

Request to Develop Reliability Rules for Implementation of Rules Enhancement Plan (REP)

Item	Response
1. Rules Enhancement Plan (REP) Description	On April 11, 2013, the NYSRC Executive Committee adopted a Rules Enhancement Plan (REP) which: (1) restructures the present NYSRC Reliability Rules and supporting elements, and (2) proposes new rules and revises others to ensure they are consistent with current and pending NERC and NPCC standards and criteria, while continuing to maintain NYSRC's more stringent and specific requirements. Comments will be considered for proposed new and revised rules that are highlighted in red-line. The REP is described in the NYSRC report, <i>Rules Enhancement Plan</i> , www.nysrc.org/reports3.asp , which describes the restructured rule format (PRR Lines 3-7) and the tasks for implementing the REP.
2. Reliability Rule Requester	NYSRC Reliability Rules Subcommittee (RRS)
3. REP Proposed Reliability Rule (PRR) No.	PRR REP-09
4. Number and Title of Proposed Reliability Rule	F-R1 Mitigation of Major Emergencies
5. Section A – Reliability Rule Elements	
1. Reliability Rule	<u>The NYISO shall develop, maintain, and implement plans to mitigate operating emergencies.</u>
2. Associated NERC & NPCC Standards and Criteria	NERC: EOP-001-2 – Emergency Operations Planning NPCC: Directory 2 – Emergency Operations
3. Applicability	NYISO
6. Section B – Requirements	
Requirements	<p>R1. Transmission Thermal Overloads If a transmission facility, which constitutes a part of the <i>NYS Bulk Power System</i>, becomes overloaded, relief measures shall be applied immediately to bring the loading within established <i>ratings</i>.</p> <p>R1.1 When a facility becomes loaded above its <i>LTE rating</i>, but below its <i>STE rating</i>, corrective action must be taken to return the loading on the facility to its <i>LTE rating</i> or lower within fifteen (15) minutes; provided, however, that after taking corrective action, loadings on the facility are not below its <i>LTE rating</i> within five (5) minutes, a <i>major emergency</i> shall be declared and corrective measures taken – which may include <i>voltage reduction</i> and/or <i>load relief</i> – to return the loading on the facility to its <i>LTE rating</i> or lower within fifteen (15) minutes from the initial overload. At the NYISO'S discretion, a major emergency may be declared at any time a facility becomes loaded above its <i>LTE rating</i>.</p> <p>R1.2 When a facility becomes loaded at or above its <i>STE rating</i>, immediate corrective action which may include <i>voltage reduction</i> and/or <i>load shedding</i>, must be initiated to reduce the loading on the facility to below its <i>STE rating</i> within five (5) minutes and furthermore, to continue to reduce the loading on the facility to below its <i>LTE rating</i> within ten (10) minutes from the initial overload. If the loading is substantially above the <i>STE rating</i>, <i>load relief</i> should be considered as the initial action to be taken.</p>

R1.3 After the loading on a facility has been reduced below its *LTE rating* additional corrective action, excluding further *voltage reduction* and/or *load shedding*, should be taken to reduce the loading on the facility to below its *normal rating* within thirty (30) minutes of the initial overload. In the event this cannot be accomplished, *emergency transfer criteria* shall be invoked.

R1.4 When a facility has been loaded for four (4) continuous hours (or such longer period as may be established by the *Rating Authority*) above its *normal rating*, but at or below its *LTE rating*, corrective action, which may include *voltage reduction* and/or *load shedding*, must be taken to return the facility to its *normal rating* within thirty (30) minutes.

Procedures shall be developed by the *NYISO* consistent with the *NYISO* tariffs that resolve transmission overloads caused by both internal and external events to the *NYS Bulk Power System*.

R2. Post-Contingency STE Rating Violations

If a transmission facility which constitutes a part of the *NYS Bulk Power System* is being operated under *emergency transfer criteria* and becomes loaded to a level which would cause its post-contingency loading to exceed its *STE rating* and corrective action could not be taken rapidly enough to meet the requirements of this policy once the *contingency* occurs, immediate corrective action which may include *voltage reduction* and *load shedding*, must be taken to reduce the loading such that sufficient time will be available to apply corrective action following the *contingency*.

R3. High or Low Voltage

Voltage control of the *NYS Bulk Power System* shall be coordinated to provide adequate voltage. at all times to maintain power *transfer capability*.

When in a *major emergency* due to voltage problems, all *transmission owners* shall be notified of the condition and direct the necessary corrective actions short of *load shedding*.

If, having taken the actions above, the actual voltage at any *NYS Bulk Power System* bus remains below its pre-contingency low limit for thirty (30) minutes or declines to a level below the midpoint between the pre- and post-contingency low limits and remains there for fifteen (15) minutes, the *NYISO* shall discuss the situation with the *transmission owner(s)* to determine if corrective action could be taken following a *contingency* to prevent a system voltage collapse. If it is anticipated that adequate time will not exist to prevent a voltage collapse following a *contingency*, the *transmission owners* shall be directed to take the necessary corrective action, including *load shedding*, to maintain a minimum voltage equal to the pre-contingency low limit. If the actual voltage at any *NYS Bulk Power System* bus declines below the post-contingency low limit and is indicative of a system voltage collapse, the *NYISO* shall immediately order *load shedding* in the amount and at the locations deemed necessary to maintain a minimum voltage equal to the pre-contingency low limit.

R.4 Post-Contingency Voltage

R4.1 Less than 5%

If the post-contingency loading of an internal New York transfer *interface* or the post-contingency flow towards New York on an *inter-control area interface* exceeds the limits associated with a voltage

collapse by less than 5%, measures shall be applied immediately to bring the loading to established limits within fifteen (15) minutes. If, after taking corrective action, loadings are not below the limit within fifteen (15) minutes, a *major emergency* shall be declared and corrective measures, which may include *load relief*, shall be initiated to bring the loading to established limits within fifteen (15) minutes. If loadings are not below the limit within thirty (30) minutes from the initial overload, *load relief* measures must be instituted.

R4.2 More than 5%

If the post-contingency loading of an internal New York transfer interface or the post-contingency flow towards New York of an inter-control area interface exceeds the limits associated with a voltage collapse by 5% or more, a major emergency shall be declared immediately and corrective measures, which may include *load relief*, shall be initiated to bring the loading to established limits. If loadings are not below 105% of the limit within fifteen (15) minutes from the initial overload, or below the limit within thirty (30) minutes from the initial overload, *load relief* measures must be instituted.

R.5 Operating Reserve Deficiency

Emergency transfer criteria shall be invoked if necessary to provide transmission capability to deliver *operating reserve* to an area deficient in *operating reserve*. The NYISO shall notify all *transmission owners* that *emergency transfer criteria* have been invoked and *transmission owners* in the deficient area shall be prepared to return facilities to appropriate *ratings* within the prescribed time should such *ratings* be exceeded. If, after the above action, a shortage of *ten (10) minute operating reserve* or *operating reserve* still exists, the NYISO shall declare a *major emergency* and shall direct that *load relief* procedures be implemented.

R.6 Stability Limit Violation

R6.1 Less than 5%

If the loading of an internal New York transfer interface or the power flow towards New York on an inter-control area interface exceeds the system *stability limit* by less than 5%, measures shall be applied immediately to bring the loading to established limits within fifteen (15) minutes. If, after taking corrective action, loadings are not below the *stability limit* within fifteen (15) minutes, a *major emergency* shall be declared and corrective measures, which may include *load relief*, shall be initiated to bring the loading to established limits within fifteen (15) minutes. If loadings are not below the *stability limit* within thirty (30) minutes from the initial overload, the *transmission owners* shall be ordered by the NYISO to institute *load relief* measures.

R6.2 More than 5%

If the loading of an internal New York transfer interface or the power flow towards New York on an inter-control area interface exceeds the system *stability limit* by 5% or more, a *major emergency* shall be declared immediately and corrective measures, which may include *load relief*, shall be initiated to bring the loading to established limits. If loadings are not below 105% of the *stability limit* within fifteen (15) minutes from the initial overload, or below the *stability limit* within thirty (30) minutes from the initial overload, *load relief* measures must be instituted.

	<p>R7. Low Frequency A sustained low frequency of 59.9 Hz is an indication of major <i>load-generation</i> imbalance in which case a <i>major emergency</i> shall be declared. During a <i>major emergency</i> resulting from a low frequency condition caused by <i>load-generation</i> imbalance within the <i>NYCA</i>, <i>load</i> shall be shed in accordance with a schedule previously determined.</p> <p>R8. The <i>NYISO</i> shall maintain procedures and systems that ensure that appropriate actions are taken when frequency, <i>reserves</i>, <i>thermal</i>, <i>voltage</i>, and/or <i>stability limits</i> are violated. The <i>NYISO</i> must notify the <i>NYSRC</i> of any changes to these procedures and systems.</p> <p>R9. The <i>NYISO</i> shall report to the <i>NYSRC</i> on every instance of a <i>major emergency</i>. Included in this report shall be a description of the incident, a summary of conditions that warranted the change to a <i>major emergency</i> state, a summary of actions taken, and the effectiveness of those actions. A preliminary report shall be provided to the <i>NYSRC</i> within one week of the incident; and a final report, if requested by the <i>NYSRC</i>, shall be provided within one month following the incident.</p> <p>R10. The <i>NYISO</i> shall institute a statewide <i>voltage reduction</i> test during the summer capability period of each year if statewide <i>voltage reduction</i> has not been called for during the early portion of the summer. The results of the test or actual <i>voltage reduction</i> shall be recorded and provided to the <i>NYSRC</i> every year.</p>
<p>7. Section C – Compliance Elements</p>	
<p>1. Measures</p>	<p>M1. The <i>NYISO</i> maintained procedures and systems in accordance with Measurement F-M1 that ensures all market participants will respond correctly when frequency, reserves and thermal, voltage and/or stability limits are violated.</p> <p>M2. The <i>NYISO</i> provided a preliminary report of major emergencies within one week of an incident. In addition, if requested by the <i>NYSRC</i>, a final report was provided within one month following the incident. These reports were prepared in accordance with Measurement F-M2 and demonstrate what <i>NYISO</i> actions were taken and their effectiveness for meeting <i>NYSRC</i> Reliability Rules.</p> <p>M3. The <i>NYISO</i> provided the annual results of test or actual statewide voltage reduction within an appropriate time period to the <i>NYSRC</i>, in accordance with Measurement F-M6</p>
<p>2. Levels of Non-Compliance</p>	<p><u>For Measure 1</u> Level 1: Not applicable.</p> <p>Level 2: <i>NYISO</i> procedures were provided, but were incomplete in one or more areas.</p> <p>Level 3: Not applicable.</p> <p>Level 4: Procedures were not provided by the <i>NYISO</i></p> <p><u>For Measure 2</u> Level 1: Not applicable.</p>

	<p>Level 2: The required reports were provided following a major emergency, but at least one report was incomplete in one or more areas.</p> <p>Level 3: The required major emergency reports were provided, but a review indicated that the NYCA system was not operated in accordance with NYSRC Reliability Rules.</p> <p>Level 4: At least one of the required major emergency reports was not provided following a reportable incident.</p> <p><u>For Measure 3</u></p> <p>Level 1: Not applicable.</p> <p>Level 2: A statewide voltage reduction test was performed if required, but the results of this test or actual voltage reduction were not provided to the NYSRC within an appropriate time period.</p> <p>Level 3: Not applicable.</p> <p>Level 4: A statewide voltage reduction test, if required, was not performed.</p>
3. Compliance Monitoring Process (See Policy 4):	
3.1 Compliance Monitoring Responsibility	<p>M1: RCMS</p> <p>M2: RCMS</p> <p>M3: RCMS</p>
3.2 Reporting Frequency	<p>M1: In accordance with NYSRC Compliance Monitoring Program schedule.</p> <p>M2: As Required.</p> <p>M3: In accordance with NYSRC Compliance Monitoring Program schedule.</p>
3.3 Compliance Reporting Requirements	<p>M1: NYISO Self-Certification. This may be supplemented, if determined by the NYSRC, by audits or other information specified by the NYSRC Compliance Monitoring Program, or other requirements determined by the NYSRC.</p> <p>M2: A report in accordance with M2 requirements.</p> <p>M3: Voltage reduction data.</p>
8. Implementation Plan	This Reliability Rule will be implemented in accordance with the NYSRC <i>Rules Enhancement Plan</i> .
9. Comments	The above reformatted Reliability Rule F-R1 and Requirements R1 through R10 include existing Reliability Rules F-R1 through F-R7 and Measurements F-M1 to F-M3 and F-M6.
10. Date Reliability Rule Adopted	
11. REP PRR Revision Dates	2/4/14