|  |  |  |  |
| --- | --- | --- | --- |
| NOGRR Number | [272](https://www.ercot.com/mktrules/issues/NOGRR272#summary) | NOGRR Title | Advanced Grid Support Requirements for Inverter-Based ESRs |

|  |  |
| --- | --- |
| Date | August 1, 2025 |
|  |  |
| Submitter’s Information | |
| Name | Michael Ratliff |
| E-mail Address | [mratliff@spearmintenergy.com](mailto:mratliff@spearmintenergy.com) |
| Company | Spearmint Energy |
| Phone Number | 812-322-4164 |
| Cell Number |  |
| Market Segment | Independent Generator |

|  |
| --- |
| Comments |

Spearmint Energy appreciates ERCOT’s continued efforts to evolve the grid forming (“GFM”) and advanced grid support (“AGS”) framework and supports the broader goals of enhancing system reliability and Inverter-Based Resource (IBR) performance. However, we respectfully submit the following comments on Nodal Operating Guide Revision Request (NOGRR) 272, which we believe merit consideration to ensure the proposed requirements are technically feasible and do not unintentionally inhibit resource optimization or interoperability.

The concerns outlined below are not exhaustive but are meant to add to the comments submitted by other Market Participants, including [Plus Power](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ercot.com%2Ffiles%2Fdocs%2F2025%2F07%2F08%2F272NOGRR-14-Plus-Power-Comments-070825.docx&wdOrigin=BROWSELINK) and [HGP Storage.](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ercot.com%2Ffiles%2Fdocs%2F2025%2F07%2F10%2F272NOGRR-16-HGP-Storage-Comments-071025.docx&wdOrigin=BROWSELINK) The technical issues outlined below further demonstrate the technical flaws of NOGRR272 and the degree to which these requirements may harm battery operators and diminish the value Energy Storage Resources (ESRs) can deliver to the market. Based on the following comments, Spearmint Energy has provided additional proposed changes to the revisions [Joint Commenters](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ercot.com%2Ffiles%2Fdocs%2F2025%2F07%2F09%2F272NOGRR-15-Joint-Commenters-Comments-070925.docx&wdOrigin=BROWSELINK) submitted on July 9, 2025.

**First,** in reviewing [ERCOT’s July 1, 2025 comments](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ercot.com%2Ffiles%2Fdocs%2F2025%2F07%2F01%2F272NOGRR-13-ERCOT-Comments-070125.docx&wdOrigin=BROWSELINK), we are concerned that the proposed requirement that “those portions of any subsequent ESR modifications that add MW capacity or make non-in-kind replacements of equipment” does not adequately distinguish between medium voltage and high voltage augmentation scenarios. In many cases, augmentation of newer AC Block systems will increase the MVA/MWac nameplate at the medium voltage level only, without altering the rating of the Main Power Transformer(s) (MPT(s)) or the high voltage substation equipment. As currently proposed by ERCOT, this expanded requirement could inadvertently apply AGS obligations to updates that have not materially changed an ESR’s high-voltage interconnection characteristics.

Additionally, the integration of new inverters with GFM capabilities into existing ESRs may introduce interoperability challenges between legacy and new units. These challenges could affect protection schemes and control settings, potentially compromising system stability. We recommend clarifying that the AGS requirement for “additional capacity” applies only when the nameplate MVA/MW is increased at the high voltage side of the project. This would preserve the intent of the rule while avoiding unintended technical complications.

**Second**, we believe the proposed requirement that ESRs provide GFM services whenever online, including during idle periods, could impair energy storage operational efficiency. The following sentence in ERCOT’s July 1, 2025 comments gives us pause:

“An ESR is always considered online unless on outage and accordingly must provide voltage support, primary frequency response, and AGS when online and within its inverter limit.”

We believe this language could lead to continuous discharge of the battery, even when the ESR is not actively participating in the market. This could undermine optimal dispatch strategies and reduce the economic efficiency of ESR operations. A similar issue was observed in PJM’s early implementation of Fast Frequency Response (FFR), where the signal was intended to be net energy neutral but in practice resulted in net energy withdrawal over time. We encourage ERCOT to consider mechanisms that ensure GFM participation does not unintentionally erode ESR State of Charge (SOC) or economic performance, particularly during idle periods. Until ERCOT resolves this and other operational and reliability issues that stakeholders have identified in their comments on NOGRR272, Spearmint Energy agrees with Joint Commenters’ proposal to delete ERCOT’s proposed requirement that an ESR provide AGS when operating within the inverter’s current limit.

We appreciate ERCOT’s engagement on these issues and welcome the opportunity to collaborate further on market concepts that leverage IBRs to enhance grid reliability.

|  |
| --- |
| Revised Cover Page Language |

None

|  |
| --- |
| Revised Proposed Guide Language |

**2.14 Advanced Grid Support Requirements for Inverter-Based Resources (IBRs)**

(1) An ESR shall meet the modeling requirements described in Planning Guide Section 6.2, Dynamics Model Development, to demonstrate its capability to maintain an internal voltage phasor in the sub-transient-to-transient timeframe and control the voltage phasor to maintain synchronism with the ERCOT Transmission Grid.

(2) An ESR interconnected to the ERCOT Transmission Grid pursuant to a Standard Generation Interconnection Agreement (SGIA) executed before April 1, 2026, is not required to comply with the requirements of this Section. For ESRs that interconnected to the ERCOT Transmission Grid pursuant to an SGIA executed before April 1, 2026 and undergo subsequent augmentation, the requirements of this Section will apply to augmented portions when the nameplate MVA/MW of that portion of the ESR is increased at the high voltage side of the project, or non-in-kind replacements of equipment are made to that portion of the ESR at the high voltage side of the project.