



Inverter-Based Resource Workshop Follow Up Update

ROS
February 06, 2020

IBR Activity – Recap 2019

- ERCOT hosted an IBR workshop in April, 2019.
- ERCOT provided regular updates to ROS on the identified follow up items in 2019.
- Notable activities included:
 - PGRR075: dynamic model quality test requirement
 - Conducted an IBR survey
 - Implemented dynamic model templates
 - Reviewed and updated dynamic models provided in the RARF

Inverter-Based Resource Workshop Follow Up Status Dashboard

| Issues | Status | Workgroups | Schedule |
|---|--|-------------------------------------|---|
| Better Communication of Existing Requirements | <p>Develop a reference document to facilitate the understanding of the existing requirements, procedures, and practices. (TBD)</p> <p>Consider a NPRR on IBR definition. (Included in the draft DGR NPRR posted on webpage of DGR Workshop II in December 2019)</p> | Resource Integration Workshop (RIW) | <p>RIW (March, 2020)</p> <p>Submit NPRR in 1Q, 2020</p> |
| Voltage Ride Through and Momentary Cessation | <p>Consider a NOGRR to clarify VRT and momentary cessation (the existing language is adequate)</p> <p>Consider a NOGRR to add transient overvoltage ride through requirement (2020)</p> <p>Identify the need of more detailed FIS stability analysis (like PSCAD study) (2020)</p> | Dynamics Working Group (DWG) | DWG (February, 2020) |
| Dynamic Models | <p>Consider a PGRR to improve dynamic model quality (PGRR075)</p> <p>To strengthen the model validation requirements (2020)</p> | DWG, RIW | DWG (February, 2020) RIW (March, 2020) |
| Advanced Features and Others | <p>Continue discussion on this topic. Zero MW reactive support Damping support from IBRs (2020)</p> | DWG, RIW | DWG (February, 2020) RIW (March, 2020) |
| Impact on Transmission Protection (New) | Existing practice in the high IBR penetration area in ERCOT (2020) | SPWG, TSPs | SPWG (March, 2020) ROS (April, 2020) |

Reference

- IEEE PES TR68, “Impact of Inverter Based Generation on Bulk Power System Dynamics and Short-Circuit Performance”, 2018
- NERC Reliability Guideline, “Inverter-Based Resource Performance Guideline”, 2018
- https://www.nerc.com/comm/PC/IRPTF%20Workshops/Key_Takeaways_April_2019_Inverter_Relay_Manufacturer_Meeting.pdf
- <https://www.osti.gov/biblio/1595917-impact-inverter-based-resource-negative-sequence-current-injection-transmission-system-protection>

Questions

Comments are welcome

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