|  |  |  |  |
| --- | --- | --- | --- |
| NPRR Number | [1101](http://www.ercot.com/mktrules/issues/NPRR1101) | NPRR Title | Create Non-Spin Deployment Groups made up of Generation Resources Providing Off-Line Non-Spinning Reserve and Load Resources that are Not Controllable Load Resources Providing Non-Spinning Reserve |
| Date of Decision | | November 29, 2021 | |
| Action | | Recommended Approval | |
| Timeline | | Urgent – to allow ERCOT to consider the scope of this Nodal Protocol Revision Request (NPRR) as part of the project to implement NPRR1093, Load Resource Participation in Non-Spinning Reserve. | |
| Proposed Effective Date | | Upon system implementation | |
| Priority and Rank Assigned | | Priority – 2022; Rank – 3195 | |
| Nodal Protocol Sections Requiring Revision | | 6.5.7.6.2.3, Non-Spinning Reserve Service Deployment | |
| Related Documents Requiring Revision/Related Revision Requests | | Other Binding Document Revision Request (OBDRR) 035, Related to NPRR1101, Create Non-Spin Deployment Groups made up of Generation Resources Providing Off-Line Non-Spinning Reserve and Load Resources that are Not Controllable Load Resources Providing Non-Spinning Reserve | |
| Revision Description | | This NPRR modifies the deployment grouping requirements for Load Resources that are not Controllable Load Resources (“NCLRs”) providing Non-Spinning Reserve (Non-Spin) to include Generation Resources providing Off-Line Non-Spin. This deployment grouping process only addresses NCLR and Off-Line Generation Resources. Other Resources providing Non-Spin are not addressed in the proposed revisions. | |
| 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 | | This NPRR modifies the grouping requirements for NCLRs providing Non-Spin to include Generation Resources providing Off-Line Non-Spin. NCLRs providing Non-Spin and Generation Resources providing Off-Line Non-Spin will be assigned to a deployment group based on random selection. This NPRR and associated OBDRR035 will facilitate Non-Spin deployment for non-local issues in groups of roughly 500 MW which may include both NCLRs and Generation Resources.  ERCOT is filing this NPRR and OBDRR035 in response to stakeholder feedback received regarding NPRR1093 and after the Non-Spinning Reserve (Non-Spin) Service Workshop held by TAC on October 19, 2021. | |
| Credit Work Group Review | | ERCOT Credit Staff and the Credit Work Group (Credit WG) have reviewed NPRR1101 and do not believe that it requires changes to credit monitoring activity or the calculation of liability. | |
| PRS Decision | | On 11/10/21, PRS voted via roll call to grant NPRR1101 Urgent status. There was one abstention from the Independent Generator (Luminant) Market Segment. PRS then voted via roll call to recommend approval of NPRR1101 as submitted and to forward to TAC NPRR1101 and the Impact Analysis with a recommended priority of 2022 and rank of 3195. There was one abstention from the Consumer (Occidental Chemical) Market Segment. All Market Segments participated both votes. | |
| Summary of PRS Discussion | | On 11/10/21, ERCOT Staff provided an overview of NPRR1101 and the request for Urgent status. | |
| TAC Decision | | On 11/29/21, TAC unanimously voted via roll call to recommend approval of NPRR1101 as recommended by PRS in the 11/10/21 PRS Report as amended by the 11/19/21 ERCOT comments. All Market Segments participated in the vote. | |
| Summary of TAC Discussion | | On 11/29/21, TAC reviewed the ERCOT Opinion, ERCOT Market Impact Statement, and 11/19/21 ERCOT comments for NPRR1101. | |
| ERCOT Opinion | | ERCOT supports approval of NPRR1101. | |
| ERCOT Market Impact Statement | | ERCOT Staff has reviewed NPRR1101 and believes the market impact for NPRR1101 will improve ERCOT’s ability to deploy Non-Spin in a technology agnostic manner, improve offer liquidity, and will allow ERCOT to procure the required quantities of Non-Spin more competitively. | |

|  |  |
| --- | --- |
| Sponsor | |
| Name | Sandip Sharma |
| E-mail Address | [sandip.sharma@ercot.com](mailto:sandip.sharma@ercot.com) |
| Company | ERCOT |
| Phone Number | 512-248-4298 |
| Cell Number |  |
| Market Segment | Not applicable |

|  |  |
| --- | --- |
| **Market Rules Staff Contact** | |
| **Name** | Cory Phillips |
| **E-Mail Address** | [cory.phillips@ercot.com](mailto:cory.phillips@ercot.com) |
| **Phone Number** | 512-248-6464 |

|  |  |
| --- | --- |
| **Comments Received** | |
| Comment Author | **Comment Summary** |
| ERCOT 111921 | Aligned the proposed revisions with baseline updates to Section 6.5.7.6.2.3 from the incorporation of NPRR1093 into the November 1, 2021 Protocols |

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

Please note that the following NPRR(s) also propose revisions to Section 6.5.7.6.2.3:

* NPRR1091, Changes to Address Market Impacts of Additional Non-Spin Procurement

Please note the baseline Protocol language in Section 6.5.7.6.2.3 has been updated to reflect the incorporation of the following NPRR(s) into the Protocols:

* NPRR1093 (incorporated 11/1/21)

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

6.5.7.6.2.3 Non-Spinning Reserve Service Deployment

(1) ERCOT shall deploy Non-Spin Service by operator Dispatch Instruction for the portion of On-Line Generation Resources that is only available through power augmentation and participating as Off-Line Non-Spin, Off-Line Generation Resources and Load Resources. ERCOT shall develop a procedure approved by TAC to deploy Resources providing Non-Spin Service. ERCOT Operators shall implement the deployment procedure when a specified threshold(s) in MW of capability available to SCED to increase generation is reached. ERCOT Operators may implement the deployment procedure to recover deployed RRS or when other Emergency Conditions exist. The deployment of Non-Spin must always be 100% of that scheduled on an individual Resource.

(2) Once Non-Spin capacity from Off-Line Generation Resources providing Non-Spin is deployed and the Generation Resources are On-Line, ERCOT shall use SCED to determine the amount of energy to be dispatched from those Resources.

(3) Off-Line Generation Resources providing Non-Spin (OFFNS Resource Status) are required to provide an Energy Offer Curve for use by SCED.

(4) Non-Spin can be provided by Controllable Load Resources that are SCED qualified or by Load Resources that are not Controllable Load Resources but do not have an under-frequency relay or the under-frequency relay is not armed.

(a) A Controllable Load Resource providing Non-Spin shall have an RTM Energy Bid for SCED and shall be capable of being Dispatched to its Non-Spin Ancillary Service Resource Responsibility within 30 minutes of a deployment instruction for capacity, using the Resource’s Normal Ramp Rate curve. An Aggregate Load Resource must comply with all requirements in the document titled “Requirements for Aggregate Load Resource Participation in the ERCOT Markets.”

(b) A Load Resource that is not a Controllable Load Resource shall be capable of being Dispatched to its Non-Spin Ancillary Service Resource Responsibility within 30 minutes of a deployment instruction for capacity. Following a deployment instruction, the QSE shall reduce the Non-Spin Ancillary Service Schedule by the amount of the deployment.

(5) ERCOT shall post a list of Off-Line Generation Resources and Load Resources that are not Controllable Load Resources on the MIS Certified Area immediately following the DRUC for each QSE with a Load Resource Non-Spin award. The list will be broken into groups of approximately 500 MW increments. ERCOT shall develop a process for determining which individual Resource to place in each group based on a random sampling of individual Load Resources that are not Controllable Load Resources awarded Non-Spin and Generation Resources carrying Off-Line Non-Spin. At ERCOT’s discretion, ERCOT may deploy one or all groups as specified in the Other Binding Document titled “Non-Spinning Reserve Deployment and Recall Procedure.”

(a) On-Line Generation Resources participating in Off-Line Non-Spin using power augmentation will be randomly distributed in Real-Time among the groups created in the Day-Ahead for the purpose of manual deployment of Non-Spin by operator Dispatch Instruction.

(b) Any Generation Resource providing Off-Line Non-Spin that did not previously receive group assignment will be automatically considered in Group 1. Any Load Resource that is not a Controllable Load Resource providing Non-Spin in Real-Time that did not previously receive group assignment will be automatically considered in Group 1. ERCOT may assign a Generation Resource providing Off-Line Non-Spin or a Load Resource that is not a Controllable Load Resource to another group if that Resource did not previously receive group assignment and, in ERCOT’s reasonable judgment, Group 1 is too large.

|  |
| --- |
| [NPRR1093: Replace paragraphs (4) and (5) above with the following upon system implementation:]  (4) Non-Spin can be provided by Controllable Load Resources that are SCED qualified or by Load Resources that are not Controllable Load Resources but do not have an under-frequency relay or the under-frequency relay is not armed.  (a) A Controllable Load Resource providing Non-Spin shall have an RTM Energy Bid for SCED and shall be capable of being Dispatched to its Non-Spin Ancillary Service Resource Responsibility within 30 minutes of a deployment instruction for capacity, using the Resource’s Normal Ramp Rate curve. An Aggregate Load Resource must comply with all requirements in the document titled “Requirements for Aggregate Load Resource Participation in the ERCOT Markets.”  (b) A Load Resource that is not a Controllable Load Resources shall be capable of being Dispatched to its Non-Spin Ancillary Service Resource Responsibility within 30 minutes of a deployment instruction for capacity. Following a deployment instruction, the QSE shall reduce the Non-Spin Ancillary Service Schedule by the amount of the deployment.  (5) ERCOT shall post a list of Off-Line Generation Resources and Load Resources that are not Controllable Load Resources on the MIS Certified Area immediately following the DRUC for each QSE with a Load Resource Non-Spin award. The list will be broken into groups of approximately 500 MW increments. ERCOT shall develop a process for determining which individual Resource to place in each group based on a random sampling of individual Load Resources that are not Controllable Load Resources awarded Non-Spin and Generation Resources carrying Off-Line Non-Spin. At ERCOT’s discretion, ERCOT may deploy all groups as specified in the Other Binding Document titled “Non-Spinning Reserve Deployment and Recall Procedure.”  (a) On-Line Generation Resources participating in Off-Line Non-Spin using power augmentation will be randomly distributed in Real-Time among the groups created in the Day-Ahead for the purpose of manual deployment of Non-Spin by operator Dispatch Instruction.  (b) Any Generation Resource providing Off-Line Non-Spin that did not previously receive group assignment will be automatically considered in Group 1. Any Load Resource that is not a Controllable Load Resource providing Non-Spin in Real-Time that did not previously receive group assignment will be automatically considered in Group 1. ERCOT may assign a Generation Resource providing Off-Line Non-Spin or a Load Resource that is not a Controllable Load Resource to another group if that Resource did not previously receive group assignment and, in ERCOT’s reasonable judgment, Group 1 is too large. |

(6) Subject to the exceptions described in paragraphs (a) and (b) below, On-Line Generation Resources that are assigned Non-Spin Ancillary Service Resource Responsibility during an Operating Hour shall always be deployed in that Operating Hour. This deployment shall be considered as a standing Protocol-directed Non-Spin deployment Dispatch Instruction. Within the 30-second window prior to the top-of-hour clock interval described in paragraph (2) of Section 6.3.2, Activities for Real-Time Operations, the QSE shall respond to the standing Non-Spin deployment Dispatch Instruction for those Generation Resources assigned Non-Spin Ancillary Service Resource Responsibility effective at the top-of-hour by adjusting the Non-Spin Ancillary Service Schedule telemetry. The QSE shall set the Non-Spin Ancillary Service Schedule telemetry equal to the portion of Non-Spin being provided from power augmentation if the portion being provided from power augmentation is participating as Off-Line Non-Spin, otherwise it shall be set to 0. As described in Section 6.5.7.2, Resource Limit Calculator, ERCOT shall adjust the HASL and LASL based on the QSE’s telemetered Non-Spin Ancillary Service Schedule to account for such deployment and to make the energy from the full amount of the Non-Spin Ancillary Service Resource Responsibility available to SCED. A Non-Spin deployment Dispatch Instruction from ERCOT is not required and these Generation Resources must be able to Dispatch their Non-Spin Ancillary Service Resource Responsibility in response to a SCED Base Point deployment instruction. The provisions of this paragraph (5) do not apply to:

(a) QSGRs assigned Off-Line Non-Spin Ancillary Service Resource Responsibility and provided to SCED for deployment, which must follow the provisions of Section 3.8.3, Quick Start Generation Resources; or

(b) The portion of On-Line Generation Resources that is only available through power augmentation if participating as Off-Line Non-Spin.

(7) Off-Line Generation Resources providing Non-Spin, while Off-Line and before the receipt of any deployment instruction, shall be capable of being dispatched to their Non-Spin Resource Responsibility within 30 minutes of a deployment instruction. Following a deployment instruction, the QSE shall reduce the Non-Spin Ancillary Service Schedule by the amount of the deployment. An Off-Line Generation Resource providing Non-Spin must also be brought On-Line with an Energy Offer Curve at an output level greater than or equal to P1 multiplied by LSL where P1 is defined in the “ERCOT and QSE Operations Business Practices During the Operating Hour.” These actions must be done within a time frame that would allow SCED to fully dispatch the Resource’s Non-Spin Resource Responsibility within the 30-minute period using the Resource’s Normal Ramp Rate curve. The Resource Status indicating that a Generation Resource has come On-Line with an Energy Offer Curve is ON as described in paragraph (5)(b)(i) of Section 3.9.1, Current Operating Plan (COP) Criteria.

(8) For DSRs providing Non-Spin, on deployment of Non-Spin, the DSR’s QSE shall adjust its Resource Output Schedule to reflect the amount of deployment. For non-DSRs with Output Schedules providing Non-Spin, on deployment of Non-Spin, ERCOT shall adjust the Resource Output Schedule for the remainder of the Operating Period to reflect the amount of deployment. ERCOT shall notify the QSEs representing the non-DSR of the adjustment through the MIS Certified Area.

(9) For On-Line Generation Resources providing Non-Spin, Base Points include Non-Spin energy as well as any other energy dispatched as a result of SCED. These Resources’ Non-Spin Ancillary Service Resource Responsibility and Normal Ramp Rate curve should allow SCED to fully Dispatch the Resource’s Non-Spin Resource Responsibility within the 30-minute time frame according to the Resources’ Normal Ramp Rate curve. For the portion of the Non-Spin Ancillary Service Resource Responsibility provided from power augmentation participating as Off-Line, SCED should be able to be dispatch it within 30 minutes of the Non-Spin deployment instruction.

(10) Each QSE providing Non-Spin from a Resource shall inform ERCOT of the Non-Spin Resource availability using the Resource Status and Non-Spin Ancillary Service Resource Responsibility indications for the Operating Hour using telemetry and shall use the COP to inform ERCOT of Non-Spin Resource Status and Non-Spin Ancillary Service Resource Responsibility for hours in the Adjustment Period through the end of the Operating Day.

(11) ERCOT may deploy Non-Spin at any time in a Settlement Interval.

(12) ERCOT’s Non-Spin deployment Dispatch Instructions must include:

(a) The Resource name;

(b) A MW level of capacity deployment for Generation Resources with Energy Offer Curve, a MW level of energy for Generation Resources with Output Schedules, and a Dispatch Instruction for Load Resources equal to their awarded Non-Spin Ancillary Service Resource Responsibility; and

(c) The anticipated duration of deployment.

(13) ERCOT shall provide a signal via ICCP to the QSE of a deployed Generation or Load Resource indicating that its Non-Spin capacity has been deployed.

(14) ERCOT shall, as part of its TAC-approved Non-Spin deployment procedure, provide for the recall of Non-Spin energy including descriptions of changes to Output Schedules and release of energy obligations from On-Line Resources with Output Schedules and from On-Line Resources that were previously Off-Line Resources providing Non-Spin capacity.

(15) ERCOT shall provide a notification to all QSEs via the ERCOT website when any Non-Spin capacity is deployed on the ERCOT System showing the time, MW quantity and the anticipated duration of the deployment.

|  |
| --- |
| [NPRR863, NPRR1000, and NPRR1010: Replace applicable portions of Section 6.5.7.6.2.3 above with the following upon system implementation for NPRR863 or NPRR1000; or upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1010:]  **6.5.7.6.2.3 Non-Spinning Reserve Service Deployment**  (1) ERCOT shall deploy Non-Spin Service by operator Dispatch Instruction for the portion of On-Line Generation Resources that is only available through power augmentation and participating as Off-Line Non-Spin and Off-Line Generation Resources. ERCOT shall develop a procedure approved by TAC to deploy Resources providing Non-Spin Service. ERCOT Operators shall implement the deployment procedure when a specified threshold(s) in MW of capability available to SCED to increase generation is reached. ERCOT Operators may implement the deployment procedure to recover deployed RRS, ECRS, or when other Emergency Conditions exist. The deployment of Non-Spin must always be 100% of that awarded on an individual Resource.  (2) Once Non-Spin capacity from Off-Line Generation Resources awarded Non-Spin is deployed and the Generation Resources are On-Line, ERCOT shall use SCED to determine the amount of energy to be dispatched from those Resources.  (3) Off-Line Generation Resources offering to provide Non-Spin must provide an Energy Offer Curve for use by SCED.  (4) Non-Spin can be provided by Controllable Load Resources that are SCED qualified or by Load Resources that are not Controllable Load Resources but do not have an under-frequency relay or the under-frequency relay is unarmed.  (a) Controllable Load Resources awarded Non-Spin shall have an RTM Energy Bid for SCED and shall be capable of being Dispatched to its Non-Spin Ancillary Service award within 30 minutes, using the Resource’s Normal Ramp Rate curve. An Aggregate Load Resource must comply with all requirements in the document titled “Requirements for Aggregate Load Resource Participation in the ERCOT Markets.”  (b) A Load Resource that is not a Controllable Load Resource shall be capable of being Dispatched to its Non-Spin Ancillary Service Resource Responsibility within 30 minutes of a deployment instruction for capacity.  (5) Off-Line Generation Resources awarded Non-Spin, while Off-Line and before the receipt of any deployment instruction, shall be capable of being dispatched to their Non-Spin award within 30 minutes of a Dispatch Instruction. On-Line Generation Resources awarded Non-Spin on the power augmentation capacity shall be capable of being dispatched to their Non-Spin award within 30 minutes of a Dispatch Instruction.  (6) ERCOT may deploy Non-Spin at any time in a Settlement Interval.  (7) ERCOT shall develop a process to place Off-Line Generation Resources and Load Resources that are not Controllable Load Resources with Non-Spin award in a group based on a random sampling for the purpose of deploying these Resources manually. At ERCOT’s discretion, ERCOT may deploy all groups as specified in the Other Binding Document titled “Non-Spinning Reserve Deployment and Recall Procedure.”  (a) On-Line Generation Resources participating in Off-Line Non-Spin using power augmentation will be randomly distributed in Real-Time among the groups created in the Day-Ahead for the purpose of manual deployment of Non-Spin by operator Dispatch Instruction.  (b) Any Generation Resource providing Off-Line Non-Spin that did not previously receive group assignment will be automatically considered in Group 1. Any Load Resource that is not a Controllable Load Resource providing Non-Spin in Real-Time that did not previously receive group assignment will be automatically considered in Group 1. ERCOT may assign a Generation Resource providing Off-Line Non-Spin or a Load Resource that is not a Controllable Load Resource to another group if that Resource did not previously receive group assignment and, in ERCOT’s reasonable judgment, Group 1 is too large.  (8) ERCOT’s Non-Spin deployment Dispatch Instructions must include:  (a) The Resource name;  (b) A MW level of capacity deployment for Generation Resources with Energy Offer Curve, a MW level of energy for Generation Resources with Output Schedules, and a Dispatch Instruction for Load Resources equal to their awarded Non-Spin Ancillary Service amount; and  (c) The anticipated duration of deployment.  (9) ERCOT shall provide a signal via ICCP to the QSE of a deployed Generation or Load Resource indicating that its Non-Spin capacity has been deployed.  (10) ERCOT shall, as part of its TAC-approved Non-Spin deployment procedure, provide for the recall of Non-Spin from On-Line Resources that were previously Off-Line Resources providing Non-Spin capacity and from On-Line Resources providing Non-Spin through power augmentation.  (11) ERCOT shall provide a notification to all QSEs via the ERCOT website when any Non-Spin capacity is deployed on the ERCOT System showing the time, MW quantity and the anticipated duration of the deployment. |