



**Transmission Constraint Workshop Follow
Up -- Discussion of the Need For Additional
Stability Assessment**

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Received Stakeholders' Comments

- Suggested that ERCOT create a stability assessment across the full span of the Planning horizon (years 1-6), including new Resources from the Generator Interconnection Status (GIS) report.
 - To identify future stability constraints and to determine the appropriate Generic Transmission Constraints (GTCs) and associated Generic Transmission Limits (GTLs).
 - Post and present the results to appropriate ERCOT stakeholder forums.
 - These findings should then be rolled into all appropriate forward looking Congestion Revenue Right (CRR) market and Planning models/studies.
- Dynamic Working Group (DWG) cases are not widely available to all ERCOT stakeholders. Potential future dynamic stability constraints, as well as voltage stability constraints, are not easily factored into the new resource investment and forward power transaction decisions.

Few Items to be Considered

- Location, project schedule, technology and models are essential to assess system stability performance.
- It is becoming increasingly difficult to identify the exact stability constraints and associated limits in Planning horizon due to short interconnection schedule and late confirmation of new projects.
 - No planned Inverter-based Resources (IBRs) beyond 2023.
 - Full interconnection stability studies are completed just before the deadline to be included in the Quarter Stability Assessment (QSA). Models are only available 6-9 months prior to initial synchronization.
 - Recently, due to model submission deadlines, increasing new committed resources have been studied in the QSA before being included in the Planning models.
- Although the planning studies such as Panhandle and West Texas studies identified the potential stability constraints, the actual GTC and GTLs are determined at a later stage with confirmed resources and models provided by Resource Entities and developers.

Few Items to be Considered

- Planning Guide 6.2 Dynamic Model Development
 - (8) Dynamic Data is considered Protected Information pursuant to Protocol Section 1.3, Confidentiality.
- Protocol 1.3.1.1 Items Considered Protected Information
 - (1)(m) Resource-specific costs, design and engineering data, including such data submitted in connection with a verifiable cost appeal.

Discussion and Next Steps

- At future PLWG meetings, ERCOT plans to continue discuss the need of additional stability study and transparency into future stability constraints.
 - What issues are we trying to solve?
 - What timeframe for information is relevant to stakeholders? (planning horizon year 1-6, operation horizon < 1 year, etc)
 - How comfortable are stakeholders with the results likely to be changed looking more than 6~12 months into the future? (certainty, approximation)
 - How can ERCOT do a better job to communicate the results of studies we currently conduct or may start conducting in the future?
- Stakeholders please provide any additional comments by January 8, 2021.

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Appendix: Existing ERCOT Stability Assessments

Existing Stability Assessments -- Planning

Stability Assessments -- Planning	Frequency	Resources Included	Purpose	Results/Reports
Full Interconnection Stability Study	Every FIS	Existing + PG 6.9 ⁽¹⁾	<ul style="list-style-type: none"> The reliability impact of the proposed resource on Transmission Facilities 	Redacted reports are posted to the MIS Secure Area
Annual Stability Assessment	Annually	Existing + PG 6.9	<ul style="list-style-type: none"> NERC TPL-001-4 Typically include future year 2 summer peak and year 3 off-peak (HWLL) 	Reports are posted to the MIS Certified Area
Special Study (Panhandle, Long Term Stability, West Texas Export, etc)	Ad-Hoc, As Needed	Existing + PG 6.9 + projected non PG 6.9 if applicable	<ul style="list-style-type: none"> Identify potential stability constraints with projected growth of IBRs Generally informational only 	Reports are posted on ERCOT.com
GTC Alternative Study	Within 180 days of an effective new GTC	Existing + PG 6.9	<ul style="list-style-type: none"> Identify alternatives for exiting the GTC 	GTC Methodologies are posted to the MIS Secure Area

(1). Units meeting PG 6.9 generally means the projects have signed Interconnection Agreement and financial security (see details in Planning Guide Section 6.9)

Existing Stability Assessments -- Operations

Stability Assessments -- Operations	Frequency	Resources Included	Purpose	Results/Reports
Quarterly Stability Assessment	Quarterly	Existing + PG 5.9 ⁽¹⁾ (Sync. date within 5-7 months of the start of each QSA)	Impact of planned GRs/SOGs connecting to the ERCOT Transmission Grid	Redacted reports are posted to the MIS Secure Area ⁽²⁾
GTC Assessment	Depends on QSA results	Existing + PG 5.9 (Sync. date within 1-2 months of the start of GTC assessment)	To determine GTC interface and the appropriate GTLs	GTC Methodologies are posted to the MIS Secure Area, Market Notice ⁽³⁾

- (1). Units included in the QSA are required to meet prerequisites, including PG 6.9, acceptable dynamic models, FIS completed, Reactive Power Study completed, etc. (see details in Planning Guide Section 5.9)
- (2). QSA results are posted 3-5 months prior to the synchronization date of the proposed units.
- (3). The GTC methodologies are posted prior to the actual synchronization of the units.