II.B Quarterly Stability Assessments (QSAs)

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February 24, 2020
ERCOT GTC Workshop

What is QSA

- QSA is a stability assessment conducted every three months to assess the impact of planned Generation Resources and Settlement Only Generators (SOGs) connecting to the ERCOT Transmission Grid
- QSA is a cluster study that includes all Generation Resources and Settlement Only Generators (SOGs) with planned Initial Synchronization for a specific three month period
- The assessment shall derive the conditions to be studied with consideration given to the results of the Full Interconnection Study (FIS) stability studies for Generation Resources or SOGs, also may study conditions other than those identified in the FIS stability studies

QSA Prerequisites – Planning Guide Section 5.9(4)

- Prerequisites to be satisfied prior to the planned new Generation Resource or SOG being included in the quarterly stability assessment:

(a) The Generation Resource or SOG has met the requirements of Section 6.9, Addition of Proposed Generation to the Planning Models.

(b) The IE has provided all Generation Resource or SOG data in accordance with the Resource Registration Glossary, Planning Model column, including but not limited to steady state, system protection and stability models.

(c) The following elements must be complete:

(i) FIS studies;

(ii) Reactive Power Study; and

(iii) System improvements or mitigation plans that were identified in these studies as required to meet the operational standards established in the Protocols, Planning Guide, Nodal Operating Guides, and Other Binding Documents prior to synchronizing the Generation Resource or SOG.

(d) The data used in the studies identified in paragraph (4)(c) above is consistent with Generation Resource or SOG data submitted by the IE as required by Section 6.9.

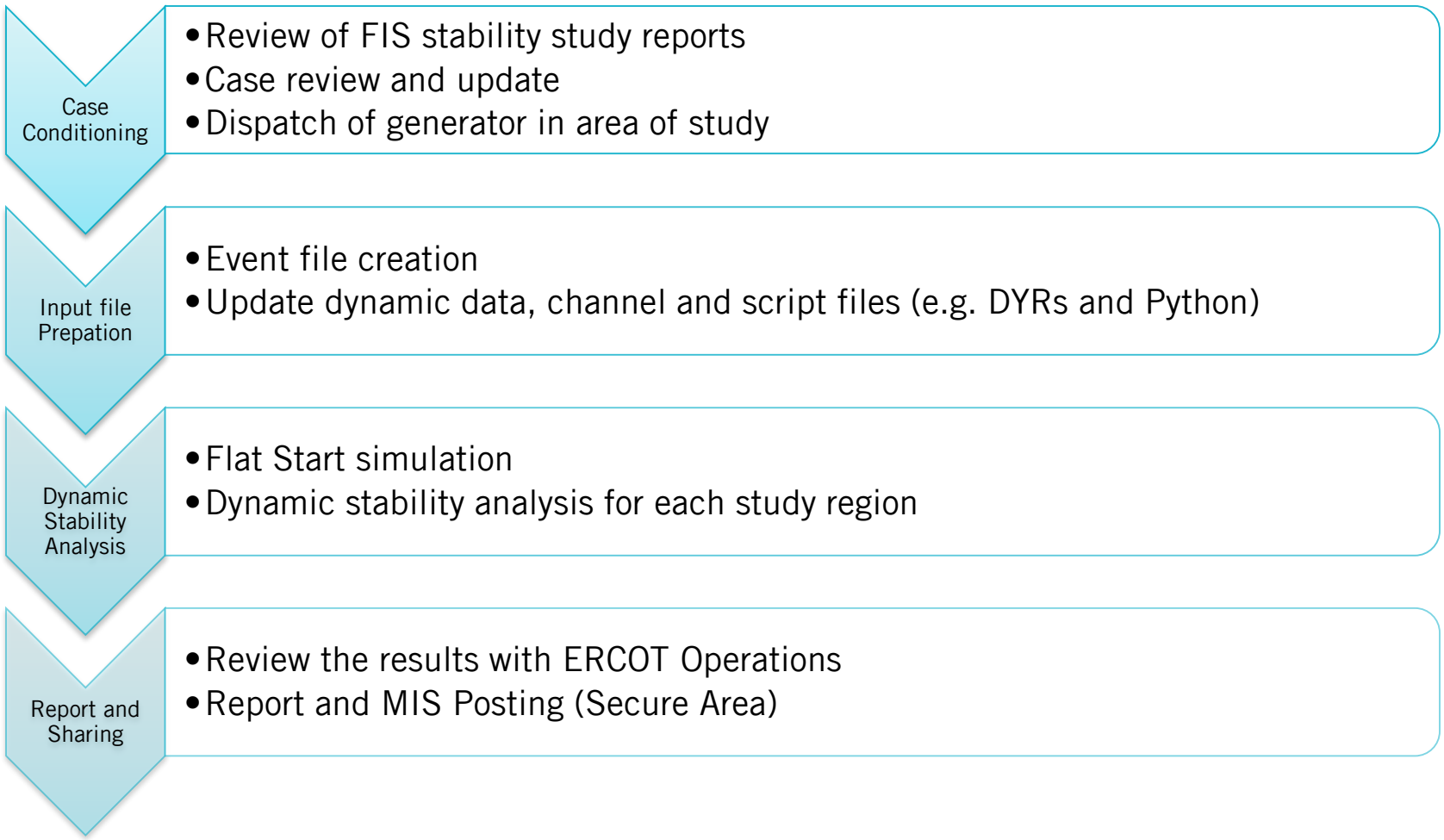
Timeline for QSA Planning Guide Section 5.9(2)

Generation Resource or SOG Initial Synchronization Date	**Last Day for an IE to meet prerequisites as listed in paragraph (4) below**	**Completion of Quarterly Stability Assessment**
Upcoming January, February, March	Prior August 1	End of October
Upcoming April, May, June	Prior November 1	End of January
Upcoming July, August, September	Prior February 1	End of April
Upcoming October, November, December	Prior May 1	End of July

QSA Need

- QSA provides an assessment of both a specific study area and other regional issues, whereas Individual FIS – Stability study focuses on a particular GR or SOG connecting to a specific study area
- QSA incorporates the latest transmission & generation updates
- QSA bridges the gap between FIS study and the GTC implementation
- Establishes clear manageable timeline for studying and implementing GTCs before Initial Synchronization

QSA Study Process



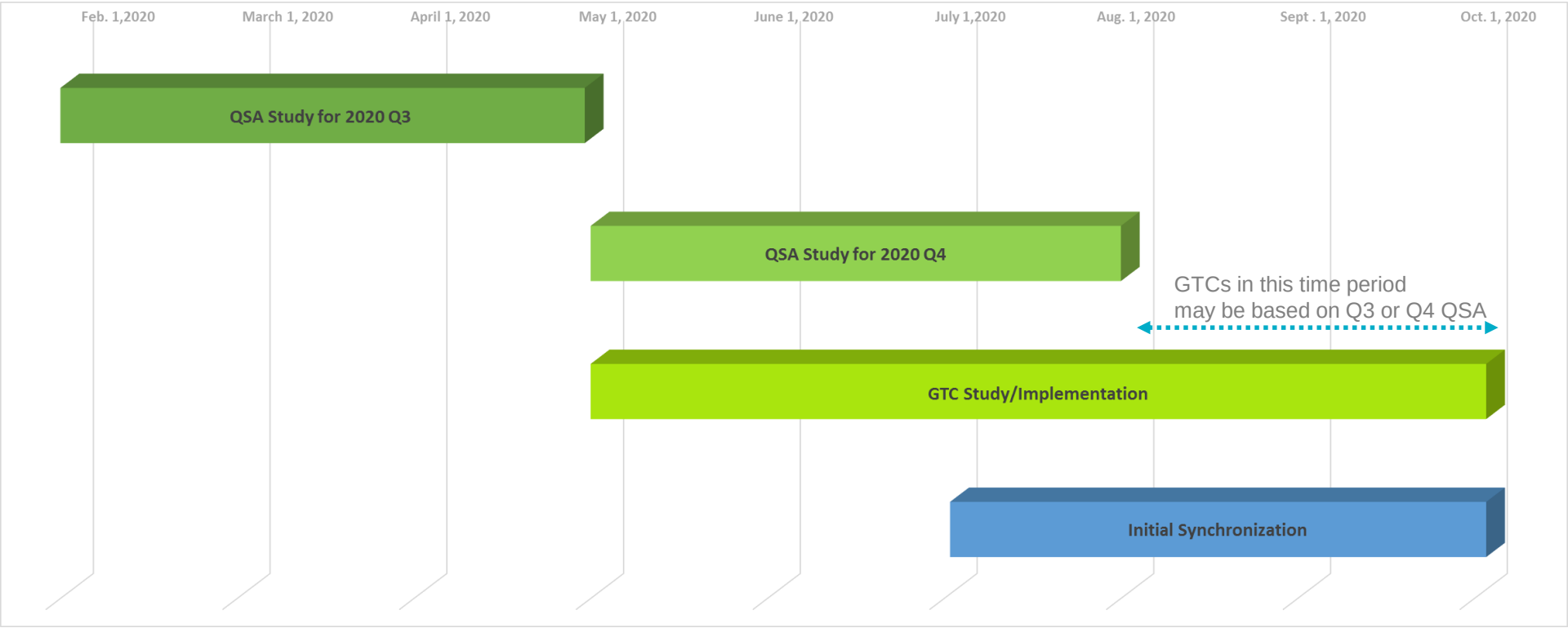
How to interpret QSA Results

- QSA results should be interpreted as an update/addendum to the FIS stability study
- QSA results are meant to identify stability issues that would affect existing GTCs or show a need to create new GTCs
- QSA results should not be interpreted as the final GTLs for any specific GTC
- QSA is not meant to identify interface definitions for any specific GTC

How does QSA influence GTC

- For every new/modified GTC area identified in the QSA, ERCOT will perform a GTC study/assessment to implement the GTLs and GTC interface
- In some cases, the QSA may provide sufficient information to update GTLs without a need for additional study, this will be determined as part of the GTC study/assessment
- Changes to the Initial Synchronization date may move the GTC study to a different time period (that would be based on the latest QSA)
- Depending on the Initial Synchronization date, the GTC study could rely on multiple QSAs

QSA – GTC development – GR and SOG Initial Synchronization Timeline (Example 2020 Q3)



Questions?