**IBRWG Update**

**April 2025**

**Chair: Julia Matevosyan, Vice-Chair: Miguel Cova Acosta**

**IBRWG met on April 18th (Webex, Open Meeting).**

The agenda and the presentation slides and meeting minutes are available [here](https://www.ercot.com/calendar/04182025-IBRWG-Meeting-_-Webex)

110 people attended the meeting (at peak)

**IBRWG Main Meeting**

**NOGRR245 IBR Capability Maximization – Lessons Learned**

Ryan Quint & Kasun Samarasekera, Elevate Energy Consulting

* Successes of the NOGRR245:
* IBR ride-through maximization will likely ***dramatically improve*** the capabilities and operational performance of IBRs across the ERCOT
* **Maximization is a successful concept** –many instances of IBR facilities commissioned with settings meeting requirements at the time but below maximum equipment capability.
* **Expanded ride-through capabilities** at inverter level and balance of plant relaying, using software-based upgrades
* **Disabling protections prone to tripping** (phase jump, ROCOF, anti-islanding, instantaneous protection, etc.), where possible
* **Upcoming improved IBR models** that align with equipment in the field
* **Resource Entities strongly leaning in to maximize ride-through capability and support the ERCOT system**, seeking information from OEMs persistently, directly, and clearly
* Challenges of NOGRR245 process and opportunities to improve:
* What is maximization exactly?
* **Reflecting information provided by OEM in terms of inverter capability at the POI is not an easy task**. Lack of guidance will lead to broad interpretation of the information that is being provided by plant owner.
* Presented the list of considerations to think about (slide 18) and process complications (slide 21)
* Standardized framework for an IBR file of parameters is needed
* High level recommendations for improvement of the process and next steps (slide 30-31).

**NOGRR245 IBR Capability Maximization – Lessons Learned**

Mike Tabrizi & Piyush Warhad Pande, Zero-Emission Grid

* Their experience was also similar to what Elevate presented but also, they had to deal a lot with the plants where OEM went out of business.
* Other IBR plants that were newer and much more organized and the whole process was easier with them.
* The maximization is tricky, a lot that goes into it and there is a need for a lot of empiric type of assessment because cannot just rely on data sheets to understand the plant capability
* OEMs are very crucial. Once OEM information is gathered also need to understand the overlying capabilities and settings of the entire plant.
* Recommendation is to supplement this with modeling and simulations to fully understand plant capabilities (i.e. detailed PSCAD simulations).
* Areas requiring clarity (slide 7), key takeaways and recommendations (slide 8)

**Comparison of NERC PRC-028, IEEE2800, NOGRR255**

Eric Newmann, TRE

* The comparison is walking through the requirements in PRC-029 and compares with the other two documents
* The slides are self-explanatory and posted on the meeting page.
* On the couple of dates PRC-028 has higher requirements (those dates are on slides) but for the most part NOGRR255 goes above and beyond PRC-028 requirement.

**Other NERC Updates**

Mark Henry, TRE

* Milestone 2 – FERC has received 23 industry comments on PRC-029, closed on March 24, Docket RM25-3-000. No decision announced. (Other PRC standards approved by FERC earlier this year.)
* Milestone 3 – Ballot pools open until April 28, voting period 10 days before comment closure:
* [Project 2020-06](https://www.nerc.com/pa/Stand/Pages/Project-2020_06-Verifications-of-Models-and-Data-for-Generators.aspx) - Model Validation and Model Verification Definitions, **comment period open until May 12, 2025**.
* [Project 2021-01](https://www.nerc.com/pa/Stand/Pages/Project_2021-01_Modifications_to_MOD-025_and_PRC-019.aspx) – System Model Validation with IBRs, **comment period open until May 21, 2025**
* [Project 2022-02](https://www.nerc.com/pa/Stand/Pages/Project2022-02ModificationstoTPL-001-5-1andMOD-032-1.aspx) - Uniform Modeling Framework for IBR, **comment period open until May 16, 2025**
* [Industry Engagement Technical Conference](ttps://www.nerc.com/pa/RAPA/Lists/RAPA/DispForm.aspx?ID=805&Source=https%3A%2F%2Fwww%2Enerc%2Ecom%2Fpa%2FRAPA%2FPages%2FCalendar%2Easpx) **June 3-5, 2025** in Arlington, VA (first half webcast)
* NERC released its [public report](https://www.nerc.com/pa/rrm/bpsa/Alerts%20DL/Inverter-Based_Resource_Modeling_Deficiencies_Aggregated_Report.pdf) on the 2024 IBR Model Quality Deficiency Alert on April 1. The next step is NERC Level 3 Alert **with essential actions needed to address the deficiencies observed**.
* Category 2 registration of IBR’s connected at >60kV transmission and nameplate >20 MVA begins in May 2025

**Other Industry Updates**

Julia Matevosyan, ESIG

* 2025 ESIG Spring Technical Workshop, March 17-2, Austin. [**Presentation and recording are posted here**](https://www.esig.energy/event/2025-spring-technical-workshop/). Highlights below:
  + IESO has included the following **GFM capability requirement** **for all BESS** in the connection assessment applications.
  + EPRI presented a study in ERCOT, ATC area, **demonstrating benefits of AGS ESR**
  + RMS presented on **GFM BESS Applications** for Improved Reliability and Power Quality **in AI Data Centers**.
  + EMTP presented on Integration of GFM IBRs in Chelian Grid.
* DOE i2X FIRST workshop on IBR plant conformity assessment with applicable interconnection requirements after commissioning, learning from the draft IEEE P2800.2 [Presentation and recording are posted here](https://www.esig.energy/event/i2x-first-hybrid-workshop-interconnection-standards-workshop-spring-2025/)
* The recordings, presentations, synopsis of all i2X FIRST meetings are [here](https://www.esig.energy/i2x-first-forum/)
* If you have participated in i2x FIRST meetings before, please provide your feedback filling in a short survey [here](https://t.e2ma.net/click/ckst2i/wrf4ivw/0mezvbb)
* Last meeting of season 1: **Tuesday, April 29** **from 11 a.m. – 1 p.m. ET,** on reactive power and voltage control requirements, specifically “Vars at night,” Reactive at sunrise and a developer’s perspective on Reactive Power-Voltage Control Requirements. [REGISTER FOR THE MEETING](https://uvig.webex.com/weblink/register/ra24ec46df0f4e336c33da7941a95bc33)
* **i2x FIRST SEASON 2** will start in May focusing on implementation of IEEE2800, NERC Milestone 3 Standards and Grid Forming Specs. More info will be available @ <https://www.esig.energy/i2x-first-forum/>