



ERCOT New SOL Methodology and FAC-014-3 R7 Requirement (Corrective Action Plan)

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Project 2015-09 Establish and Communicate System Operating Limits

High level overview of the changes:

- FAC-010-3 – SOL methodology for the planning horizon will be retired on March 31, 2024
- FAC-011-3 – SOL methodology for the operations horizon replaced with FAC-011-4
- FAC-014-2 – Establishing and Communicating SOL and SOL information replaced with FAC-014-3
- Revised definition of System Operating Limit
- New definition of System Voltage Limit
- Revised SOL Whitepaper

ERCOT NEW SOL Methodology for Operations Horizon

- The new NERC Reliability Standards FAC-011-4 and FAC-014-3 will become effective on April 1, 2024
- FAC-011-4 R1: Each Reliability Coordinator shall have a documented methodology for establishing SOLs (i.e., SOL methodology) within its Reliability Coordinator Area. This methodology will address each type of SOL: Facility Ratings, System Voltage Limits, and stability limits.
- Establishes System Operating Limits (SOLs), and the subset of SOLs classified as Interconnection Reliability Operating Limits (IROLs) [FAC-011-4 R1, R8, R8.1, R8.2]
- Communications of the SOL Methodology, the methods of communication of the SOLs and IROLs, and required communications between the Planning Coordinator, Transmission Planner with affected entities [FAC-011-4 R9; FAC-014-3 R5-R8]
- Draft SOL Methodology for Operations Horizon sent out to NERC-registered Transmission Operators and Transmission Planners, ERCOT Transmission Operators on August 11, 2023

FAC-014-3 R7 - Corrective Action Plans

- R7.** Each Planning Coordinator and each Transmission Planner shall annually communicate the following information for Corrective Action Plans developed to address any instability identified in its Planning Assessment of the Near-Term Transmission Planning Horizon to each impacted Transmission Operator and Reliability Coordinator. This communication shall include: *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*
- 7.1** The Corrective Action Plan developed to mitigate the identified instability, including any automatic control or operator-assisted actions (such as Remedial Action Schemes, under voltage load shedding, or any Operating Procedures);
 - 7.2** The type of instability addressed by the Corrective Action Plan (e.g. steady-state and/or transient voltage instability, angular instability including generating unit loss of synchronism and/or unacceptable damping);
 - 7.3** The associated stability criteria violation requiring the Corrective Action Plan (e.g. violation of transient voltage response criteria or damping rate criteria);
 - 7.4** The planning event Contingency(ies) associated with the identified instability requiring the Corrective Action Plan;
 - 7.5** The System conditions and Facilities associated with the identified instability requiring the Corrective Action Plan.

FAC-014-3 R7 - Corrective Action Plans

- The following template is developed so that each PC and TP fill in the details annually and communicate to ERCOT ISO
- The template can be attached as an Appendix in the Annual TPL studies report or be shown in a separate section in the Annual TPL studies

FAC-014-3 R7	Question	Response
7.1	Describe the Corrective Action Plan developed to mitigate the identified instability, including any automatic control or operator-assisted actions (such as Remedial Action Schemes, under voltage load shedding, or any Operating Procedures)	
7.2	The type of instability addressed by the Corrective Action Plan (e.g. steady-state and/or transient voltage instability, angular instability including generating unit loss of synchronism and/or unacceptable damping)	
7.3	The associated stability criteria violation requiring the Corrective Action Plan (e.g. violation of transient voltage response criteria or damping rate criteria);	
7.4	The planning event Contingency(ies) associated with the identified instability requiring the Corrective Action Plan	
7.5	The System conditions and Facilities associated with the identified instability requiring the Corrective Action Plan	