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| **SO-28 SPS actuation for N-0 Conditions:** A SPS is a Special Protection Scheme which is an automatic system designed to trip a generator off line when needed to protect the transmission system. If an SPS is actuated for an N-0 condition that means it is tripping the generator off even though there has been no transmission contingency. This can occur when a new generator is connected to a transmission system that can handle some of its output all of the time and all of its output only some of the time. Since line flows are determined by more than that generator’s output, a SPS is employed to take the generator off line when the total flow, which the generator is not allowed to know, is reaching the transmission lines limit.  A problem arose with coordinating ERCOT operations directions to the generator with the generators actions to avoid being tripped. The SPS warning signal, before the trip, was being used by the generator to cut production to avoid the trip. All parties agreed that this was appropriate; however it was unclear whether a complete SPS investigation and report was needed when the warning signal activated but the SPS never tripped the unit. The investigation and reporting was a considerable burden on the Transmission Service Provider (TSP), ERCOT, and the Texas Reliability Entity (TRE). All parties agreed that the investigation and report were needed only if the SPS actually tripped the unit and the Operating Guides were modified to clarify the requirements.  This issue affects WGRs almost exclusively since several WGRs have been connected to the transmission system ahead of the needed improvements. While this is normally a temporary situation, the design and construction of CREZ has become part of the solution for many of the WGRS. Other, timelier transmission upgrades are not being pursued since they would become redundant once CREZ construction is complete. This issue has been resolved through procedural changes. | |
| **Priority** | Low |
| **Considerations** | Policy: None |
| Reliability: None |
| Technical: None |
| Market: None |
| Performance/Compliance: Fundamentally, this issue is associated with compliance procedures. |
| Cost Allocation: None |
| **Strategy** | Recommendation: Insure that there are no reliability issues associated with the N-) SPS operating procedures and modify the Operating Guides to clarify requirements. |
| **Activities** | ERCOT (E X): Assist in review and resolution of the issue. |
| Market Participants (MP X):  Generators, TRE, and TSPs assist in review and resolution of the issue. |
| **Follow-Up** | None needed |
| **Schedule** | September 2009 Operating Guide Revision Request 224 clarifying SPS reporting requirements was approved |