



ERCOT Quarterly Stability Assessment (QSA)

Deadlines, Deliverables, and Common Issues for Large Generators

Riaz Khan
Supervisor – Large Generation Integration

Aug 27, 2026

Outline:

- QSA Pre-Requisites and Deadlines
- Dynamic Model Submission
- Courtesy Reminder Email
- Actions Needed
- Common Issues

QSA – Pre-Requisites and Deadlines

- ERCOT conducts stability assessment every three months (quarterly) to assess the impact of planned Large Generators and Large Loads (Planning Guide 5.3.5)
- This presentation is focusing on Large Generators only

Next
QSA


Generator Synch Date	QSA Deadline*	45-Day Deadline*
Jan, Feb, March (Q1)	Prior Aug 1	Jun 17
Apr, May, Jun (Q2)	Prior Nov 1	Sep 17
Jul, Aug, Sep (Q3)	Prior Feb 1	Dec 18
Oct, Nov, Dec (Q4)	Prior May 1	Mar 17

* If falls on holiday/weekend → extends to the next business day

Item	Due Date/Comments
FIS Studies (All components)	Must be approved and posted by 45-Day Deadline
Dynamic Models (PSSE, PSCAD, TSAT)	Model Submission due: 45-Day Deadline Address any comments by QSA Deadline
Completed Reactive Study	Due by QSA Deadline
Signed SGIA	Due by QSA Deadline
Financial Commitment	Due by QSA Deadline
Notice to Proceed	Due by QSA Deadline
Collector System Model	Due by QSA Deadline
Air permit (if applicable)	Due by QSA Deadline
Greenhouse Gas permit (if applicable)	Due by QSA Deadline
Declaration of water adequacy (if applicable)	Due by QSA Deadline
Complete Planning Level Data in RIOO Substation Details	Due by QSA Deadline

QSA – Dynamic Model Submission

Model Submission Items*

- PSS/E: Model, Model Quality Test (MQT)
- PSCAD: Model, MQT, Unit Model Validation Report, Guideline Check sheet

If PSS/E model is user defined:

- TSAT dynamic data + TSAT MQT – required if the PSS/E model is User Defined Model (UDM)

Include a Model Quality Test (MQT) report overlaying the PSCAD and PSS/E model response. If utilizing a user-defined-model in PSS/E, then also include the TSAT model response in the overlay

▪ File Submission and Naming:

- Package PSS/E/TSAT files as **ProjectName_INR#_DYNAMIC_(date).zip**
- Package PSCAD files as **ProjectName_INR#_PSCAD_(date).zip**,
 - "date" reflects the last model update date
 - Upload to RIOO under Other category

*For more information, see model quality guide

https://www.ercot.com/files/docs/2021/04/20/Model_Quality_Guide.zip

QSA – Courtesy Reminder Email



Hello,

I am reaching out regarding the project referenced in the subject line. The requested synchronization date for the subject project falls in the period under study for ERCOT Quarterly Stability Assessment pursuant to Planning Guide 5.3.5. Inclusion in this QSA will enable your project to synchronize starting in Q2 - 2027.

In accordance with the timeline as defined in Planning Guide 5.3.5 (4), the attached checklists outline the prerequisites to be met **45 days prior to the QSA deadline** and the prerequisites to be met **by the QSA deadline**:

- If you wish to participate in the upcoming QSA, please download and submit the completed checklist to RIOO-IS prior to the deadlines for ERCOT to review. If the prerequisites are not met by the respective deadlines, the expected Synchronization Date (and corresponding COD) will be pushed back at least one quarter.
- Please also refer to the attached PSSE 36 transition document.
- If the project dates have rescheduled and you no longer wish to synchronize in the aforesaid quarter, please inform us at ResourceIntegrationDepartment@ercot.com and update your project schedule via RIOO-IS accordingly. Note that invalid dates in RIOO-IS will lead to project cancellation under Planning Guide 5.2.6.
- If you wish to cancel your project, please initiate cancellation via RIOO-IS.

IMPORTANT: Per Planning Guide 5.3.2.5 (2), ERCOT is allowed ten Business Days to provide comments to the TDSP submitting each FIS study element. ERCOT can extend this review period by an additional 20 Business Days if additional time is needed to review the report. The ten Business Days period allow ERCOT but also other TSPs to comment. After comments are provided, addressed, and the study is approved, the study can be finalized per Planning Guide 5.3.2.5 (3). If the draft studies are not provided with sufficient time to review (at least ten Business Days prior to the 45-days deadline), ERCOT cannot guarantee QSA inclusion, as the finalized FIS study elements are required to be submitted to RIOO-IS per Planning Guide 5.3.5 (4).

Courtesy Email Notification

- Sent roughly one month before the 45-day deadline
- Lists the required items and their respective deadlines
- Two checklists with two separate deadlines: the 45-day gate and the QSA deadline
- Includes related guidance as applicable (e.g., PSS/E version transition)

IMPORTANT

- Approved FIS studies required by the 45-day deadline (finalized and posted in RIOO)
- PG allows 10 business days for ERCOT and other TSP(s) to review; ERCOT can extend the review period by additional 20 business days

QSA – Action Needed

Actions Needed

- Fill out the checklists and upload to RIOO under Other category

Not ready?

- Update project milestone dates in RIOO
- Stale dates
 - Keep project out of courtesy reminder emails
 - Trigger cancellation notice under PG 5.2.6

45-day Requirement

45-Day Requirement	File Name	Date Submitted	Status
Completed and approved FIS			Choose an item.
Steady state study			Choose an item.
Short circuit study			Choose an item.
Dynamics study			Choose an item.
Facilities study			Choose an item.
Dynamic Models (PSSE & PSCAD) *4 QSA Reference			Choose an item.
PSSE Model			☐
PSSE Model Quality Test (MQT)			☐
PSCAD Model (psc or .pscx files are accepted)			☐
PSCAD Model Template			☐
PSCAD Model Quality Test Include a Model Quality Test (MQT) report <u>overlaying</u> the PSCAD and PSS/E model response. If utilizing a user-defined-model in PSS/E, then also include the TSAT model response in the overlay			☐
PSCAD Unit Model Validation Report			☐
PSCAD Guideline Check sheet			☐
TSAT Dynamic Data for UDM *4 QSA Reference			Choose an item.
TSAT Dynamic Model Quality Test			☐

QSA Requirements	File Name as Posted in RIOO	Date Submitted	Status
Collector System Model			Choose an item.
Collector System Model [(<u>.raw</u> + <u>.seq</u>) OR .OLR files are accepted]			☐
Collector System Template (https://www.ercot.com/files/docs/2020/06/30/Collector_System_Template.zip)			☐
Air permit from TCEQ (if required) *5			Choose an item.
Greenhouse Gas (if required) *5			Choose an item.
Declaration of water adequacy (if not IRR)			Choose an item.

QSA – Common Issues

Incomplete FIS

- All FIS elements (steady state, short circuit, dynamics, facilities) must be reviewed, finalized and posted in RIOO
- Each re-submission resets the review clock
- Drafts arriving late – very common issue

Dynamic model issues

- Missing items
- Submission does not follow model quality guide
- Comments on dynamic models not addressed within the timeframe

For any email communications, include:

- The RI Engineer and
- ResourceIntegrationDepartment@ercot.com

Questions

