



Inverter-Based Resource Workshop Follow Up Update

ROS
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Inverter-Based Resource Workshop Follow Up Status Dashboard

Issues	Status (Tentative Schedule)	Workgroups	Target Dates
Better Communication of Existing Requirements	Develop a reference document to facilitate the understanding of the existing requirements, procedures, and practices. (Q4, 2019)	Resource Integration Workshop (RIW)	RIW (9/26/2019, 11/21/2019)
	Consider a NPRR on IBR definition. (Q4, 2019)	Resource Definition Task Force (RTF)	To be included in the DGR NPRR
Nuisance Tripping and Artificially Limiting Plant Capability	Continue discussion on this topic.		No scheduled activity
Voltage Ride Through and Momentary Cessation	Consider a NOGRR to clarify VRT and momentary cessation (Q3, 2019)	Dynamics Working Group (DWG)	DWG (8/27/2019, 11/20/2019)
	Consider a NOGRR to add transient overvoltage ride through requirement (Q1, 2020)	DWG	
	Identify the need of more detailed FIS stability analysis (like PSCAD study) (Q1, 2020)	DWG, RIW	
Dynamic Models	Consider a PGRR to improve dynamic model quality (Q3, 2019) => PGRR075	DWG, RIW	RIW (6/20/2019, 7/30/2019, 9/26/2019) DWG (8/27/2019, 11/20/2019)
	To strengthen the model validation requirements (Q4, 2019)	DWG, RIW	
Battery Energy Storage Operational Requirements	Develop requirements for battery energy storage (Q1, 2020) (Will be covered in the BESTF)	ROS, RIW	ROS (Covered in BESTF)
Advanced Features and Others	Continue discussion on this topic. Zero MW reactive support		No scheduled activity

Dynamic Models – Generic and User Defined Models (UDM)

- Total of 62 IRR sites are now using generic models – about half of these sites have recently switched from UDM to generic models

Dynamic Model	UDM	Generic
Compatible with different PSS/e version	No	Yes
Maintenance Cost for different PSS/e version	Yes	No
Open format, good documentation, and clear model implementation	No	Yes
Vetted by OEMs	Yes	?

- Observations from provided generic IRR models:
 - Generic models contain approximations
 - Generic models may not function well under weak grid
 - Could result in instability (numerical or real?) in the ERCOT studies and potentially lower the stability limits
 - MOD26/27 is to validate an existing model, not sufficient to create a new model

Dynamic Models – Generic and User Defined Models (UDM)

- ERCOT will explore the options to ensure the model quality and accuracy
 - All the models should undergo a standard set of model quality tests (PGRR075)
 - Should all the models be reviewed and approved by the manufactures?
 - Should all the models be benchmarked with OEM provided PSCAD model?

Questions

Comments are welcome

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