



SSR Study Proposals

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ERCOT Transmission Planning

Resource Integration Workshop
August 25, 2020

Proposed Fewer Scenarios for SSR studies

Original	Proposed
• 100% Devices, 100% Dispatch • 100% Devices, 10% Dispatch • 10% Devices, 100% Dispatch • 10% Devices, 10% Dispatch • Additional Q_{LAGGING} scenario • Additional Q_{LEADING} scenario	• 100% Devices, 100% Dispatch • 100% Devices, 10% Dispatch, Q_{LAGGING} • 100% Devices, 10% Dispatch, Q_{LEADING} • 50% Devices, 20% Dispatch

- Change:
 - Two fewer scenarios and no scenario with 10% inverters/turbines online
- Justification:
 - More reasonable reflection of SSR risk based on historical outage information
 - Combining the power-factor scenarios with 10% dispatch appears to be sufficient per past frequency scans
- Criteria:
 - No SSR and no tripping for the above scenarios
 - TOs can require additional scenarios

Proposed NPRR: SSR Mitigation

- Protocol 3.22:
 - Require Mitigation for N-1 thru N-6 for new projects

(3) If the SSR study performed in accordance with paragraph (2) above indicates that the Generation Resource is vulnerable to SSR in the event of ~~four~~six or less concurrent transmission Outages, the IE shall develop an SSR Mitigation Plan, provide it to the interconnecting TSP for review and inclusion in the TSP's SSR study report to be approved by ERCOT, and implement the SSR Mitigation prior to Initial Synchronization.

- This would have the positive benefit of reducing the need to disconnect Resources and/or bypass the series capacitors which could in turn avoid reducing transfer limits
- SSR Mitigation technology for Generation Resources is mature and reasonable to implement
 - Note that this change really only impacts projects which are further from series capacitors (being N-5 or N-6); mitigation tends to work well here
- Applicable going forward (Protocol section applies to SSR study criteria)
 - Existing monitoring procedures would continue to be maintained

Next Steps and Tentative Schedule

- Update ERCOT SSR standard scope document to reflect proposed SSR study scenarios in September, 2020
- Submit SSR Mitigation NPRR in September, 2020

Comments are welcome

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