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| PGRR Number | [112](https://www.ercot.com/mktrules/issues/PGRR112) | PGRR Title | Dynamic Data Model and Full Interconnection Study (FIS) Deadline for Quarterly Stability Assessment |
| Date of Decision | | July 25, 2024 | |
| Action | | Approved | |
| Timeline | | Normal | |
| Estimated Impacts | | Cost/Budgetary: Less than $10K (O&M)  Project Duration: No project required | |
| Effective Date | | December 1, 2024 | |
| Priority and Rank  Assigned | | Not applicable | |
| Planning Guide Sections Requiring Revision | | 5.3.2.5, FIS Report and Follow-up  5.3.5, ERCOT Quarterly Stability Assessment | |
| Related Documents Requiring Revision/Related Revision Requests | | None | |
| Revision Description | | This Planning Guide Revision Request (PGRR) establishes requirements for Interconnecting Entities (IEs) to submit dynamic data models and for Transmission Service Providers (TSPs) to submit final Full Interconnection Studies (FISs) for approval at least 45 days prior to the quarterly stability assessment deadline. Projects will not be qualified for the quarterly stability assessment if dynamic data models and final FISs are submitted less than 45 days prior to the deadline.  This PGRR also establishes that an IE must notify ERCOT and lead TSP(s) of changes to FIS assumptions that occur after FIS completion and before Initial Synchronization. It further clarifies that ERCOT shall not include a Generation Resource or Settlement Only Generator (SOG) in a quarterly stability assessment if certain requirements are not met prior to the quarterly stability assessment deadline. ERCOT will be required to notify a Generation Resource or SOG if it is ineligible be included in a quarterly stability assessment for which it has timely submitted data. | |
| Reason for Revision | | [Strategic Plan](https://www.ercot.com/files/docs/2023/08/25/ERCOT-Strategic-Plan-2024-2028.pdf) Objective 1 – Be an industry leader for grid reliability and resilience  [Strategic Plan](https://www.ercot.com/files/docs/2023/08/25/ERCOT-Strategic-Plan-2024-2028.pdf) Objective 2 - Enhance the ERCOT region’s economic competitiveness with respect to trends in wholesale power rates and retail electricity prices to consumers  [Strategic Plan](https://www.ercot.com/files/docs/2023/08/25/ERCOT-Strategic-Plan-2024-2028.pdf) Objective 3 - Advance ERCOT, Inc. as an independent leading industry expert and an employer of choice by fostering innovation, investing in our people, and emphasizing the importance of our mission  General system and/or process improvement(s)  Regulatory requirements  ERCOT Board/PUCT Directive  *(please select ONLY ONE – if more than one apply, please select the ONE that is most relevant)* | |
| Justification of Reason for Revision and Market Impacts | | In accordance with Sections 5, Generator Interconnection or Modification and 6, Data/Modeling, IEs must submit dynamic data models and model quality test reports for approval ahead of the quarterly stability assessment deadlines established in paragraph (2) of Section 5.3.5.  Paragraph (4)(b)(i) of Section 5.3.5 recommends that the IE submit dynamic data models 30 days prior to the quarterly stability assessment deadline. However, in most cases, IEs submit or update the models only a week or two prior to the deadline, leaving ERCOT with a limited time period for reviewing such models. Additionally, TSPs have sometimes submitted FIS studies only a week or two before the quarterly stability assessment deadline, leaving ERCOT little time to review the study results before the deadline.  Market Participants have raised concerns with their dynamic data models not being evaluated in time for them to address comments prior to the quarterly stability assessment deadline.  This PGRR addresses Market Participant and ERCOT concerns by requiring the dynamic data model and final FISs to be submitted at least 45 days prior to the quarterly stability assessment deadline. This will provide ERCOT with sufficient time to review the submissions and send comments to the IE and will also provide the IE with sufficient time to address comments prior to the quarterly stability assessment deadline.  This PGRR will also ensure that a Generation Resource or SOG has satisfied the prerequisites for a quarterly stability assessment before ERCOT includes it in such an assessment. | |
| ROS Decision | | On 10/5/23, ROS voted unanimously to table PGRR112 and refer the issue to the Planning Working Group (PLWG) and Dynamics Working Group (DWG). All Market Segments participated in the vote.  On 3/7/24, ROS voted unanimously to recommend approval of PGRR112 as amended by the 1/17/24 ERCOT comments. All Market Segments participated in the vote.  On 4/4/24, ROS voted unanimously to endorse and forward to TAC the 3/7/24 ROS Report and the 4/1/24 Revised Impact Analysis for PGRR112 with a recommended effective date of December 1, 2024. All Market Segments participated in the vote. | |
| Summary of ROS Discussion | | On 10/5/23, ERCOT Staff presented PGRR112. Participants highlighted areas for potential improvements to the proposed language to provide clarity and referred PGRR112 to the PLWG and DWG for further discussion.  On 3/7/24, PLWG leadership reported the working group supports PGRR112 as modified by the 1/17/24 ERCOT comments.  On 4/4/24, participants reviewed the 4/1/24 Revised Impact Analysis. Market Participants requested a December 1, 2024 implementation date to allow them time to accommodate the new deadline requirements. | |
| TAC Decision | | On 4/15/24, TAC voted unanimously to recommend approval of PGRR112 as recommended by ROS in the 4/4/24 ROS Report. All Market Segments participated in the vote. | |
| Summary of TAC Discussion | | On 4/15/24, there was no additional discussion beyond TAC review of the items below. | |
| TAC Review/Justification of Recommendation | | Revision Request ties to Reason for Revision as explained in Justification  Impact Analysis reviewed and impacts are justified as explained in Justification  Opinions were reviewed and discussed  Comments were reviewed and discussed (if applicable)  Other: (explain) | |
| ERCOT Board Decision | | On 6/18/24, the ERCOT Board voted unanimously to recommend approval of PGRR112 as recommended by TAC in the 4/15/24 TAC Report. | |
| PUCT Decision | | On 7/25/24, the PUCT approved PGRR112 and accompanying ERCOT Market Impact Statement as presented in Project No. 54445, Review of Protocols Adopted by the Independent Organization. | |

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| **Opinions** | |
| Credit Review | Not applicable |
| Independent Market Monitor Opinion | IMM has no opinion on PGRR112. |
| ERCOT Opinion | ERCOT supports approval of PGRR112. |
| ERCOT Market Impact Statement | ERCOT Staff has reviewed PGRR112 and believes that requiring the dynamic data model and final FISs to be submitted at least 45 days prior to the quarterly stability assessment deadline will have a market positive impact by providing Market Participants time to address ERCOT’s comments from the evaluation of dynamic data models prior to the quarterly stability assessment deadline. |

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| Market Segment | Not Applicable |

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| **Comments Received** | |
| **Comment Author** | **Comment Summary** |
| LCRA 103123 | Proposed modifications to require TSPs to submit the preliminary FIS studies at least 45 days prior to the applicable quarterly stability assessment deadline |
| ERCOT 011724 | Agreed to change the deadline for submission of a final FIS from 30 Business Days to 45 days prior to the quarterly stability assessment deadline and proposed revisions to establish that an IE be required to notify ERCOT and the lead TSP(s) of changes to FIS assumptions that occur after FIS completion and before Initial Synchronization |
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| **Market Rules Notes** | |

Please note the baseline Planning Guide language in Section 5.3.5 was updated to include paragraphs (5) and (6) which were inadvertently omitted in the original submission of this PGRR.

Please note that the following PGRR(s) also proposes revisions to the following section(s):

* PGRR115, Related to NPRR1234, Interconnection Requirements for Large Loads and Modeling Standards for Loads 25 MW or Greater
  + Section 5.3.5

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| Proposed Guide Language Revision |

5.3.2.5 FIS Report and Follow-up

(1) The TSP(s) will submit to ERCOT and to the other TSP(s) via the online RIOO system a preliminary report of findings and recommendations for each of the FIS elements.

(2) Any questions, comments, proposed revisions, or clarifications by any party shall be made in writing to the TSP(s) within ten Business Days after the issuance of each study report, which may cover one or more study elements. ERCOT can extend this review period by an additional 20 Business Days and an email will be sent to notify the affected TSP(s) and the IE that it needs additional time to review the report.

(3) After considering the information received from ERCOT and other TSPs, the study element(s) report will be deemed complete and a final report shall be provided, via the online RIOO system, to ERCOT and all TSPs. The TSP(s) conducting the FIS shall submit via the online RIOO system, the SSR analysis, if required, as a separate document from the remainder of the report.

(4) Each final study element report will be available via the online RIOO system after the report has been deemed complete and marked “final” and will be posted to the MIS Secure Area within ten Business Days. Coincident with posting of the final FIS study element reports to the MIS Secure Area, ERCOT will notify the TSP and the IE when each study element report is posted. The TSP shall provide a copy of each final report to the IE upon request.

(5) The study element(s) report shall not contain sensitive information including, but not limited to, confidential plant design information including stability study model data and parameters and contingencies causing instability. The TSP(s) shall provide this information to ERCOT and other TSP(s) upon request.

(6) The TSP issuing the final FIS element(s) report shall indicate that the report is the final report required by the FIS. At the end of the ten Business Day review period following the issuance of the final FIS element(s) report, the FIS will be deemed complete and the IE and TSP may execute an SGIA.

(7) The final FIS element(s) report shall be deemed complete and marked “final” via the online RIOO system at least 45 days prior to the quarterly stability assessment deadline defined in paragraph (2) of Section 5.3.5, ERCOT Quarterly Stability Assessment.

(8) Should the IE wish to proceed with any proposed transmission-connected project, the IE must execute a new or amended SGIA with the appropriate TSP within 180 days following the completion of the FIS (includes all major study element(s) reports). Failure to do so may result in a cancellation as described in Section 5.2.6, Project Cancellation Due to Failure to Comply with Requirements.

(9) During the time after the FIS is completed and before Initial Synchronization, the IE shall notify both ERCOT and the lead TSP(s) of any changes to the assumptions used for the FIS along with a detailed written explanation of why the changes were made. If the changes substantially differ from the assumptions used for the FIS, ERCOT and the TSP(s) shall determine the impact of the changes on the results of the FIS and, if applicable, SSR studies. If the changes are determined by ERCOT and lead TSP(s) to have the potential to materially alter the conclusions documented in the FIS, the lead TSP(s) will make appropriate modifications to one or more FIS study elements. The updated FIS reports will be submitted via the online RIOO system. Any questions, comments, proposed revisions, or clarifications by any party shall be made in writing to the TSP(s) within ten Business Days after the issuance of an updated study report. Initial Synchronization of the generator may be delayed pending completion of these modifications to the FIS.

5.3.5 ERCOT Quarterly Stability Assessment

(1) ERCOT shall conduct a stability assessment every three months to assess the impact of planned large generators connecting to the ERCOT System. The assessment shall derive the conditions to be studied with consideration given to the results of the FIS stability studies for large generators, with planned Initial Synchronization in the period under study. ERCOT may study conditions other than those identified in the FIS stability studies.

(2) Large generators that are not included in the assessment as described in this Section as result of the IE failing to meet the prerequisites by the deadlines as listed in the table below will not be eligible for Initial Synchronization during that three-month period. The timeline for the quarterly stability assessment shall be in accordance with the following table:

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| Generator 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 |

(3) If the last day for an IE to meet prerequisites or if completion of the quarterly stability assessment as shown in the above table falls on a weekend or holiday, the deadline will extend to the next Business Day.

(4) The following prerequisites shall be satisfied prior to a large generator being included in the quarterly stability assessment:

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

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

(i) The IE shall submit the final dynamic data model at least 45 days prior to the quarterly stability assessment deadline described in paragraph (2) above. If ERCOT is unable to complete its review prior to the quarterly stability assessment deadline, ERCOT shall not include the Generation Resource or Settlement Only Generator (SOG) in that quarterly stability assessment.

(ii) Changes to the dynamic data model after the stability study is deemed complete may subject the Generation Resource or SOG to modification of one or more FIS study elements as defined in paragraph (9) of Section 5.3.2.5, FIS Report and Follow-up. If ERCOT and the lead TSP(s) determine that modifications to one or more FIS study elements are required, then ERCOT shall not include the Generation Resource or SOG in a quarterly stability assessment until the revised FIS has been completed in accordance with paragraph (4)(c)(i) below.

(iii) If an IE submitted a final dynamic data model at least 45 days prior to the quarterly stability assessment deadline but ERCOT determines that the Generation Resource or SOG is ineligible to be included in a quarterly stability assessment pursuant to paragraphs (4)(b)(i) or (4)(b)(ii) above, ERCOT will send a notification to the IE.

(c) The following elements must be complete:

(i) Final FIS studies, which the TSP must have submitted via the online RIOO system at least 45 days prior to the quarterly stability assessment deadline;

(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 generator.

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

(5) At any time following the inclusion of a large generator in a stability assessment, but before the Initial Synchronization of the generator, if ERCOT determines, in its sole discretion, that the generator no longer meets the prerequisites described in paragraph (4), or that an IE has made a change to the design of the generator that could have a material impact on ERCOT System stability, then ERCOT may refuse to allow Initial Synchronization of the generator, provided that ERCOT shall include the generator in the next quarterly stability assessment period that commences after identification of the material change or after the generator meets the prerequisites specified in paragraph (4), as applicable. If ERCOT determines, in its sole discretion, that the change to the design of the generator would not have a material impact on ERCOT System stability, then ERCOT may not refuse to allow Initial Synchronization of the generator due to this change.

(6) ERCOT shall post to the MIS Secure Area a report summarizing the results of the quarterly stability assessment within ten Business Days of completion.