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| PGRR Number | [120](https://www.ercot.com/mktrules/issues/PGRR120) | PGRR Title | SSO Prevention for Generator Interconnection |

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| Date | December 17, 2024 |

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| Market Segment | Independent Generator |

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| Comments |

Southern Power Company (“Southern Power”) submits these comments for discussion at the December 18, 2024, Planning Working Group (PLWG) meeting. Southern Power offers two redline suggestions for ERCOT and stakeholder review.

Southern Power respectfully requests clarity on the timing of when ERCOT would communicate the decision to cancel a proposed generation interconnection project pursuant to the newly proposed paragraph (1) of Section 5.2.10, Subsynchronous Oscillation (SSO) Prevention. Since ERCOT is proposing to identify the relevant information (i.e., if the number of Creditable Single Contingencies that would cause the generator to become radial to a series capacitor(s) post contingency is not greater than one), that would be used to determine if a proposed large generation interconnection project is subject to cancellation, as part of the Security Screening Study, Southern Power believes that it is appropriate for ERCOT to communicate this cancellation decision for large generators as part of the findings in the Security Screening Study report and has added proposed language to paragraph (4) of Section 5.3.1, Security Screening Study, to reflect this change. We believe this is important to provide additional certainty to future generation interconnection projects and existing generation interconnection projects that are far along in the interconnection process and have already successfully passed the Security Screening Study phase of the Generator Interconnection or Modification (GIM) process.

Secondly, Southern Power adds language that would allow for existing generators to proceed with a proposal to modify a generator, as described in paragraph (1)(c) of Section 5.2.1, Applicability, if Subsynchronous Oscillation (SSO) is observed during simulations so long as that generator has implemented SSO Mitigation that has been approved by ERCOT. Without this redline, it is possible that the policy change would discourage site improvements, such as repowering, when the site operates under an existing SSO Mitigation plan that could potentially be lost when repowering.

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| Revised Cover Page Language |

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| Planning Guide Sections Requiring Revision | 5.2.10, Subsynchronous Oscillation (SSO) Prevention (new)  5.3.1, Security Screening Study |

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| Revised Proposed Guide Language |

***5.2.10 Subsynchronous Oscillation (SSO) Prevention***

(1) A proposal to interconnect a generator, as described in paragraph (1)(a) or (1)(b) of Section 5.2.1, Applicability, will be subject to cancellation as described in Section 5.2.6, Project Cancellation Due to Failure to Comply with Requirements, if the number of Credible Single Contingencies causing the generator to become radial to a series capacitor(s) post contingency is not greater than one. Credible Single Contingencies will be determined as follows:

(a) Large generators shall have the number of Credible Single Contingencies that cause a generator to become radial to a series capacitor(s) determined during the topology-check in the Security Screening Study, as described in Section 5.3.1, Security Screening Study.

(b) Small generators shall have the number of Credible Single Contingencies that cause a generator to become radial to a series capacitor(s) determined by the TDSP.

(2) A proposal to modify a generator, as described in paragraph (1)(c) of Section 5.2.1, that is interconnected such that a Credible Single Contingency causes the generator to become radial to a series capacitor(s) shall be allowed only if simulations demonstrate that Subsynchronous Oscillation (SSO) is not observed or if SSO is observed and the Resource Entity for the Generation Resource has demonstrated to ERCOT’s reasonable satisfaction that SSO has been fully mitigated.

(3) If any SSO is observed during operations, ERCOT may prohibit the generator from operating until it is demonstrated to ERCOT’s reasonable satisfaction that SSO has been fully mitigated.

5.3.1 Security Screening Study

(1) For each Generator Interconnection or Modification (GIM) submitted for a large generator, ERCOT will conduct a steady-state Security Screening Study, including power-flow and transfer studies, based on the expected in-service year to identify potential generation dispatch limitations based on the site proposed by the Interconnecting Entity (IE).

(a) The Security Screening Study is a high-level review of the project and generally includes a number of initial assumptions from both ERCOT and the IE. In accordance with P.U.C. Subst. R. 25.198, Initiating Transmission Service, ERCOT will establish the scope of the Security Screening Study that will include a determination of the need for a more in-depth Subsynchronous Resonance (SSR) study. The SSR vulnerability of all Generation Resources applicable under Section 5, Generator Interconnection or Modification, will be assessed pursuant to Protocol Section 3.22.1.2, Generation Resource or Energy Storage Resource Interconnection Assessment.

(b) At its sole discretion, ERCOT may waive the requirement for a Security Screening Study for a GIM.

(2) The results of the Security Screening Study will provide an indication of the level at which the proposed generator can expect to operate simultaneously with other known generators in the area before significant transmission additions or enhancements may be required. During the course of the Security Screening Study, ERCOT may consult with the affected Transmission Service Provider(s) (TSP(s)), if needed, to identify the most efficient means of providing transmission service.

(3) During the Security Screening Study phase of the GIM process, and in accordance with the Protocols, all data, documents, and other information required by ERCOT from an IE related to a request for interconnection are considered Protected Information pursuant to Protocol Section 1.3.1.1, Items Considered Protected Information, to the extent that such information is not otherwise publicly available. Accordingly, ERCOT shall not publicly release any of the protected data, documents, or other information during the Security Screening Study phase except to TSPs. Information about interconnection requests in the Security Screening Study phase will only be released publicly in aggregated amounts.

(4) Upon completion of the Security Screening Study, ERCOT will present the IE with a preliminary report that will inform the IE about the suitability of the proposed Point of Interconnection (POI) for the proposed MW amount. This report does not imply any commitment by ERCOT or any TSP to recommend or construct transmission additions or enhancements. The report will also contain a description of the SSR assessment performed as part of the Security Screening Study and any conclusions resulting from the SSR assessment, including the number of identified Credible Single Contingencies that would cause a generator to become radial to a series capacitor(s) and ERCOT’s determination of whether to cancel a proposal to interconnect a generator as described in paragraph (1) of Section 5.2.10, Subsynchronous Oscillation (SSO) Prevention.

(5) Within 180 days of the date ERCOT notifies the IE of the Security Screening Study results, the IE must notify ERCOT, via the online Resource Integration and Ongoing Operations (RIOO) system, of its desire to pursue an FIS, otherwise ERCOT shall consider the GIM withdrawn by the IE. ERCOT will begin initiation and coordination of the FIS only after receiving this Notification and all required items from the IE for the FIS application to be approved. TSPs will receive a RIOO system automated email when ERCOT determines the FIS application is complete.

(6) After the expiration of the 180-day period, an IE must submit a new GIM for a Security Screening Study and must again pay the appropriate fee. The IE will also be required to submit any updates or changes in the project’s data to ERCOT.

(7) For any interconnection request that proposes either a large generator that would be interconnected at distribution voltage or a qualifying modification to a large generator that is interconnected at distribution voltage, ERCOT will not initiate a Security Screening Study or propose any FIS kickoff meeting until the IE first provides written confirmation from the affected Distribution Service Provider (DSP) stating that the DSP has evaluated the proposed project, determined that the interconnection of the generator at distribution voltage is electrically feasible, and identified the necessary upgrades to accommodate the proposed interconnection. In conducting a Security Screening Study for such an interconnection request, ERCOT shall evaluate only the transmission-level impacts, if any, of the proposed generator, and the affected DSP shall provide ERCOT any information concerning the DSP’s facilities or the proposed generator interconnection as may be requested by ERCOT for the purpose of completing the Security Screening Study.