**IBRWG Meeting Minutes**

**July 2024**

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

**IBRWG met on July 12th (Webex, Open Meeting).**

The agenda and the presentation slides are available [here](https://www.ercot.com/calendar/07122024-IBRWG-Meeting-_-Webex)

**IBRWG Main Meeting**

**Preliminary Advanced Grid Support Inverter-Based ESR Functional Specification and Test Framework**

Andrew Isaacs (Electranix)

* + Collaborative work with ERCOT developing testing framework and functional specifications for advanced grid support from inverter-based ESRs.
	+ Tested the framework on 4 models from commercially available grid forming (GFM) batteries from the OEMs.
	+ All IBRs are required to have some a basic set of functions, but extra characteristics from GFM ESRs are beneficial.
	+ Damping capability requirement is somewhat special to ERCOT due to the presence of series capacitors in ERCOT grid and need for damping.
	+ Identified a few areas where IEEE28000 and GFM could possibly conflict, but there are provisions for this in the standard itself. The identified areas still grant further examination.
	+ The limitations of IEEE 2800 for GFM should be also taken into account in the next version of IEEE 2800.
	+ Four test benches have been proposed, with different test benches for different tests.
	+ Eleven tests are proposed so far, some have subtests and some a variation of the same tests so you might see a different final set.
	+ Some of the criteria in the tests are qualitative and some are quantitative. ERCOT was looking for more quantitative criteria, but it just wasn’t possible everywhere, in which case some guidance on the performance expectations was provided.

**ERCOT Advanced Grid Support Inverter-Based ESR Assessment and Adoption Discussion**

Fred Huang (ERCOT)

* + Electranix’s presentation covered performance of GFM from the resource perspective, this presentation covered system perspective.
	+ Going to propose it for inverter-based ESR technology first as advanced support there is commercially available and only requires software/control modifications.
	+ ERCOT provided some background about why advanced support capabilities are needed from IBRs, other countries requiring GFM, and results from ERCOT’s preliminary studies showing stability and GTC benefit (It was found that GFM ESR may potentially increase WESTEX, McCamey and Panhandle GTC limits approximately 5-10% based on tested cases. For several other GTCs the constraints can also be potentially mitigated).
	+ ERCOT’s adoption proposal is that all existing inverter-based ESRs are not required but highly recommended to provide advanced grid support. New inverter-based ESR will be required to provide advanced grid support.
	+ ERCOT and TSPs should also start considering advanced grid support devices like STATCOM.
	+ Next steps: submit revision request by the end of 2024 to adopt the advanced grid support form inverter-based ESR.
	+ ERCOT plans to continue assessing the application of advanced support by wind and solar as well and assess application of IBRs for black start.
	+ Stakeholders are encouraged to provide comments and suggestion to Shun-Hsien.Huang@ercot.com

**DWG and IBRWG Collaboration**

**DWG Procedure Manual Updates for NOGRR-245**

Johnathan Rose (ERCOT)

* + The DWG Procedure Manual draft was pasted on this event page and the current version of the manual can be found on ERCOT webpage.
	+ This is continuation of the work to propose some model testing for NOGRR245, because a lot of the requirements will be evaluated through MQT.
	+ ERCOT asked for comments within a week, by 7/19 to expedite the process.
	+ Katie Rich asked for an addition of one week, while still keeping a possibility to target August ROS. It was agreed that ERCOT can go with 7/24 deadline.

**Other Business**

* + Item on auto-reclosing close to IBRs that ROS asked SPWG and IBRWG to coordinate on. SPWG is meeting on 7/17 had this item is on their agenda. We’ll discuss it at IBRWG in August.
	+ Market notice about ERCOT’s plan to send an RFI in the beginning of August to support the transition to a single resource ESR model, may be an update at the next IBRWG meeting on that could be useful.