|  |  |  |  |
| --- | --- | --- | --- |
| NPRR Number | [1213](https://www.ercot.com/mktrules/issues/NPRR1213) | NPRR Title | Allow DGRs and DESRs on Circuits Subject to Load Shed to Provide ECRS |
| Date of Decision | December 15, 2023 |
| Action | Recommended Approval |
| Timeline  | Normal |
| Proposed Effective Date | To be determined |
| Priority and Rank Assigned | To be determined |
| Nodal Protocol Sections Requiring Revision  | 3.8.6, Distribution Generation Resources (DGRs) and Distribution Energy Storage Resources (DESRs) 3.16, Standards for Determining Ancillary Service Quantities  |
| Related Documents Requiring Revision/Related Revision Requests | None |
| Revision Description | This Nodal Protocol Revision Request (NPRR) amends requirements for Distribution Generation Resources (DGRs) and Distribution Energy Storage Resources (DESRs) that are seeking qualification to provide ERCOT Contingency Reserve Service (ECRS), as follows:* Paragraph (1)(c) of Section 3.8.6 allows for DGRs and DESRs on circuits subject to disconnection during Load shed events to provide ECRS; and
* Section 3.16 recognizes that ERCOT will establish limits on ECRS, which may be provided by DGRs/DESRs on circuits subject to disconnection during Load shed events.
 |
| Reason for Revision |  Addresses current operational issues. Meets Strategic goals (tied to the [ERCOT Strategic Plan](https://www.ercot.com/files/docs/2018/12/13/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 | The Public Utility Commission of Texas (PUCT) has asked ERCOT to review all Ancillary Services provided by DGRs and DESRs and review which may be provided by a Resource on a distribution circuit that may be subject to Under-Frequency Load Shed (UFLS), Under-Voltage Load Shed (UVLS), or Load shed during an Energy Emergency Alert (EEA) event. In response to the PUCT’s request, NPRR1171, Requirements for DGRs and DESRs on Circuits Subject to Load Shedding, identified the Ancillary Services (Non-Spin Reserve Service and Regulation Down) that can be provided by DGRs and DESRs on circuits subject to Load shed. ERCOT indicated that ECRS would be considered following the implementation of ECRS and a reasonable window of time to gain experience with the new Ancillary Service.In order to support grid reliability and mitigate Real-Time operational issues, ERCOT launched ECRS in June 2023. ECRS complements and provides support to ERCOT’s current suite of Ancillary Services: Regulation Up, Regulation Down, Responsive Reserve Service, and Non-Spin Reserve Service. Allowing more Resources to provide ECRS will support greater competition in the market to the overall benefit of consumers. As a matter of policy, access to ECRS will also incentivize greater deployment of resilient, dispatchable distributed resources that can support Texas’ growing need for new generation capacity.  |
| PRS Decision | On 12/15/23, PRS voted unanimously to recommend approval of NPRR1213 as submitted. All Market Segments participated in the vote. |
| Summary of PRS Discussion | On 12/15/23, participants discussed a portion of ECRS would be eligible for participation in Ancillary Service provision, and that further discussion would be held prior to development of the 2025 Ancillary Services Methodology.  |

|  |
| --- |
| **Opinions** |
| Credit Review | To be determined |
| Independent Market Monitor Opinion | To be determined |
| ERCOT Opinion | To be determined |
| ERCOT Market Impact Statement | To be determined |

|  |
| --- |
| Sponsor |
| Name | Monica Batra-Shrader |
| E-mail Address | mbatra@enchantedrock.com |
| Company | Enchanted Rock |
| Phone Number | N/A |
| Cell Number | 214-907-8562 |
| Market Segment | Independent Retail Electric Provider (IREP) |

|  |
| --- |
| **Market Rules Staff Contact** |
| **Name** | Brittney Albracht |
| **E-Mail Address** | Brittney.Albracht@ercot.com  |
| **Phone Number** | 512-225-7027 |

|  |
| --- |
| **Comments Received** |
| Comment Author | **Comment Summary** |
| None |  |

|  |
| --- |
| **Market Rules Notes** |

None

|  |
| --- |
| Proposed Protocol Language Revision |

***3.8.6 Distribution Generation Resources (DGRs) and Distribution Energy Storage Resources (DESRs)***

(1) As a condition for the interconnection of a DGR or DESR, the affected Resource Entity, after consultation with the relevant Distribution Service Provider (DSP), shall provide documentation from the DSP to ERCOT stating that the interconnecting distribution circuit will not be disconnected as part of an Energy Emergency Alert (EEA) Level 3, an under-frequency Load shedding event, or an under-voltage Load shedding event, unless required for DSP local system maintenance or during a DSP local system emergency.

(a) If a DSP subsequently determines that any circuit to which a DGR or DESR is interconnected will need to be disconnected during these Load shedding events, or that a DGR or DESR will need to be moved to a circuit that will be disconnected during these Load shedding events:

(i) The DSP shall promptly notify the designated contact for the DGR or DESR;

(ii) The Resource Entity shall promptly notify ERCOT of this fact via the Resource Registration process; and

(iii) The DGR or DESR will immediately be disqualified from offering to provide any Ancillary Service.

(b) Upon receiving notification from the DSP that the DGR or DESR is no longer subject to disconnection during any of these Load shedding events, and that no known system limitations or changes have occurred that would inhibit the DGR or DESR from complying with Ancillary Service performance requirements, the Resource Entity for the DGR or DESR shall notify ERCOT of this fact via the Resource Registration process and will, at that time, be eligible to offer to provide Ancillary Services if the Resource is otherwise qualified to do so.

|  |
| --- |
| ***[NPRR1171: Replace paragraph (1) above with the following upon system implementation and renumber accordingly:]***(1) As a condition for the interconnection of a DGR or DESR, the affected Resource Entity, after consultation with the relevant Distribution Service Provider (DSP), shall submit an executed Section 23, Form R, Interconnection Circuit Designation for Distribution Generation Resources (DGRs) and Distribution Energy Storage Resources (DESRs).(a) The DSP shall indicate that the interconnecting distribution circuit for the DGR or DESR is subject to Load shed if the DSP determines that the distribution circuit may be disconnected as part of an Energy Emergency Alert (EEA) Level 3 Load shedding event, an Under-Frequency Load Shed (UFLS) event, or an Under-Voltage Load Shed (UVLS) event.(b) The DSP shall indicate that the interconnecting distribution circuit for the DGR or DESR is not subject to Load shed if the DSP determines that the distribution circuit will not be disconnected for any Load shed purpose during any of the events listed in paragraph (a) above. This condition may be met where:(i) A DGR or DESR is connected to a distribution circuit which the DSP has excluded from Load shedding events, which may include, but is not limited to, a distribution circuit that interconnects only DGRs or DESRs; or(ii) A DGR or DESR is connected to a distribution circuit where a recloser or other sectionalizing device excludes the DGR or DESR from Load shedding events on the distribution circuit.(c) If the DSP has indicated that the interconnecting distribution circuit may be subject to Load shed, the DGR or DESR may qualify to provide only the following Ancillary Services, subject to the limits established by ERCOT pursuant to Section 3.16, Standards for Determining Ancillary Service Quantities:(i) Non-Spinning Reserve (Non-Spin); (ii) ERCOT Contingency Reserve Service (ECRS); and(iii) Regulation Down Service (Reg-Down).(d) If the DSP has indicated that the interconnecting distribution circuit is not subject to Load shed, then the DGR or DESR shall not be subject to the Ancillary Service qualification limitations described in paragraph (c) above.(e) The DSP shall identify on Section 23, Form R, whether the DSP has identified any operational limitations for the DGR or DESR based on known system limitations and planning or operational studies, including studies performed in accordance with Planning Guide Section 5.4.2, Submission of Interconnection Agreement and TSP and/or DSP Studies and Technical Requirements. Temporary limitations, such as may occur during maintenance outage conditions, are not required to be reported on Section 23, Form R.(2) If a DSP at any time after the interconnection of a DGR or DESR determines that any circuit to which the DGR or DESR is interconnected will be subject to Load shed during any of the Load shedding events listed in paragraph (1)(a) above, or that a DGR or DESR will need to be electrically relocated to a circuit that will be subject to Load shed during these Load shedding events:(a) The DSP shall promptly notify ERCOT and the designated contact for the DGR or DESR;(b) The Resource Entity for the DGR or DESR shall promptly submit an updated Section 23, Form R, to ERCOT and shall make a corresponding update to its Resource Registration data; and(c) The Ancillary Service qualification limitations in paragraph (1)(c) above will apply to the DGR or DESR.(3) If a DGR or DESR is interconnected to a circuit that is subject to Load shed and then either is relocated to a different circuit that is not subject to Load shed during any of the Load shed events listed in paragraph (1)(a) above or receives notification from the DSP that the DGR or DESR is no longer subject to Load shed during any of these events, the Resource Entity for the DGR or DESR shall submit an updated Section 23, Form R, to ERCOT and shall make a corresponding update to its Resource Registration data. |

(2) For a proposed conversion of an existing Settlement Only Distribution Generator (SODG) to a DGR or DESR, the interconnecting DSP will evaluate the proposed conversion and will determine whether it is electrically and operationally feasible. If the interconnecting DSP determines that the conversion is not electrically or operationally feasible, the DSP may disallow the conversion.

|  |
| --- |
| ***[NPRR995 and NPRR1171: Replace applicable portions of paragraph (2) above with the following upon system implementation:]***(2) For a proposed conversion of an existing Settlement Only Distribution Generator (SODG) to a DGR or for a proposed conversion of an existing Settlement Only Distribution Energy Storage System (SODESS) to a DESR, the Resource Entity will follow the generation interconnection process outlined in Planning Guide Section 5, Generator Interconnection or Modification. |

(3) The Resource Node for a DGR or DESR shall be fixed at a single Electrical Bus in the ERCOT Network Operations Model.

(a) If a DSP determines that a topology change has altered, or is expected to alter, the electrical path connecting the DGR or DESR to the ERCOT Transmission Grid for a period longer than 60 days:

(i) The DSP shall promptly notify the interconnecting Transmission Service Provider (TSP) and the designated contact for the DGR or DESR, and the interconnecting TSP shall notify ERCOT; and

(ii) The Resource Entity shall submit a change request to ERCOT via the Resource Registration process.

3.16 Standards for Determining Ancillary Service Quantities

(1) ERCOT shall comply with the requirements for determining Ancillary Service quantities as specified in these Protocols and the ERCOT Operating Guides.

(2) ERCOT shall, at least annually, determine with supporting data, the methodology for determining the quantity requirements for each Ancillary Service needed for reliability, including:

(a) The percentage or MW limit of ERCOT Contingency Reserve Service (ECRS) allowed from Load Resources providing ECRS;

(b) The maximum amount (MW) of Responsive Reserve (RRS) that can be provided by Resources capable of Fast Frequency Response (FFR);

|  |
| --- |
| ***[NPRR1128: Replace item (b) above with the following upon system implementation:]***(b) The maximum amount (MW) of Responsive Reserve (RRS) that can be provided by Resources capable of Fast Frequency Response (FFR) and specify the Operating Hours where prioritizing procurement of FFR up to the maximum FFR amount is beneficial in improving reliability; |

(c) The maximum amount (MW) of Regulation Up Service (Reg-Up) that can be provided by Resources providing Fast Responding Regulation Up Service (FRRS-Up); and

(d) The maximum amount (MW) of Regulation Down Service (Reg-Down) that can be provided by Resources providing Fast Responding Regulation Down Service (FRRS-Down).

|  |
| --- |
| ***[NPRR1007: Delete items (c) and (d) above upon system implementation of the Real-Time Co-Optimization (RTC) project and renumber accordingly.]*** |

(e) The minimum capacity required from Resources providing RRS using Primary Frequency Response shall not be less than 1,150 MW.

(3) The ERCOT Board shall review and approve ERCOT's methodology for determining the minimum Ancillary Service requirements, any minimum capacity required from Security-Constrained Economic Dispatch (SCED) dispatchable Resources to provide Non-Spinning Reserve (Non-Spin), the minimum capacity required from Resources providing Primary Frequency Response to provide RRS, the maximum amount of RRS that can be provided by Resources capable of FFR, and the maximum amount of Reg-Up and Reg-Down that can be provided by Resources providing FRRS-Up and FRRS-Down.

|  |
| --- |
| ***[NPRR1007, NPRR1128, NPRR1171, and NPRR1183: Replace applicable portions of paragraph (3) above with the following upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1007; or upon system implementation for NPRR1128, NPRR1171, or NPRR1183:]***(3) The ERCOT Board shall review and approve ERCOT's methodology for determining the minimum Ancillary Service requirements, any minimum capacity required from Security-Constrained Economic Dispatch (SCED) dispatchable Resources to provide Non-Spinning Reserve (Non-Spin), the maximum amount of Non-Spin that can be provided by Distribution Generation Resources (DGRs) and Distribution Energy Storage Resources (DESRs) that are interconnected to a distribution circuit that is subject to Load shed, the maximum amount of ECRS that can be provided by DGRs and DESRs that are interconnected to a distribution circuit that is subject to Load shed, the minimum capacity required from Resources providing Primary Frequency Response to provide RRS, the maximum amount of RRS that can be provided by Resources capable of FFR, and the Operating Hours where prioritizing procurement of FFR up to the maximum FFR amount is beneficial in improving reliability. ERCOT shall post on the ERCOT website the ERCOT Methodologies for Determining Minimum Ancillary Service Requirements approved by the ERCOT Board. |

(4) If ERCOT determines a need for additional Ancillary Service Resources under these Protocols or the ERCOT Operating Guides, after an Ancillary Service Plan for a specified day has been posted, ERCOT shall inform the market by posting notice on the ERCOT website, of ERCOT’s intent to procure additional Ancillary Service Resources under Section 6.4.9.2, Supplemental Ancillary Services Market. ERCOT shall post the reliability reason for the increase in service requirements.

|  |
| --- |
| ***[NPRR1007: Delete paragraph (4) above upon system implementation of the Real-Time Co-Optimization (RTC) project and renumber accordingly.]*** |

(5) Monthly, ERCOT shall determine and post on the Market Information System (MIS) Secure Area a minimum capacity required from Resources providing RRS using Primary Frequency Response. The remaining capacity required for RRS may be supplied by all Resources qualified to provide RRS, provided that RRS from Load Resources on high-set under-frequency relays and Resources providing FFR shall be limited to 60% of the total ERCOT RRS requirement. ERCOT may increase the minimum capacity required from Resources providing RRS using Primary Frequency Response if it believes that the current posted quantity will have a negative impact on reliability or if it would require additional Regulation Service to be deployed.

|  |
| --- |
| ***[NPRR1128 and NPRR1183: Replace applicable portions of paragraph (5) above with the following upon system implementation:]***(5) Monthly, ERCOT shall determine and post on the ERCOT website a minimum capacity required from Resources providing RRS using Primary Frequency Response. The remaining capacity required for RRS may be supplied by all Resources qualified to provide RRS, provided that RRS from Load Resources on high-set under-frequency relays and Resources providing FFR shall be limited to 60% of the total ERCOT RRS requirement. ERCOT may increase the minimum capacity required from Resources providing RRS using Primary Frequency Response if it believes that the current posted quantity will have a negative impact on reliability or if it would require additional Regulation Service to be deployed. ERCOT may add more Operating Hours where prioritizing procurement of FFR up to the maximum FFR amount is beneficial in improving reliability if it believes that these additional hours are vulnerable to low system inertia. ERCOT will issue an operations notice when such a change is made. |

(6) The amount of RRS that a Qualified Scheduling Entity (QSE) can self-arrange using a Load Resource excluding Controllable Load Resources and Resources providing FFR is limited to its Load Ratio Share (LRS) of the capacity allowed to be provided by Resources not providing RRS using Primary Frequency Response established in paragraph (5) above, provided that RRS from these Resources shall be limited to 60% of the total ERCOT RRS requirement.

(7) However, a QSE may offer more of the Load Resource above the percentage limit established by ERCOT for sale of RRS to other Market Participants. The total amount of RRS using the Load Resource procured by ERCOT is also limited to the capacity established in paragraph (5) above, up to the lesser of the 60% limit or the limit established by ERCOT in paragraph (5) above.

(8) Monthly, ERCOT shall determine and post on the MIS Secure Area a minimum capacity required from Resources providing ECRS. The amount of Load Resources excluding Controllable Load Resources that may or may not be on high-set under-frequency relays providing ECRS is limited to 50% of the total ERCOT ECRS requirement.

|  |
| --- |
| ***[NPRR1183: Replace paragraph (8) above with the following upon system implementation:]***(8) Monthly, ERCOT shall determine and post on the ERCOT website a minimum capacity required from Resources providing ECRS. The amount of Load Resources excluding Controllable Load Resources that may or may not be on high-set under-frequency relays providing ECRS is limited to 50% of the total ERCOT ECRS requirement. |

(9) The amount of ECRS that a QSE can self-arrange using a Load Resource excluding Controllable Load Resources is limited to the lower of:

(a) 50% of its ECRS Ancillary Service Obligation; or

(b) A reduced percentage of its ECRS Ancillary Service Obligation based on the limit established by ERCOT in paragraph (8) above.

(10) A QSE may offer more of the Load Resource above the percentage limit established by ERCOT for sale of ECRS to other Market Participants. The total amount of ECRS using the Load Resource excluding Controllable Load Resources procured by ERCOT is also limited to the lesser of the 50% limit or the limit established by ERCOT in paragraph (9) above.

(11) The maximum MW amount of capacity from Resources providing FRRS-Up is limited to 65 MW. ERCOT may reduce this limit if it believes that this amount will have a negative impact on reliability or if this limit would require additional Regulation Service to be deployed.

(12) The maximum MW amount of capacity from Resources providing FRRS-Down is limited to 35 MW. ERCOT may reduce this limit if it believes that this amount will have a negative impact on reliability or if this limit would require additional Regulation Service to be deployed.

(13) Resources can only provide FRRS-Up or FRRS-Down if awarded Regulation Service in the Day-Ahead Market (DAM) for that particular Resource, up to the awarded quantity.

|  |
| --- |
| ***[NPRR1007: Delete paragraphs (11)-(13) above upon system implementation of the Real-Time Co-Optimization (RTC) project.]*** |