Transient Security Assessment Tool (TSAT) Data Requirement Update

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ROS Meeting

IBR Model Availability in TSAT
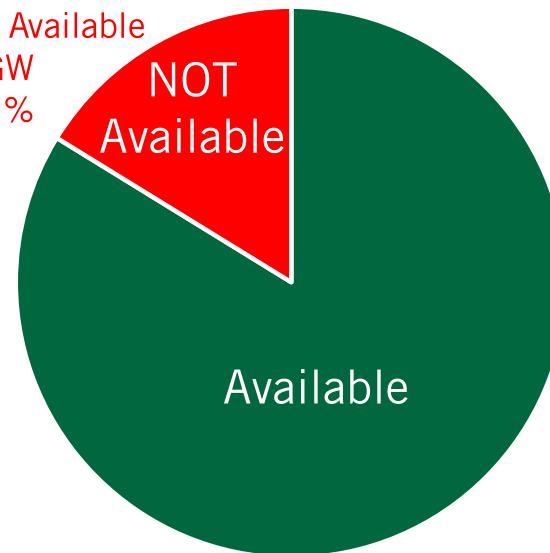
- Models for Inverter-Based Resources (wind, solar, battery) often use user-defined code (those user-defined models submitted for PSSE)

	Model Submission	Model Accepted	REs need to update the models
Initial model Submission by 1/31/2022	435	386	49
Initial model submission after 1/31/2022	1	1	0
No model submission	31	0	0
Total	467	387	49

20 REs with 31 IBRs have still not provided models

All 23 REs with 49 IBRs were informed by ERCOT about the model deficiency and model update

IBR Model Availability in TSAT

IBR UDM Not Available
~7.8 GW
~16.3 %

NOT Available

Available

IBR Generic & UDM Available
~40 GW
~83.7 %

Status Update

- Based on the available TSAT models, ERCOT is assessing which GTCs may be eligible for ERCOT to calculate GTLs using TSAT.

- In the ERCOT EMS environment, TSAT models are identified by equipment name which is available in the TSAT model library. It was found that some TSAT UDMs developed by third party cannot support this feature. may require improvements. ERCOT has informed the Resource Entities (REs) to update this feature.

Appendix

RRGRR021 TSAT Requirement

- Effective August 1, 2020, Resource Entities for all existing and new Generation Resource or Settlement Only Generator (SOG), including a storage device are required to submit TSAT dynamic models for the ERCOT operations model

- Resource Entities with IRRs that have PSSE user-defined models are required to review these models and submit TSAT user-defined dynamic models

- TSPs are required to review the PSSE user-defined models for existing transmission equipment (dynamic reactive devices etc.) and submit TSAT user-defined dynamic models

TSAT User-Defined models

- Generation Resources or SOGs, including a storage device that have provided a user-defined planning model (in PSSE) are required to provide the same user-defined model for TSAT operations model

- Generic TSAT models are NOT acceptable where GRs have submitted user-defined models for planning model (PSSE)

- Both planning (PSSE) and operations (TSAT) user-defined model should use (read) the same dynamic model parameters (dynamic data format dyr file)

RRGRR021 Timeline

- ERCOT announced at the March 4, 2021, ROS meeting that it would refrain from reporting non-compliance with the TSAT model submission requirement to the Public Utility Commission until November 1, 2021.

- On October 1, 2021, ERCOT sent an email to each impacted RE and provided the status with respect to their Generation Resource(s) and/or SOG(s) for TSAT model requirement.

- On November 3, 2021, ERCOT started reporting non-compliance with the RRGRR021 TSAT model submission requirement to the Public Utility Commission.

Questions?

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