**IBRWG Report To ROS**

**January 2024**

**Chair: Mohammad Albaijat, Vice-Chair: Julia Matevosyan**

**IBRWG met on January 12th and 22nd (Webex, Open Meetings)**

**January 12th meeting summary:**

**Discussion Items:**

**EMT Models for Legacy IBRs**

Presentation by Andrew Isaacs (Electranix), and discussion supported by Deepak Ramasubramanian (EPRI)

* + A large portion of IBRs where EMT model is not available OEMs are still in business.
  + Often no good or satisfactory solution to this problem
  + Five options were listed with diminishing accuracy/usefulness of the model.
  + SMA confirmed that its sliding scale of risk and proxy model approaches pose exponentially more risk and probably provide a false sense of security to the end-client.
  + For PSS/E models, where OEM is out of business the risk is lower than with EMT. It should be possible to obtain generic model and tune it up to match the response. The risk is lower for RMS models, you should be able to do better with generic or proxy models for transient stability, compared to EMT.
  + If models don’t reflect IBR limitations, worst case contingency assumptions will need to be made in the system studies.

**TSAT modeling update**

Update presented by Yunzhi Cheng (ERCOT)

* + Last 5% model left for TSAT so far
  + Out of 16 existing GTCs, 7 don’t have acceptable TSAT models. The slide has details for those 7 and how much % of models are accepted so far.
  + All the models need to be submitted to ERCOT from resource owners or interconnection entity, ERCOT cannot use the models provided by the vendor directly.
  + UDM Submittal Requirement guideline was recently updated to include additional UDM TSAT requirements (based on lessons learned and supposed to reduce back and forth and speed up model acceptance).
  + ERCOT will bring updates to future IBRWG meetings.

**DWG and IBRWG collaboration**

Presented by Paul Koberlein (vice-chair of DWG)

* + With NOGRR245 how is ERCOT going to review tests and verify compliance?
  + Currently, during actual events, through model validation, MQTs etc.
  + In the future forming a subgroup between DWG & IBRWG will help to form best practice for this.
  + Still need to talk to Market Rules if formal TF is needed or informal collaboration is acceptable.
  + The subgroup will also consider inputs from IEEE standards.
  + Intended timeline is 6 months, but may take longer, if needed
  + Can, potentially, use IBRWG or DWG meetings time, but separate meeting time is preferred.
  + Even though DWG meetings are closed meetings, these subgroup meetings will be open.

**NOGRR 245 update**

Presented by Stephen Solis (ERCOT)

* + On NOGRR245 ERCOT did submit additional comments on 1/8/24 with proposed additional modifications to the requirements that consider the technical feasibility of meeting the requirements as identified in RFI results and taking in the feedback from the stakeholders.
  + Texas RE filed comments on1/11/24, which were supportive.
  + ERCOT hoped for a positive vote at January TAC

**NOGRR 255 update**

Presented by Stephen Solis (ERCOT)

* + NOGRR 255 has been updated (Jan 4th ERCOT comments).
  + Proposed changes were listed on the slides.
  + Question from ROS, if IBRWG had concerns with NOGRR255 and that they would like to see the position more formally documented. IBRWG hasn’t provided any opposing responses but a more formal report may help provide the clarity.

**IBR plant model development and Developer/OEM/ERCOT interactions and gaps**

Siddharth Pant (GE Vernova) presented on GE Vernova solar and storage solutions (S&SS) products.

* + Product design process, IBR model development, project-specific model and study aspects, gaps in model development and studies, and suggested improvements.
    - Have minimum of 2 stages for project model submission;
    - Final model comes with vendor attestation;
    - Develop standard grid performance tests;
    - Use regional grid studies to update standard grid performance evaluation.

**GFM BESS and BESS Augmentation**

Presented by Prashant Kensal (Tesla), Askhat Tullegen (Tesla), Sarah Dodamead (Tesla)

* + Covered Tesla’s GFM BESS capabilities, existing projects, incentives.
  + Presented augmentation goals and proposals. Main point is that power augmentation (supplementing degraded battery modules with new ones over the course of the project life, to keep the same MWh) in a BESS will be an ongoing/continuous process throughout lifetime of the project – it may be impractical and unnecessary to treat it as material modification and trigger restudies.

**September 22nd meeting summary:**

**The meeting solely focused on Data Recoding by Schweitzer Electronic Laboratories Equipment**

Presented by Tom McQuilken and Jon Beach (SEL)

* + Covered types of disturbance monitoring: fault recording, sequence of events recording and dynamic disturbance monitoring
  + Covered capabilities in existing SEL relays to capture filtered and unfiltered data and event recording settings as well as
  + SEL equipment specifically meant for data recording.
  + During Q&A there was a discussion around capabilities of data recording equipment vs what resolution is actually needed for disturbance event recording. – still continued debate
  + In upcoming IBRWG meetings, it would be good to see presentations on a similar topic by inverter manufacturers.