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| NOGRR Number | [264](https://www.ercot.com/mktrules/issues/NOGRR264) | NOGRR Title | Related to NPRR1235, Dispatchable Reliability Reserve Service as a Stand-Alone Ancillary Service |
| Date Posted | May 29, 2024 |
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| Requested Resolution  | Normal |
| Nodal Operating Guide Sections Requiring Revision  | 2.3, Ancillary Services2.3.4, Dispatchable Reliability Reserve Service (new)2.3.4.1, Additional Operational Details for Dispatchable Reliability Reserve Service Providers (new)9.4.5, Resource-Specific Dispatchable Reliability Reserve Service (new) |
| Related Documents Requiring Revision/Related Revision Requests | Nodal Protocol Revision Request (NPRR) 1235, Dispatchable Reliability Reserve Service as a Stand-Alone Ancillary Service |
| Revision Description | This Nodal Operating Guide Revision Request (NOGRR) and related NPRR1235 develops a stand-alone Dispatchable Reliability Reserve Service (DRRS) product. |
| 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 | This NOGRR is related to NPRR1235 that has been developed pursuant to Public Utility Regulatory Act § 39.159(d) which requires ERCOT “to develop and implement an ancillary services program to procure dispatchable reliability reserve services on a day-ahead and real-time basis to account for market uncertainty.” |

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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** |
| --- | --- | --- |
| Regulation Down Service (Reg-Down)andRegulation 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 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 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-DownandReg-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, 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; andc. 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 capacity, or reserved capacity from On-Line Generation Resources, capable of being ramped to a specified output level within ten minutes, operating at a specified output for at least two consecutive hours, and are dispatchable by Security-Constrained Economic Dispatch (SCED).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 two consecutive hours.c. Load Resources that are not Controllable Load Resources and may or may not be controlled by under-frequency relay. Load Resources that are not Controllable Load Resources providing ECRS must be capable of reducing Load in response to an Extensible Markup Language (XML) Dispatch Instruction within ten 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 6.5.7.6.2.4, 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 four consecutive hours. 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 four consecutive hours. 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 an 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. |

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| ***[NOGRR211: Replace paragraph (1) above with the following upon system implementation of NPRR1007:]***(1) The types of Ancillary Services required by ERCOT are described below:

| **ANCILLARY SERVICE TYPE** | **DESCRIPTION** | **ERCOT AUTHORITY ACTION** |
| --- | --- | --- |
| Regulation Down Service (Reg-Down)andRegulation 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-DownandReg-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; andc. 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 two consecutive hours.b. Controllable Load Resources dispatchable by Security-Constrained Economic Dispatch (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 two consecutive hours.c. Load Resources that are not Controllable Load Resources and may or may not be controlled by under-frequency relay. Load Resources that are not Controllable Load Resources providing ECRS must be capable of reducing Load in response to an Extensible Markup Language (XML) Dispatch Instruction within ten 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 6.5.7.6.2.4, 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 four consecutive hours. 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 four consecutive hours.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 an 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. |
| Dispatchable Reliability Reserve Service (DRRS)***Reference: Protocol Section 6.5.7.6.2.5, Deployment of Dispatchable Reliability Reserve Service (DRRS)*** | Off-line Capacity from a Generation Resource that can be On-Line within two hours and can operate at its High Sustained Limit for at least four consecutive hours. | The RUC process will be relied upon to identify the need for deploying DRRS. |
| 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. |

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2.3.4 Dispatchable Reliability Reserve Service

2.3.4.1 Additional Operational Details for Dispatchable Reliability Reserve Service Providers

(1) Generation Resources providing Dispatchable Reliability Reserve Service must be capable of being On-Line within two hours of notification of deployment and run at their respective High Sustained Limits (HSLs) for at least four consecutive hours, as specified in Protocol Section 2.1, Definitions.

9.4.5 Resource-Specific Dispatchable Reliability Reserve Service

(1) ERCOT shall develop monthly reports detailing Resource-specific Dispatchable Reliability Reserve Service (DRRS) performance during deployments based on the criteria described in Protocol Section 8.1.1.4.5, Dispatchable Reliability Reserve Service Energy Deployment Criteria.