an Automatic Generation Control (AGC) system. | a. Reg-Down energy is a deployment to increase or decrease generation at a level below the Generation Resource’s Base Point in response to a change in system frequency.  b. Reg-Up energy is a deployment to increase or decrease generation at a level above the Generation Resource’s Base Point in response to a change in system frequency. |
| Reg-Down  and  Reg-Up  (for Load Resource)  ***Reference: Protocol Section 2*** | Load Resource capacity provided by a QSE from a specific Load Resource to control frequency within the system. | a. Reg-Down is a deployment to increase or decrease Load as deployed within its Ancillary Service Schedule for Reg-Down below the Load Resource’s Maximum Power Consumption (MPC) limit in response to a change in system frequency.  b. Reg-Up is a deployment to increase or decrease Load as deployed within its Ancillary Service Schedule for Reg-Up above the Load Resource’s Low Power Consumption (LPC) limit in response to a change in system frequency. |
| Responsive Reserve (RRS)  ***Reference: Protocol Section******2*** | Operating reserves on Generation Resources, Load Resources, and Resources capable of providing Fast Frequency Response (FFR) maintained by ERCOT to help control the frequency of the system. RRS on Generation Resources and Controllable Load can be used as energy during an Energy Emergency Alert (EEA) event. | RRS may only be deployed as follows:  a. Through automatic Governor action or under-frequency relay in response to frequency deviations;  b. By electronic signal from ERCOT in response to the need; and  c. As ordered by an ERCOT Operator during an EEA or other emergencies. |
| Non-Spinning Reserve (Non-Spin) Service  ***Reference: Protocol Section 2*** | a. Off-Line Generation Resource capacity, or reserved capacity from On-Line Generation Resources, capable of being ramped to a specified output level within 30 minutes, and operating at a specified output for the entire duration of the Non-Spin obligation.  b. Controllable Load Resources that are capable of ramping to an ERCOT-instructed consumption level within 30 minutes and consuming at the ERCOT-instructed level for the entire duration of the Non-Spin obligation.  c. Load Resources that are not Controllable Load Resources and that are not controlled by under-frequency relay. Load Resources that are not Controllable Load Resources providing Non-Spin must be capable of reducing Load in response to a XML Dispatch Instruction within 30 minutes and remain deployed until recalled by ERCOT. | Deployed in response to loss-of-Resource contingencies, Load forecasting error, or other contingency events on the system. See Protocol Section 6.5.7.6.2.3, Non-Spinning Reserve Service Deployment. |
| Voltage Support Service (VSS)  ***Reference: Protocol Section*** 3.15***, Voltage Support*** | Reactive capability of a Generation Resource that is required to maintain transmission and distribution voltages on the ERCOT Transmission Grid within acceptable limits. All Generation Resources with a gross rating greater than 20 MVA shall provide VSS. | Direct the scheduling of VSS by providing Voltage Profiles at the point of interconnection. The Generation Resource is obligated to maintain the published voltage profile within its Corrected Unit Reactive Limit (CURL). |
| Black Start Service (BSS)  ***Reference: Protocol Section*** 3.14.2***, Black Start*** | The provision of Generation Resources under a Black Start Agreement, which are capable of self-starting without support from within ERCOT in the event of a Partial Blackout or Blackout. | Provide emergency Dispatch Instructions to begin restoration to a secure operating state after a Partial Blackout or Blackout. |
| Reliability Must-Run (RMR) Service  ***Reference: Protocol Section*** 3.14.1***, Reliability Must Run*** | The provision of Generation Resource capacity and energy under an RMR Agreement. | Enter into contractual agreements to retain units required for reliable operations. Direct the operation of those units that otherwise would not operate and that are necessary to provide reliable operations. |

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| [NOGRR187, NOGRR204, NOGRR210, and NOGRR211: Replace applicable portions of paragraph (1) above with the following upon system implementation of NPRR863, NPRR989, NPRR1005, or NPRR1007, respectively:]  (1) The types of Ancillary Services required by ERCOT are described below:   | **ANCILLARY SERVICE TYPE** | **DESCRIPTION** | **ERCOT AUTHORITY ACTION** | | --- | --- | --- | | Regulation Down Service (Reg-Down)  and  Regulation Up Service (Reg-Up)  (for Generation Resources and Energy Storage Resources (ESRs))  ***Reference: Protocol Section******2, Definitions and Acronyms*** | Resource capacity provided by a Qualified Scheduling Entity (QSE) from a specific Generation Resource or ESR to control frequency within the system which is controlled second by second, normally by an Automatic Generation Control (AGC) system. | a. Reg-Down energy is a Resource-specific deployment to increase or decrease generation at a level below the Generation Resource’s or ESR’s Base Point in response to a change in system frequency.  b. Reg-Up energy is a Resource-specific deployment to increase or decrease generation at a level above the Generation Resource’s or ESR’s Base Point in response to a change in system frequency. | | Reg-Down  and  Reg-Up  (for Load Resource)  ***Reference: Protocol Section******2*** | Load Resource capacity provided by a QSE from a specific Load Resource to control frequency within the system. | a. Reg-Down is a Resource-specific deployment to increase or decrease Load below the Load Resource’s Maximum Power Consumption (MPC) limit in response to a change in system frequency.  b. Reg-Up is a Resource-specific deployment to increase or decrease Load above the Load Resource’s Low Power Consumption (LPC) limit in response to a change in system frequency. | | Responsive Reserve (RRS)  ***Reference: Protocol Section******2*** | Operating reserves on Generation Resources, ESRs, Load Resources, and Resources capable of providing Fast Frequency Response (FFR) maintained by ERCOT to help control the frequency of the system. RRS on Generation Resources, ESRs, and Controllable Load can be used as energy during an Energy Emergency Alert (EEA) event. | RRS may only be deployed as follows:  a. Through automatic Governor action or under-frequency relay in response to frequency deviations;  b. By electronic signal from ERCOT in response to the need; and  c. As ordered by an ERCOT Operator during an EEA or other emergencies. | | ERCOT Contingency Reserve Service (ECRS)  ***Reference: Protocol Section******2*** | a. Off-Line Generation Resource or ESR capacity, or reserved capacity from On-Line Generation Resources or ESRs, capable of being ramped to a specified output level within ten minutes, and operating at a specified output for at least one hour.  b. Controllable Load Resources dispatchable by SCED that are capable of ramping to an ERCOT-instructed consumption level within ten minutes and consuming at the ERCOT-instructed level for at least one hour.  c. Load Resources other than Controllable Load Resources that may or may not be controlled by under-frequency relay that are capable of interrupting within ten minutes at ERCOT instruction for at least one hour | Deployed in response to loss-of-Resource contingencies, Load forecasting error, or other contingency events on the system. See Protocol Section 6.5.7.6.2.4, Deployment and Recall of ERCOT Contingency Reserve Service. | | Non-Spinning Reserve (Non-Spin) Service  ***Reference: Protocol Section 2*** | a. Off-Line Generation Resource or ESR capacity, or reserved capacity from On-Line Generation Resources or ESRs, capable of being ramped to a specified output level within 30 minutes, and operating at a specified output for at least one hour.  b. Controllable Load Resources that are capable of ramping to an ERCOT-instructed consumption level within 30 minutes and consuming at the ERCOT-instructed level for at least one hour.  c. Load Resources that are not Controllable Load Resources and that are not controlled by under-frequency relay. Load Resources that are not Controllable Load Resources providing Non-Spin must be capable of reducing Load in response to a XML Dispatch Instruction within 30 minutes and remain deployed until recalled by ERCOT. | Deployed in response to loss-of-Resource contingencies, Load forecasting error, or other contingency events on the system. See Protocol Section 6.5.7.6.2.3, Non-Spinning Reserve Service Deployment. | | Voltage Support Service (VSS)  ***Reference: Protocol Section* *3.15, Voltage Support*** | Reactive capability of a Generation Resource or ESR that is required to maintain transmission and distribution voltages on the ERCOT Transmission Grid within acceptable limits. All Generation Resources and ESRs with a gross rating greater than 20 MVA shall provide VSS. | Direct the scheduling of VSS by providing Voltage Profiles at the Point of Interconnection Bus (POIB). The Generation Resource or ESR is obligated to maintain the published voltage profile within its Corrected Unit Reactive Limit (CURL). | | Black Start Service (BSS)  ***Reference: Protocol Section* *3.14.2, Black Start*** | The provision of Generation Resources under a Black Start Agreement, which are capable of self-starting without support from within ERCOT in the event of a Partial Blackout or Blackout. | Provide emergency Dispatch Instructions to begin restoration to a secure operating state after a Partial Blackout or Blackout. | | Reliability Must-Run (RMR) Service  ***Reference: Protocol Section* *3.14.1, Reliability Must Run*** | The provision of Generation Resource capacity and energy under an RMR Agreement. | Enter into contractual agreements to retain units required for reliable operations. Direct the operation of those units that otherwise would not operate and that are necessary to provide reliable operations. | |

2.3.2.1 Additional Operational Details for Non-Spinning Reserve Service Providers

(1) Non-Spin Service Generation Resource providers must be capable of being synchronized and ramped to a specified output level within 30 minutes of notification of deployment and run at a specified output level for at least one hour, as specified in item (1)(a) of Protocol Section 3.17.3, Non-Spinning Reserve Service.

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| [NOGRR211: Replace paragraph (1) above with the following upon system implementation of NPRR1007:]  (1) Non-Spin Service Generation Resource providers, including MW from power augmentation, must be capable of being synchronized and ramped to a specified output level within 30 minutes of notification of deployment and run at a specified output level for at least one hour, as specified in item (1)(a) of Protocol Section 3.17.3, Non-Spinning Reserve Service. |

(2) Non-Spin Controllable Load Resource providers must be capable of ramping to an ERCOT-instructed consumption level within 30 minutes and consuming at the ERCOT-instructed level for at least one hour, as specified in item (1)(b) of Protocol Section 3.17.3.

(3) A Load Resource that is not a Controllable Load Resource providing Non-Spin must be capable of reducing Load based on an XML Dispatch Instruction issued by ERCOT within 30 minutes and maintaining that deployment until recalled.

(4) To become provisionally qualified as a provider of Non-Spin, a Load Resource shall complete the following requirements:

(a) Register as a Load Resource with ERCOT;

(b) Complete asset registration of the Load Resource;

(c) Provide ERCOT the appropriate Non-Spinning Load affidavit;

(d) Test to verify appropriate voice communications are in place for VDIs by ERCOT;

(e) Provide telemetry through the QSE to ERCOT in accordance with all applicable requirements set forth in paragraph (5) of Protocol Section 6.5.5.2, Operational Data Requirements; and

(f) Be able to consume at an ERCOT-instructed level during an ERCOT deployment for a minimum of one hour up to a maximum of the hours of service responsibility.

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| [NOGRR211: Replace item (f) above with the following upon system implementation of NPRR1007:]  (f) Be able to consume at an ERCOT-instructed level during an ERCOT deployment for a minimum of one hour. |

(5) To become and remain fully qualified as a provider of Non-Spin, the Load Resource shall complete all the requirements for provisional qualification identified above and the following:

(a) Respond successfully to an actual ERCOT deployment or pass simulated or actual testing according to ERCOT’s Procedure; and

(b) Perform verification testing as described in Section 8, Attachment G, Load Resource Tests.