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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 | February 13, 2025 |

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| Market Segment | Not applicable |

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| Comments |

Splight appreciates this opportunity to submit comments on Planning Guide Revision Request (PGRR) 120. Building on the comments submitted by Lone Star Transmission, LLC (Lone Star) filed February 7, 2025, Splight would like to reinforce the fact that multiple mechanisms exist to prevent Subsynchronous Oscillation (SSO) events on series-compensated lines. In addition to the solutions proposed by Lone Star, a dynamic contingency management system (DCM) is a type of advanced technology that uses super-fast computing and real-time communications to control generation and/or load. With a DCM in place, the status of the Resources on a series-compensated line would be monitored on a sub-second basis and if SSO were detected, the system could reduce injection or take the compensation offline – protecting the system with minimal impact. As such, Splight proposes the following changes to PGRR120:

1. Include DCM as an option for SSO mitigation. This could be implemented alongside mechanical solutions, which can provide backup.
2. Splight also proposes that the generator owners who seek interconnection under Section 5.2.10 may provide the mitigating mechanism.

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| Revised Cover Page Language |

None

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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 and proposed generators study indicates an unmitigable risk of SSO through studies. 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.

(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.

(4) A Transmission Service Provider (TSP) or generator owner shall be allowed to provide mitigation to prevent the risk of SSO under the listed configuration in paragraph (1) above. Such mitigations will include, but are not limited to, the implementation of a sub-second dynamic contingency management solution by the generator, or operational schemes such as breaker configuration, switching mechanisms like the cross-tripping of series capacitors for the credible N-1 condition, the replacement of series capacitors with grid-enhancing technologies such as Smart Wires, TCSC, UPFC, STATCOMs, etc., or eliminating the need for series capacitors via networking with new or existing lines.