

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

Item	Response
<b>1. Rules Enhancement Plan (REP) Description</b>	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> , <a href="http://www.nysrc.org/reports3.asp">www.nysrc.org/reports3.asp</a> , which describes the restructured rule format (PRR Lines 3-7) and the tasks for implementing the REP.
<b>2. Reliability Rule Requester</b>	NYSRC Reliability Rules Subcommittee (RRS)
<b>3. REP Proposed Reliability Rule (PRR) No.</b>	PRR REP-12
<b>4. Number and Title of Proposed Reliability Rule</b>	<b>G-R1 NYCA System Restoration Plan</b>
<b>5. Section A – Reliability Rule Elements</b>	
1. Reliability Rule	<b>A NYCA System Restoration Plan (NYCA SRP) shall be maintained to restore the NYCA system to a normal operating state in a safe and orderly manner and as promptly as reasonably possible following a major or total blackout. The NYCA SRP shall be composed of a NYISO system restoration plan and Transmission Owner system restoration plans.</b>
2. Associated NERC & NPCC Standards and Criteria	NERC: EOP-005-2, EOP-006-2 NPCC: Directory 8
3. Applicability	NYISO, TOs, and Black Start Providers
<b>6. Section B – Requirements</b>	
Requirements	<p><b>R1.</b> The NYISO shall develop and maintain a NYCA SRP that provides assurance that the NYCA system will be restored in a safe and orderly manner and as promptly as reasonably possible following a major or total blackout.</p> <p>The NYCA SRP shall include system restoration at two integrated levels: restoration of the NYCA backbone system in accordance with a NYISO System Restoration Plan (NYISO SRP) and restoration of local areas in accordance with Transmission Owner system restoration plans (TO SRPs).</p> <p>The NYCA SRP shall include the following minimum requirements:</p> <p><b>R1.1.</b> Procedures for coordinating the <i>NYISO</i> SRP and the <i>transmission owner</i> SRPs.</p> <p><b>R1.2.</b> Required actions to be included in each <i>transmission owner's</i> restoration plan, consistent with <i>NYISO</i> procedures and <i>NYSRC</i>, <i>NPCC</i>, and <i>NERC</i> criteria.</p> <p><b>R1.3.</b> Procedures for coordinating the SRPs of the <i>NYISO</i> and neighboring Reliability Coordinators, including restoration of interconnections.</p> <p><b>R1.4.</b> Identification of <i>black start facilities</i> required for implementing the <i>NYISO</i> SRP, including the names, location, megawatt capabilities, megavar capabilities, and unit type.</p>

**R1.5.** Procedures for *black start facility* test requirements to verify that each *black start* unit in the *NYISO* and *transmission owner* SRPs is capable of meeting the requirements of these SRPs. These *black start* testing requirements shall include:

*Gas turbine, combined cycle, and hydro black start units:*

Each *Black Start Provider* shall complete a successful test of the startup and operation of each of those *black start facilities* included in the *NYISO* and *transmission owner* SRPs for each Capability Year.

The *NYISO* shall determine the number of units within a *black start facility* that shall be tested annually.

*Steam black start units:*

Each *Black Start Provider* shall complete a successful test of the startup and synchronization to the *transmission system* of each unit included in the *NYCA* SRP every three Capability Years.

In addition, completion of successful tests requiring isolation from the transmission system, but not requiring startup and synchronization with the transmission system, shall be conducted during each intervening Capability Year. This intervening year test shall be conducted as follows: 1) a *black start* gas turbine isolated from the transmission system shall energize the internal light and power bus of the steam *black start* unit; and 2) auxiliary loads required to introduce fire into the boiler (fans, pumps, etc.) shall be added to the internal light and power bus. The intervening year test does not require fire in the boiler or synchronization to the transmission system.

The *NYISO* shall designate which steam units shall be tested during each Capability Year in accordance with the above testing requirements.

The *NYISO* shall determine the time within the Capability Year that testing shall be completed.

The *NYISO* procedures shall indicate that with due regard for reliability considerations and subject to approval by the *transmission owner* and the *NYISO*, a test performed by *black start facilities* in the *transmission owner's* SRP within one month beyond the Capability Year test period, or longer in force majeure cases, shall be considered a valid test for that Capability Year. On request by the *NYSRC*, the *NYISO* shall certify that reliability was considered when the *NYISO* and the *transmission owner* approved *black start facility* testing beyond the Capability Year.

**R1.6.** Procedures requiring that each transmission owner identify *black start* resources that are necessary for implementing its SRP. These procedures shall also require transmission owners to identify the name, location, megawatt capacity, megavar capacity, and type of *black start* resource(s). The identity of transmission SRP *black start facilities* shall be made available to the *NYISO* and to affected *transmission owners*. In addition, *NYISO* procedures shall include a requirement that each *Black start Provider* annually provide a letter to the *NYISO* confirming that it identifies and maintains a list of critical components in its facilities (i.e., batteries, diesel back-up generators, inverters etc.) to verify the condition of these critical components in accordance with good industry practice.

**R1.7.** Identification of the necessary operating instructions and procedures to cover loss of telecommunications channels during a system disturbance.

**R1.8.** Identification of protocols for disseminating information to operating entities identified in the plan during a system disturbance.

**R1.9.** Procedures for ensuring that the coordination of *NYISO* and *transmission owner* SRPs be demonstrated by drill or by simulation.

**R1.10.** Procedures requiring *transmission owners* to notify the *NYISO* of any proposed changes to *transmission owner* SRP facilities or procedures that could effect the coordination of the *NYISO* and *TO* restoration plans at least two months prior to their implementation.

**R1.11.** Procedures requiring that the *NYISO* and *transmission owner* SRPs be reviewed and updated annually and whenever changes are made in the *NYS Power System*. This review shall evaluate the impact of planned system expansion or reconfiguration on these SRPs, prior to implementation.

**R1.12.** Identification of guidelines which provide the basis for alternative restoration actions if normal restoration procedures cannot be executed due to system conditions.

**R1.13.** Procedures for coordinating annual updates to the *NYISO* SRP and restoration plans of neighboring Reliability Coordinators.

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**R2.** Each Transmission Owner shall establish and maintain a restoration plan in accordance with the NYCA SRP, NYISO procedures, and R1. These restoration plans shall be coordinated with the restoration plans of other Transmission Owners and shall be part of the NYCA SRP.

**R2.1.** The Transmission Owner SRP shall adopt procedures to identify black start resources that are necessary for implementing their SRP including testing requirements, in accordance with the NYCA SRP and NYISO procedures.

**R2.2.** Transmission Owners shall conduct an annual review of their SRP.

**R2.3.** Transmission Owners shall conduct annual training of their operating personnel on their SRP procedures, including the procedures for coordinating with the NYISO SRP. Each Transmission Owner shall report to the NYISO the completion of the annual training and review.

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**R3.** Each *Black Start Provider* shall develop and implement appropriate test procedures in accordance with R1, R2, and NYISO requirements and procedures to ensure those *black start facilities* that are included in the *NYISO's* and *transmission owner's* SRPs are able to perform their intended functions. These *black start* testing requirements shall include:

**R3.1.** *Gas turbine, combined cycle, and hydro black start units:*

Each *Black Start Provider* shall complete a successful test of the startup and operation of each of those black start facilities included in the *NYISO* and *transmission owner* SRPs for each Capability Year.

The *NYISO* will specify the number of units within a *black start facility* that shall be tested annually.

	<p><u>Steam black start units:</u></p> <p>Each <i>Black Start Provider</i> shall complete a successful test of the startup and synchronization to the transmission system of each unit included in the NYCA SRP every three Capability Years.</p> <p><b>R3.2.</b> Completion of successful tests requiring isolation from the transmission system, but not requiring startup and synchronization with the transmission system, shall be conducted during each intervening Capability Year. This intervening year test shall be conducted as follows: 1) a <i>black start</i> gas turbine isolated from the transmission system shall energize the internal light and power bus of the steam <i>black start</i> unit; and 2) auxiliary loads required to introduce fire into the boiler (fans, pumps, etc.) shall be added to the internal light and power bus. The intervening year test does not require fire in the boiler or synchronization to the transmission system.</p> <p>The NYISO will specify which steam units shall be tested during each Capability Year in accordance with the above testing requirements.</p> <p><b>R3.3.</b> With due regard for reliability considerations and subject to approval by the <i>transmission owner</i> and the NYISO, a test performed by <i>black start facilities</i> in the <i>transmission owner's</i> SRP within one month beyond the Capability Year test period, or longer in force majeure cases, shall be considered a valid test for that Capability Year. Each <i>Black Start Provider</i> shall provide documentation of these test results to the appropriate entity in accordance with NYISO and <i>transmission owner</i> procedures.</p> <p><b>R3.4.</b> Each <i>Black Start Provider</i> shall annually provide a letter to the NYISO confirming that it identifies and maintains a list of critical components in its facilities (i.e., batteries, diesel back-up generators, inverters etc.) and performs tests to verify the condition of these critical components in accordance with good industry practice. Test results will be provided to the NYISO upon request.</p> <p><b>R3.5.</b> <i>Black Start Providers</i> shall attend NYISO and <i>transmission owner</i> restoration training as required.</p>
<p><b>7. Section C – Compliance Elements</b></p>	
<p>1. Measures</p>	<p><b>M1.</b> The NYISO has a NYCA SRP and documented procedures that fully comply with requirements in accordance with sub-requirements in R1.1 through R1.13 and has identified NYISO SRP black start facilities in accordance with R1.4.</p> <p><b>M2.</b> The NYISO certified that each TO has a SRP in accordance with R2 and each TO has confirmed that the black start resources that each TO has identified as necessary for implementing its SRP will assure that the TO system will be restored in a safe and orderly manner, and as promptly as reasonably possible following a major or total blackout.</p> <p><b>M3.</b> As defined in R1, R3, and R4, the NYISO certified that for the Capability Year specified by the NYSRC: (1) it received the annual letter from each Black Start Provider confirming that it maintained a list of critical components and tests these components accordingly, (2) it received sufficient documentation from each Black Start Provider showing that the Black Start Provider developed required test procedures and accordingly successfully tested its black start facilities for each Capability Year, and (3) each Black Start Provider met NYISO training requirements.</p>

<p>2. Levels of Non-Compliance</p>	<p><b><u>For Measure 1</u></b></p> <p><b>Level 1:</b> The NYISO has an NYCA SRP, but failed to have procedures and complete actions that fully comply with one of the sub-requirements in R1.</p> <p><b>Level 2:</b> The NYISO has an NYCA SRP, but failed to have procedures and complete actions that fully comply with two of the sub-requirements in R1. OR The NYISO failed to identify NYISO black start facilities in accordance with G-M1.4.</p> <p><b>Level 3:</b> The NYISO has an NYCA SRP, but failed to have procedures and complete actions that fully comply with three of the sub-requirements in R1.</p> <p><b>Level 4:</b> The NYISO has an NYCA SRP, but failed to have procedures and actions that fully comply with four or more of the sub-requirements in R1.</p> <p><b><u>For Measure 2</u></b></p> <p><b>Level 1:</b> The NYISO certified that all Transmission Owners have SRPs, but one or more failed to fully comply with one of the three of the black start testing, SRP coordination, or training requirements.</p> <p><b>Level 2:</b> The NYISO certified that all Transmission Owners have SRPs, but one or more failed to fully comply with two of three of the black start testing, SRP coordination, or training requirements. OR The NYISO certified that one or more TOs failed to confirm that black start resources it has identified will assure that its system will be restored in a safe and orderly manner, and as promptly as reasonably possible.</p> <p><b>Level 3:</b> The NYISO certified that all Transmission Owners have SRPs, but one or more failed to fully comply with all of the black start testing, SRP coordination, and training requirements.</p> <p><b>Level 4:</b> The NYISO certified that one or more Transmission Owners do not have a SRP.</p> <p><b><u>For Measure 3</u></b></p> <p><b>Level 1:</b> The NYISO certified that, for the Capability Year specified by the NYSRC, one Black Start Provider did not provide a letter to the NYISO satisfying required testing of critical facility components, or did not comply with black start facility testing requirements in accordance with R1, R2, and R3, and NYISO or transmission owner procedures.</p> <p><b>Level 2:</b> The NYISO certified that, for the Capability Year specified by the NYSRC, two Black Start Providers did not provide a letter to the NYISO satisfying required testing of critical facility components, or did not comply with black start facility testing requirements in accordance with R1, R2, R3, and NYISO or transmission owner procedures and schedules.</p> <p><b>Level 3:</b> The NYISO certified that, for the Capability Year specified by the NYSRC, three Black Start Providers did not provide a letter to the NYISO satisfying required testing of critical facility components, or did not comply with black start facility testing requirements in accordance with R1, R2, R3, and NYISO or transmission owner procedures and schedules. OR The NYISO certified that one or more Black Start Providers failed to attend restoration training as required by the NYISO or transmission owner.</p>
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	<b>Level 4:</b> The NYISO certified that, for the Capability Year specified by the NYSRC, four or more Black Start Providers did not provide a letter to the NYISO satisfying required testing of critical facility components, or did not comply with black start facility testing requirements in accordance with R1, R2, R3, and NYISO or transmission owner procedures or schedules.
<b>3. Compliance Monitoring Process (See Policy 4):</b>	
<b>3.1 Compliance Monitoring Responsibility</b>	<ul style="list-style-type: none"> <li>• G-M1: RCMS</li> <li>• G-M2: Review of TO compliance – NYISO</li> <li>• G-M2: Review of NYISO Certification of TO compliance – RCMS</li> <li>• G-M3: Review of Black Start Provider compliance – NYISO</li> <li>• G-M3: Review of NYISO Certification of Black Start Provider compliance – RCMS</li> </ul>
<b>3.2 Reporting Frequency</b>	<ul style="list-style-type: none"> <li>• G-M1: In accordance with NYSRC Compliance Monitoring Program schedule.</li> <li>• G-M2: Annually</li> <li>• G-M3: Annually</li> </ul>
<b>3.3 Compliance Reporting Requirements</b>	<ul style="list-style-type: none"> <li>• G-M1: NYISO Self-Certification</li> <li>• G-M2: NYISO Certification of TO Compliance</li> <li>• G-M3: NYISO Certification of Black Start Provider Compliance</li> </ul>
<b>8. Implementation Plan</b>	This Reliability Rule will be implemented in accordance with the NYSRC <i>Rules Enhancement Plan</i> .
<b>9. Comments</b>	
<b>10. Date Reliability Rule Adopted</b>	
<b>11. REP PRR Revision Dates</b>	5/19/14