

Standards Authorization Request Form

When completed, email this form to:
sarcomm@nerc.net

NERC welcomes suggestions to improve the reliability of the bulk power system through improved reliability standards. Please use this form to submit your request to propose a new or a revision to a NERC's Reliability Standard.

Request to propose a new or a revision to a Reliability Standard

Title of Proposed Standard(s):	Establish and Communicate System Operating Limits		
Date Submitted:	September 29, 2017		
SAR Requester Information			
Name:	Project 2015-09 SDT		
Organization:	NERC		
Telephone:	404.446.9691	E-mail:	steven.noess@nerc.net
SAR Type (Check as many as applicable)			
<input checked="" type="checkbox"/> New Standard	<input checked="" type="checkbox"/> Withdrawal of existing Standard		
<input checked="" type="checkbox"/> Revision to existing Standard	<input type="checkbox"/> Urgent Action		

SAR Information

Purpose (Describe what the standard action will achieve in support of Bulk Electric System reliability.):

The project will revise requirements for determining and communicating System Operating Limits (SOLs) used in the reliable planning and operation of the Bulk Electric System (BES).

Industry Need (What is the industry problem this request is trying to solve?):

FAC standards fulfill an important reliability objective for determining and communicating SOLs used in the reliable planning and operation of the Bulk Electric System (BES). Revisions are necessary to improve the requirements by eliminating overlap with approved Transmission Planning (TPL) requirements, enhancing consistency with Transmission Operations (TOP) and Interconnection Reliability Operations (IRO) standards, and addressing issues with determining and communicating SOLs and Interconnection Reliability Operating Limits (IROLs).

SAR Information

Brief Description (Provide a paragraph that describes the scope of this standard action.)

The proposed standards project will revise the requirements for determining and communicating SOLs and IROLs to address issues identified in Project 2015-03 Periodic Review of System Operating Limit Standards. The resulting standard(s) and definition(s) will benefit reliability by improving alignment with approved TPL and proposed TOP and IRO standards. The project may result in development of one or more proposed Reliability Standards and definitions and may consolidate reliability objectives from the existing three Reliability Standards. Where necessary, the standard drafting team (SDT) will review and modify existing Reliability Standards and NERC Glossary terms (definitions) for incorporating the new and/or revised definitions.

Detailed Description (Provide a description of the proposed project with sufficient details for the standard drafting team to execute the SAR. Also provide a justification for the development or revision of the standard, including an assessment of the reliability and market interface impacts of implementing or not implementing the standard action.)

The standards development project will consider recommendations from Project 2015-03 Periodic Review of System Operating Limits. This review included inputs from the Independent Experts Review Project (IERP), FERC Directives, and Paragraph 81 concepts. When completed, the project will address all issues identified in the Periodic Review Recommendations (PRRs) for FAC-010-3, FAC-011-3, and FAC-014-2, including:

- Propose retirement of FAC-010-3. BES planning is covered under approved TPL-001-4 which provides comprehensive requirements for a variety of contingencies. The standards project will propose retirement of FAC-010-3.
- Clarify acceptable System performance criteria for the operations time horizon. The proposed standards project will develop continent-wide standards for system performance in the operations time horizon to replace currently-enforceable requirements in FAC-011-3 that specify acceptable system performance through the Reliability Coordinator's (RC) SOL methodology. Development of a table similar to TPL-001-4 Table 1 with appropriate requirements for the operations time horizon would enhance clarity and consistency. This project will determine the appropriate family of standards for this table.
- Propose requirements to address identified reliability issues. Requirement(s) will be developed to address FERC Order No. 777 directive for the communication of IROL information to Transmission Owners (P6 and P41). FERC Order No. 777 states:
"As discussed below, we also direct NERC to develop a means to assure that IROLs are communicated to transmission owners." (P 6)

"NERC should establish a clearly defined communication structure to assure that IROLs and

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changes to IROL status are timely communicated to transmission owners...One way to achieve this objective...is to modify FAC-014 to require the provision of IROLs to transmission owners. However, we leave it to NERC to determine the most appropriate means for communicating IROL status to transmission owners.” (P 41)

- Revise or develop new definitions to provide clarity and alignment with how SOLs are treated in proposed TOP and IRO standards developed in Project 2014-03 Revisions to TOP and IRO Standards. This work may include, but is not limited to, revising the definition of System Operating Limit (SOL) and creating a new definition for SOL Exceedance. The project will also address the issues identified in the FAC PRRs related to the application of the IROL term. Proposed definitions should provide clarity and consistency to establishing SOLs and IROLs and promote a common understanding of what it means to establish and exceed SOLs. The SDT will review the existing body of NERC Reliability Standards and NERC Glossary terms (definitions) and where appropriate, modify those standards and definitions by incorporating the new terms and/or definitions of SOL Exceedance and System Voltage Limit, as well as the revised definition of SOL. The SDT will coordinate with other drafting teams on relevant standards as necessary.
- Clarify responsibilities for establishing and communicating SOLs. The project will propose requirements to clearly delineate the functional entity responsibilities for determining and communicating each type of SOL (Facility Ratings, System voltage limits, voltage stability limits, and transient stability limits) where not already addressed in existing standards (e.g., FAC-008).
- Develop revised or new requirement(s) that facilitate transfer of necessary reliability information between the planning and operating entities for establishing and communicating System Operating Limits.
Revise requirements to conform to the Results-Based Standards format, functional entity terms found in the NERC Functional Model, guidelines for compliance elements, and NERC standards for content and quality (Independent Experts Review Project).

Reliability Functions

The Standard will Apply to the Following Functions (Check each one that applies.)

<input type="checkbox"/> Regional Reliability Organization	Conducts the regional activities related to planning and operations, and coordinates activities of Responsible Entities to secure the reliability of the Bulk Electric System within the region and adjacent regions.
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Reliability Functions	
<input checked="" type="checkbox"/> Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
<input type="checkbox"/> Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports Interconnection frequency in real time.
<input type="checkbox"/> Interchange Authority	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
<input checked="" type="checkbox"/> Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
<input type="checkbox"/> Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within a Planning Coordinator area.
<input checked="" type="checkbox"/> Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within its portion of the Planning Coordinator area.
<input type="checkbox"/> Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
<input checked="" type="checkbox"/> Transmission Owner	Owns and maintains transmission facilities.
<input checked="" type="checkbox"/> Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
<input type="checkbox"/> Distribution Provider	Delivers electrical energy to the End-use customer.
<input checked="" type="checkbox"/> Generator Owner	Owns and maintains generation facilities.
<input checked="" type="checkbox"/> Generator Operator	Operates generation unit(s) to provide real and Reactive Power.
<input type="checkbox"/> Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
<input type="checkbox"/> Market Operator	Interface point for reliability functions with commercial functions.
<input type="checkbox"/> Load-Serving Entity	Secures energy and transmission service (and reliability-related services) to serve the End-use Customer.

Reliability and Market Interface Principles

Applicable Reliability Principles (Check all that apply).	
<input checked="" type="checkbox"/>	1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
<input checked="" type="checkbox"/>	2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and Reactive Power supply and demand.
<input checked="" type="checkbox"/>	3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.
<input type="checkbox"/>	4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented.
<input type="checkbox"/>	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems.
<input type="checkbox"/>	6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.
<input checked="" type="checkbox"/>	7. The reliability of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis.
<input type="checkbox"/>	8. Bulk power systems shall be protected from malicious physical or cyber attacks.
Does the proposed Standard comply with all of the following Market Interface Principles?	
1. A reliability standard shall not give any market participant an unfair competitive advantage.	Enter (yes/no) YES
2. A reliability standard shall neither mandate nor prohibit any specific market structure.	YES
3. A reliability standard shall not preclude market solutions to achieving compliance with that standard.	YES
4. A reliability standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards.	YES

Related Standards

Standard No.	Explanation
FAC-010-3	Project 2015-03 PRR recommends retirement.
FAC-011-3	Project 2015-03 PRR recommends revision.

Related Standards	
FAC-014-2	Project 2015-03 PRR recommends revision.
FAC-015-1	Project 2015-09 SDT proposed new.
Other standards and NERC Glossary terms/definitions	Project 2015-09 SDT proposed revisions, as required to account for the use of any new and modified NERC Glossary definitions.

Related SARs	
SAR ID	Explanation

Regional Variances	
Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
RFC	
SERC	
SPP	
WECC	Regional Differences (Section E) is being reviewed through the WECC standards process.