



**TEXAS RE**

# **Update on NERC IBR- Related Activities**

**ERCOT IBRWG Meeting  
Mark Henry  
October 10, 2025**



# NERC Standards Development Update for FERC Order 901

**Milestone 2** – FERC approved PRC-029-1 on July 24, 2025, with an effective date of October 01, 2026, see [Docket RM25-3-000](#). NERC hosting a [webinar November 5](#) to discuss FERC directives in its approval, Order 909.

## Milestone 3 –

Project 2020-06 - Verification of Models and Data for Generators – posted for third round of comments September 29 – October 10.

- MOD-026 Verification of Dynamic Models & Data.

Project 2021-01 – System Model Validation with IBRs – anticipate final Ballot in early October (met quorum and approval in second ballot).

- MOD-033-3 Steady-State and Dynamic System Model Validation

Project 2022-02 - Uniform Modeling Framework for IBR – Final Ballots passed October 3, standards will be sent to NERC Board, then FERC.

- MOD-032-2 – Data for Power System Modeling and Analysis
- IRO-010-6 – Reliability Coordinator Data & Information Specification & Collection
- TOP-003-8 – Trans. Oper and Bal. Auth. Data & Information Specification & Collection Implementation



**Milestone 4** –SARS posted for comments August 28-October 10, drafting team nominations open until Sept. 15:  
 Project 2025-03 Operational Studies  
 Project 2025-04 901 Planning Studies



# FERC Order 909

- Approves PRC-024-4 (Frequency and Voltage Protection Settings for Synchronous Generators, Type 1/2 Wind Resources, and Synchronous Condensers), PRC-029-1 (Frequency and Voltage Ride-through Requirements for IBRs), and definition of “ride-through” to mean “the plant/facility remains connected and continues to operate through voltage or frequency system disturbances.”
- Directs NERC to determine through its standards process whether and how to account for:
  - equipment limitations of HVDC-connected IBRs with choppers (which may physically prevent them from fully complying with the ride-through provisions of the standard), and
  - long lead time between adopting IBR design specifications and placing IBR in service.
- Directs NERC to submit an informational filing to FERC in 18 months on reliability impacts of PRC-029-1, R4 exemption process (including number of exemptions requested, and number granted with reasons for exemptions).

**NERC hosts a [webinar November 5](#) to discuss FERC Order 909 directives**





## Other NERC Activity Related to IBRs

Standard Project [2022-04 EMT Modeling](#). Formal comment period and initial ballot, target posting deferred to October 1 – November 21 for FAC-002-5, Facility Interconnection Studies. Ballot pool forming until November 6

Standard Project [2023-01 EOP-004 IBR Event Reporting](#) has scheduled drafting team meetings in October and still plans to conduct a formal ballot and comment before end of 2025.

Texas RE is processing Category 2 GO and GOP registrations for IBR entities connected to transmission above 60kV and capacity above 20 MVA but not currently registered. Target effective date May 15, 2026.

[Talk with Texas RE: IBR Registration and Applicable Standards](#) webinar on Tuesday, October 14, 1:30-2:30 pm.



# NERC IRPS September 18<sup>th</sup> Meeting Topics

- **Technical Presentation - Grid Forming Technology and Potential SSO Benefits – Deepak Ramasubramanian**
- **Updates**
  - **Work Item #8 – Reliability Guideline: Recommended Approach to Interconnection Studies for BPS-Connected Inverter-Based Resources – Alex Shattuck**
  - **Work Item #24 – Reliability Guideline: IBR Commissioning Best Practices – Jason Baptiste**
  - **Work Item #27 – White Paper: Equipment Model Validation – Andy Hoke**
  - **NERC Order No. 901 Work Plan Activities – Josh Blume**
  - **EMTWG – Aung Thant White Paper Outline: EMT Methodologies to Evaluate IBR Ride-through Performance – Suman Debnath, Maysam Radvar**
- **Open Discussion:**
  - Potential work item for exploring need and recommendation of uniform IBR setting file (e.g., XYZ.IBR)**
  - Coordination of multiple plants in close proximity**

➤ **NEXT MEETING October 16, 12:00 Central (Webex)**  
**Meeting ID: 263 758 791 999    Passcode: U8GV6yJ2**

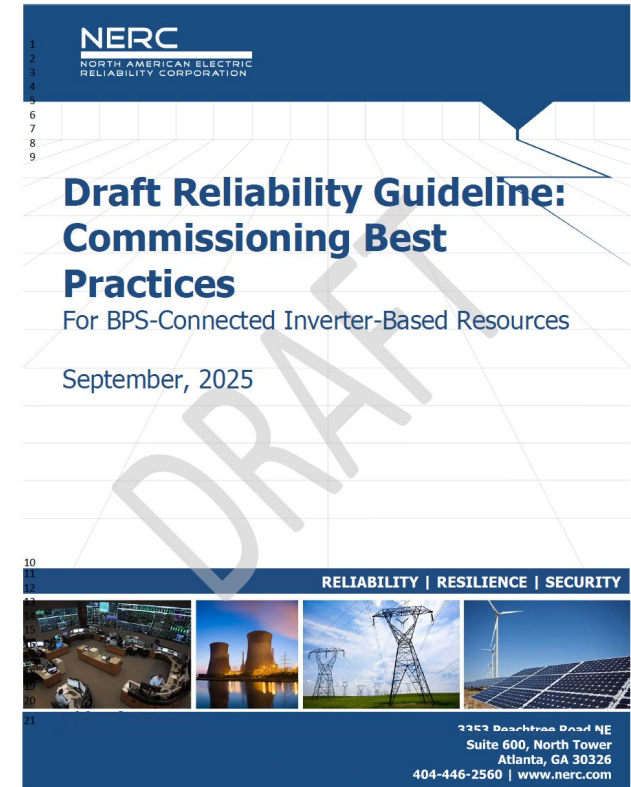


# IRPS IBR Commissioning Guideline

Posted for Public Comment September 22- November 6

## Recommendations

- **Model to Field Parameter Mapping, Verification, and Validation:** coordination and communication between OEMs, GO/GOPs and transmission planners and operators
- **Commissioning Test Procedures and Checklists:** for relay functional testing and coordination (PRC-027), SCADA and ancillary system commissioning, Site Acceptance Tests/data collection (MOD 25, 26, & 27)
- **Lessons Learned:** track and apply to future interconnections
- **Plant Monitoring and Continuous Performance Validation Systems:** to ensure compliance with PRC-028, PRC-030, and VAR-002



# Lesson Learned from NERC Events Analysis

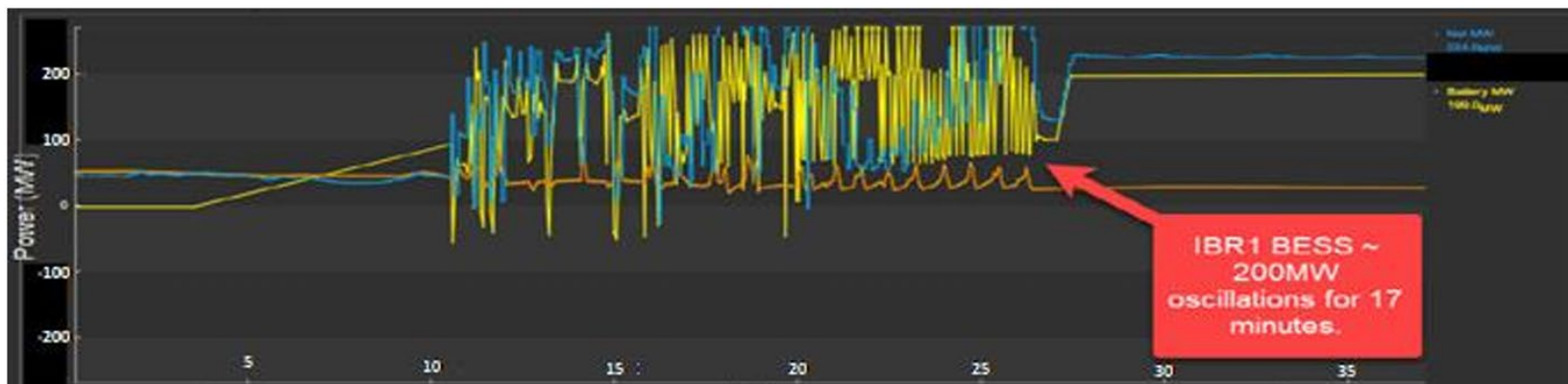
## LL20250901 IBR Controls Oscillation Events

- Hybrid battery energy storage systems (BESS) and photovoltaic (PV) sites experienced controller algorithm issues during commissioning, resulting in two inverter-based resource (IBR) site batteries creating large interconnection-wide “oscillations.”
- Occurred three times across two plants and led to instances of a utility disconnecting IBRs for reliability reasons.
  - Invalid data caused algorithm issues
  - Inverter start-up procedures led to inverters in off-line mode after
  - Incorrect handling of combined solar and BESS output
- **Corrective actions:**
  - Utility operators created operational procedures to address oscillations and are developing engineering processes to detect and notify appropriate personnel. More rigorous controller integration evaluations such as Hardware in the Loop testing for new interconnects with better IBR owner engagement and communication also are in the works.

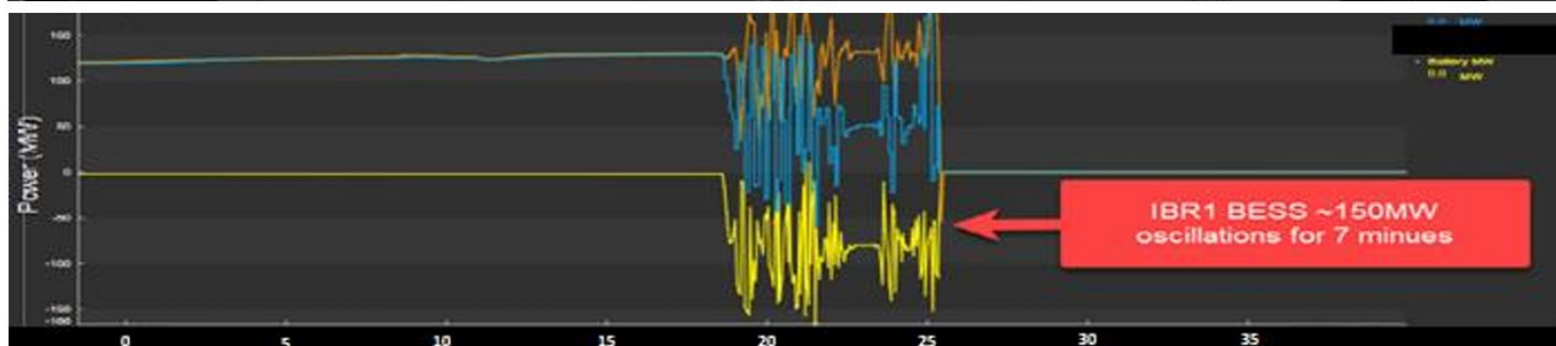


# Lesson Learned from NERC Events Analysis - Traces

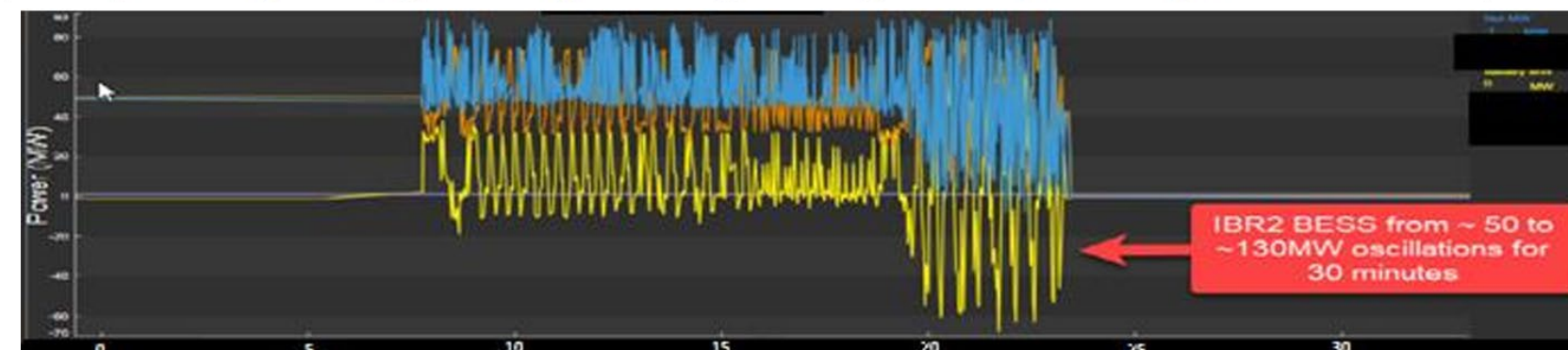
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Questions?  
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