

## Standard Authorization Request Form

Title of Proposed Standard	Revise System Operating Limit Methodology in FAC-011-1 to Require Consideration of Credible Multiple Element Contingencies in the Operating Horizon
Request Date	November 9, 2007

<b>SAR Requester Information</b>	<b>SAR Type</b> <i>(Check a box for each one that applies.)</i>
Name Roger E. Clayton, Chairman, NYSRC Reliability Rules Subcommittee, on behalf of the New York State Reliability Council	<input type="checkbox"/> New Standard
Primary Contact Roger E. Clayton	<input checked="" type="checkbox"/> Revision to existing Standard
Telephone 518-588-6362 Fax	<input type="checkbox"/> Withdrawal of existing Standard
E-mail <a href="mailto:roger.clayton@electricpowerresources.com">roger.clayton@electricpowerresources.com</a>	<input type="checkbox"/> Urgent Action

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**Purpose** (Describe what the standard action will achieve in support of bulk power system reliability.)

Revise FAC-011-1 to require consideration of credible multiple element contingencies for determining system operating limits (SOLs) in the operating horizon, as defined in TLP-003-0\* and FAC-010-1 in the planning horizon.

\*TLP-001-1, which is proposed to replace TPL-001-0 through TPL-004-0, would continue to require consideration of credible multiple element contingencies.

**Industry Need** (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.)

Credible multiple element contingencies pose a threat to the reliability of the bulk electric system in North America. As per an analysis conducted by PPL Electric Utilities, presented to the NERC Planning Committee on March 15, 2006, historical data shows multiple element contingency events occurred on the PJM system on an average of 18 times per year during the 1996-2003 period, clearly showing that these are not uncommon events. Not developing both planning and operating standards for determining SOLs that consider multiple facility forced outages, i.e., Category C contingencies, despite the frequent occurrence of such events, would be accepting a type of event that could lead to a high risk of unreliable performance. Therefore, the system must be postured for meeting Category C contingencies for determining SOLs in the operating horizon, as is now required by Standards TPL-003-0 and FAC-010-1 in the planning horizon. Strengthening of FAC-011-1, by considering credible multiple element contingencies, would make this standard consistent with TPL-003-0 and FAC-010-1, and would improve system performance by operating, as well as planning to Category C contingencies.

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

Revise FAC-011-1 to require consideration of credible multiple element contingency events for determining SOLs in the operating horizon, as required by TPL-003-0 and FAC-010-1 for the planning horizon.

**Detailed Description** (Provide a description of the proposed project with sufficient details for the standard drafting team to execute the SAR.)

Revise Requirement R2 of FAC-011-1 such that the Reliability Coordinator's methodology for determining SOLs in the operating horizon include a requirement to operate in real time to credible multiple element contingencies identified in TPL-003-0, Table 1, so as not to violate IROL post contingency limits. This requirement should be consistent with Requirements R2.4 and R2.5 of FAC-010-1, which provides requirements for developing SOLs in the planning horizon. Credible multiple element contingencies are those identified through study which can lead to IROL violations.

Following a single or double contingency, the system will no longer be required to be operated to Category C contingencies.

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**Reliability Functions**

<b>The Standard will Apply to the Following Functions</b> <i>(Check box for each one that applies.)</i>		
<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.
X	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.
x	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.
x	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 type="checkbox"/>	Transmission Owner	Owns and maintains transmission facilities.
X	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 type="checkbox"/>	Generator Owner	Owns and maintains generation facilities.
<input 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**

<b>Applicable Reliability Principles</b> <i>(Check box for all that apply.)</i>	
X	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.
X	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.
X	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.
X	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.
X	7. The security 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.
<b>Does the proposed Standard comply with all of the following Market Interface Principles?</b> <i>(Select 'yes' or 'no' from the drop-down box.)</i>	
1. A reliability standard shall not give any market participant an unfair competitive advantage. 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	

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***Related Standards***

<b>Standard No.</b>	<b>Explanation</b>
FAC-011-1	Requirement R2 defines the contingencies that apply to the operating horizon.

***Related SARs***

<b>SAR ID</b>	<b>Explanation</b>

***Regional Variances***

<b>Region</b>	<b>Explanation</b>
ERCOT	
FRCC	
MRO	
NPCC	
SERC	
RFC	
SPP	
WECC	