

## Inverter-Based Resource Performance Working Group (IRPWG)

Website: [IRPWG](#)

Chair: Al Schriver

NERC Lead: Ryan Quint; Rich Bauer

Hierarchy: Reports to RSTC

Vice Chair: Julia Matevosyan

Scope Update: December 2020

Updated: June 24, 2021

#	Task Description	Risk Profile(s)	Strategic Focus Area(s)	Target Completion	Requested PC Action	Status
3	<b>IEEE p2800 Monitoring and Support</b> <i>Monitor and support the activities of IEEE p2800, and provide technical expertise and input as requested.</i>			Ongoing	None	Ongoing, as needed.
5	<b>White Paper: BPS-Connected IBR and Hybrid Plant Capabilities for Frequency Response</b> <i>White paper on utilizing the full capabilities of inverter-based resources and hybrid plants for providing frequency response.</i>			Q3 2021	Approve	On track; heading to RSTC in September 2021.
6	<b>Reliability Guideline: Electromagnetic Transient Modeling and Simulations</b> <i>Reliability Guideline on EMT modeling and simulations of BPS-connected inverter-based resources.</i>			Q1 2022	Approve	Date moved back to Q1 2022.
8	<b>Reliability Guideline: Recommended Approach to Interconnection Studies for BPS-Connected Inverter-Based Resources</b> <i>Focused guidance on improving the study process for BPS-connected inverter-based resources, particularly with increasing penetrations of these resources and the growing complexity of performing sufficient studies to ensure BPS reliability.</i>			Q4 2021	Approve	On track; work underway.
9	<b>Reliability Guideline: Recommended Operating Procedures for Managing Abnormal BPS-Connected Inverter-Based Resource Oscillation Conditions</b> <i>Focused guideline for grid operators faced with any abnormal performance or grid conditions with BPS-connected inverter-based resources.</i>			Tabled Q4 2022 (?)	Approve	Tabled.

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10	<b>Doc Type TBD: Day-Ahead and Short-Term Operational Studies with Increasing Inverter-Based Resources (Particularly BESSs and Hybrids)</b> <i>Paper covering day-ahead and short-term operational studies related to the inclusion and consideration of inverter-based resources (particularly BESSs and hybrids).</i>			Tabled Q4 2022 (?)	Approve	Tabled.
11	<b>TPL-001-5 SAR</b> <i>SAR regarding modifications to TPL-001-5 that align with the recommendations made in the approved IRPWG standards review white paper.</i>			TBD	Approve	Rejected by RSTC at June 2021 meeting. Awaiting direction from IRPWG leadership on how to proceed.
12	<b>White Paper: Grid Forming Technology</b> <i>Paper covering perspectives for registered entities regarding the new grid forming technology and its use on the bulk power system.</i>			Q4 2021	Approve	New task; on track.
13	<b>SAR: EOP-004-4 Gen Loss Criteria for IBRs</b> <i>Follow-up from San Fernando Disturbance report regarding recommendation for IRPWG to draft a SAR to address the issue identified in EOP-004-4 regarding the generation loss criteria so that it is applicable for inverter-based resources as well synchronous generation.</i>			Q1 2022	Approve	New task; on track.
14	<b>Inclusion of EMT Models into MOD and TPL Standards</b> <i>Follow-up from San Fernando Disturbance report regarding recommendations for the modeling and study standards (e.g., MOD and TPL) to be reviewed by IRPWG to consider the inclusion of EMT models for study purposes by the TP and PC. As note in the report, the IRPWG guideline on EMT modeling does not ensure any one entity actually executes EMT studies, when needed.</i>			Q1 2022	Approve	New task; on track.
<b>Completed Tasks</b>						
1	<b>Review IRPWG Scope</b> <i>Revised scope with new IRPWG group.</i>			Q4 2020	Approve	Approved by RSTC.

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2	<b>San Fernando Disturbance Follow-Up White Paper</b> <i>Discussion of NERC San Fernando Disturbance Report and identification of any next steps for IRPWG to add to work plan.</i>			Q2 2021	None	Approved by RSTC at June 2021 meeting.
4	<b>Reliability Guideline: BPS-Connected BESS and Hybrid Plant Performance, Modeling, and Studies</b> <i>Reliability Guideline on recommended performance, modeling, and studies for BPS-connected BESS and hybrid power plants.</i>			Q1 2021	Approve	Approved by RSTC and published in March 2021.
<b>Cancelled Tasks</b>						
7	<b>White Paper: Energy Transition to Increasing Penetrations of BPS-Connected Inverter-Based Resources</b> <i>Brief strategic white paper of ensuring BPS reliability with increasing BPS-connected inverter-based resources.</i>			Q4 2021	Approve	Cancelled due to low priority and being addressed by other in-depth topics.