

Request to Develop or Modify Reliability Rules (NYSRC Policy No. 1-4)
Submit request to raymond40@aol.com via the NYSRC site www.nysrc.org

Item	Response
1. Respondent	
Name	Kathy Whitaker (NYISO)/RRS
Organization	
Address	
Phone & Fax numbers	
Email address	
2. Title of proposed rule change & PRR No.	System Restoration Measurements G-M1 and G-M3 (PRR 112)
3. New rule or modification of NYSRC RR?	
If a new rule is proposed, provide any relevant citation to existing standards	
If a modification to an existing rule is proposed, provide NYSRC RR reference	G-M1 and G-M3
4. Wording of proposed rule change	There are no changes to related Reliability Rule G-R1, "NYCA System Restoration Plan"
5. Rationale for proposed rule change	
Identify advantages	See Attachment
Identify disadvantages	G-M1.5, which requires comprehensive black start testing every three years for steam units, is a relaxation of present rules which require comprehensive testing every year for all units. However, on balance, the advantages of this rule change, as described in the Attachment, outweigh this disadvantage.
6. Measurement(s)	<p>G-M1</p> <p><i>[Below is a revision of G-M1, Requirement 5. There are no changes for G-M1 Requirements 1-4 and 6-13.]</i></p> <p><u>5. Identification of blackstart facility test requirements to verify that each blackstart facility in the NYISO SRP is capable of meeting the requirements of the NYISO SRP. These tests, at minimum, shall be conducted for each Capability Year and include those tests described in Table BS-1 of NPCC Directory #8, System Restoration. The NYISO shall determine the number of units within a blackstart facility that shall be tested annually, and the time within the Capability Year that testing shall be completed.</u></p> <p><u>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:</u></p> <p><u>Gas turbine, combined cycle, and hydro black start units:</u></p> <p><u>Each Black Start Provider shall complete a successful test of the startup and operation of each of those black start facilities included in</u></p>

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 **once** 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.

G-M3

Each Black **S**start Provider shall develop **and implement**

appropriate test procedures in accordance with G-M1, G-M2, 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. Each Blackstart Provider shall complete a successful test of the startup and operation of each of its Blackstart Facilities included in the NYCA SRP for each Capability Year to demonstrate that its Blackstart Facilities can perform their intended functions in accordance with the procedures required in Measurement G-M1. 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 will specify 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 once 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 will specify which steam units shall be tested during each Capability Year in accordance with the above testing requirements.

With due regard for reliability considerations and subject to

	<p>approval by the Transmission Owner and the NYISO, a test performed by black start facilities in the Transmission Owner 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 Black Start Provider shall provide documentation of these test results to the appropriate entity in accordance with NYISO and transmission owner procedures.</p> <p>In addition, each Black Start Provider 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. Black Start Providers shall attend NYISO and transmission owner restoration training as required.</p>
7A. G-M1 Full Compliance Statement	The NYISO has a NYCA SRP that complies fully with all 13 requirements as defined in G-M1.
8A. G-M1 Levels of Non-Compliance	
Level 1	The NYISO failed to prepare procedures and complete actions necessary for fully complying with one of the requirements within G-M1.
Level 2	The NYISO failed to prepare procedures and complete actions necessary for fully complying with two of the requirements within G-M1.
Level 3	The NYISO failed to prepare procedures and complete actions necessary for fully complying with three of the requirements within G-M1.
Level 4	The NYISO failed to prepare procedures and complete actions necessary for fully complying with four or more of the requirements within G-M1.
7B. G-M3 Full Compliance Statement	As defined in G-M1, G-M3, and G-M4, 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.
8B. G-M3 Levels of Non-Compliance	
Level 1	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 G-M1, G-M2, & G-M3, and NYISO or transmission owner procedures.
Level 2	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 G-M1, G-M2, G-M3, and NYISO or transmission owner procedures and schedules.
Level 3	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 G-M1, G-M2, G-M3, 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.
Level 4	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 G-M1, G-M2, G-M3, NYISO or transmission owner procedures or schedules.
9. Compliance Documentation Reporting Entity	G-M1: NYISO G-M3: Black Start Providers
10. Compliance Monitoring Entity/Entites	G-M1: RCMS G-M3: NYISO & RCMS
11. Implementation Plan	<p>The NYISO shall modify procedures in the NYISO System Restoration Manual and other relevant NYISO documents in accordance with required G-M1 changes in PRR 112. In addition, the NYISO shall prepare a report to the NYSRC describing the implementation status of the revised NYISO black start testing procedures. This status report shall include a confirmation that the requirement that a steam unit comprehensive test is required if one has not been completed within the last two years, as well as the requirement stated in Line 12, have been implemented. The above NYISO system restoration black start procedure changes and status report shall be submitted to RCMS within six months of Executive Committee approval of PRR 112. Prior to this submission, the NYISO shall provide monthly status reports of the implementation of steam unit testing changes to RCMS.</p> <p>The NYISO shall submit a G-M3 compliance certification to RCMS recognizing revised G-M3 requirements in PRR 112, following the above six month period and in accordance with the NYSRC 2013 Compliance Monitoring Program schedule.</p>
12. Comments	<p>The following requirement will be included in steam test procedures:</p> <p>During black start tests of steam units, the ability of gas turbine</p>

	units to control frequency and voltage while isolated from the transmission system shall be monitored by the Generation Owner.
13. Date Rule/Measurement Adopted	10/12/12
14. PRR Revision Dates	6/26/12, 7/23/12, 7/24/12, 8/29/12, 9/6/12, 10/4/12