



Implementation Overview & Lessons Learned

Experience and Insights

2025 NOGRR245

Inverter-Based Resource RFI

FRT Requirements

Applicability



FRT Requirement

Applies to all IBRs, TIWGR, T2WGR, irrespective of when the SGIA was executed.



Extensions and Exemptions

IBRs, TIWGR, T2WGR, with SGIA executed before August 1, 2024, can request extension/exemption if it cannot meet the prescribed FRT requirements by 31st December 2025



Min Requirements

Such entities must comply with FRT requirements as on May 1, 2024, until maximization.

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IEEE 2800–2022

Applicability



IEEE 2800–2022 Applicability

IBRs with SGIA executed on or after August 1 2024

IBRs that implements a GIM on or after August 1 2024.

IBRs with SGIA prior to August 1 2024, and implements a modification to meet legacy VRT requirement after January 1 2028



IEEE 2800–2022 Exemptions

IBRs with SGIA executed before August 1 2024 and implements a modification to meet Legacy VRT requirements before January 1 2028.

The above IBR must maximize its capabilities to come as close to IEEE 2800–2022 requirements as possible

TIWGR, T2WGR are not required to meet IEEE 2800–2022

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VRT Requirements Applicability



Preferred VRT Applicability

IBRs with SGIA executed on or after August 1 2024

IBRs that implements a GIM after August 1 2024, unless the modification is implemented before Jan 1 2028.



Legacy VRT Applicability

IBRs, TIWGR, T2WGR that are not subject to Preferred VRT requirements (SGIA prior to August 1 2024 and a GIM that is implemented before Jan 1 2028)

Overview: Key Insights Gained

Bottomline :

- Do not limit yourself to documents and provided values
- Detailed modeling and simulations expertise is needed to convert OEM parameters to plant-level parameters.

SGIA Obligations

Staggered performance floor with minimum obligations based on SGIA.

Active Power Injection

Active power reduction permitted only when primary energy resource unavailable or voltage support prioritized

Provisions

Provisions for extensions and exemptions

Grid Security

Grid security prioritized by maximizing IBR ride-through range & minimizing IBRs disconnections.

OEM Involvement

OEM involvement crucial for submittals & final implementation.

VRT Compliance Tiers

Three VRT compliance tiers applicable based on SGIA, upward maximization mandatory.

Unit Terminal to POI Translation

Detailed PSCAD Simulations needed



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RFI Submittal & Implementation Challenges

- Plant \neq Inverter – overall capability limited by “weakest” element (e.g., breakers, arrestors)
- Data gaps – Difficult to report capabilities before full plant build
- OEM data consolidation – Challenging with multiple suppliers involved
- Stage mismatch – QSA protection settings often out of sync with balance of plant assumptions and field settings.
- Early planning is critical.

Areas Requiring Clarity

DocuSign Review Process:

DocuSign Review Process: What review/validation steps does ERCOT follow after submission?

Incomplete Fields

How are unanswered/incorrect fields handled if based on SGIA the project does not require compliance for a particular section?

Unmet Maximization Claims

What's the process if a project declares maximization but cannot deliver it later

Post Submission Updates

Is there flexibility to revise submitted information as project details evolve?

Data vs. Reality:

What are the implications if submitted capabilities differ from actual field performance?

Extension to Exemption:

Is there a formal pathway to transition from an extension request to a full exemption?

Key Takeaways & Recommendations

Detailed engineering assessment is needed to decide how much you can “maximize”.

Resource Entities tend to stick to minimum requirements, rather than “maximization”

Ensure full-plant capability assessment, not just inverter specs – Engineering Analysis needed !

Ensure coordination with BOP studies, TRV, TOV, ensure Protection coordination of the plant.

Align study models & field implementations.

Start OEM coordination early to consolidate data/final implementation. Plan early & book their availability.

Recommended policy flexibility (extension-to-exemption flow)

A clear review/update mechanism post-DocuSign, post- 31st December, post-Jan 2028.



Got Questions? We're here to help.

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