	© ISO New England Inc. 2024	Procedure: Perform Voltage Reduction Audit & Administration
	Process Name: Monitor Resource Performance	
	Procedure Number: RTMKTS.0180.0070	Revision Number: 22.1
	Procedure Owner: Jon Gravelin	Effective Date: October 16, 2024
	Approved By: Director, Operations	Valid Through: October 16, 2026


SOP- RTMKTS.0180.0070

Perform Voltage Reduction Audit & Administration

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1. Objective

The objective of this procedure is to confirm the voltage reduction test will result in a minimum load reduction of 1.5% of total system load when implemented in Real-Time. It will also be used to assess compliance with voltage reduction requirements of ISO New England Operating Procedure No. 13 - Standards for Voltage Reduction and Load Shedding Capability (OP-13).

2. Background

ISO will perform a voltage reduction test & audit to verify voltage reduction capability for each Market Participant (MP)/Transmission Owner (TO) that has control over transmission/distribution facilities.


OP-13 establishes standards for the testing the voltage reduction capability of MPs/TOs that have control over transmission/distribution facilities. These standards require all MPs/TOs with control over any transmission/distribution facility to have the capability to reduce load demand when directed to do so for Bulk Electric System (BES) dispatching purposes. These MPs/TOs are expected to comply with these established standards. ISO and the Local Control Centers (LCCs) use the capability to reduce load, as necessary, to maintain system reliability. This would occur during generating capacity deficiencies, energy deficiencies, and other emergency operating conditions as described in ISO New England Operating Procedure No. 4 - Action During a Capacity Deficiency (OP-4) and ISO New England Operating Procedure No. 7 - Action in an Emergency (OP-7).

3. Responsibilities

NOTE

Any North American Electric Reliability Corporation (NERC) Certified Control Room System Operator, certified at the Reliability Coordinator (RC) level, has the authority to take action(s) required to comply with NERC Reliability Standards.


1. The Lead Compliance Analyst, Reliability & Operations Compliance (ROC) is responsible for the following:
 - A. Coordinating the voltage reduction test & audit with ISO System Operations & Market Administration and Master/Local Control Center (M/LCC) Heads.
 - B. Collecting and analyzing the voltage reduction test results for each individual MP/TO that has control over transmission/distribution facilities.
 - C. Reporting each individual non-compliant MP/TO voltage reduction test results to the appropriate Committees, TOs, M/LCC Heads and ISO management.

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- D. Report on the estimated New England load relief from the voltage reduction tests to the Reliability Committee and M/LCC Heads.
2. The Administrative Assistant, System Operations and Market Administration, is responsible for issuing the voltage reduction test notifications and forms that require completion, to the applicable MPs/TOs.
3. The Operations Analysis & Integration (OAI) Analyst shall provide the Lead Compliance Analyst, ROC the New England estimated load relief from the less than ten (10) minutes and greater than ten (10) minutes voltage reduction tests.

4. Controls

None.

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5. Instructions


5.1 Establish and Communicate Testing Material

1. The Lead Compliance Analyst, ROC, in conjunction with the Manager, Control Room Operations and M/LCC Heads shall establish the voltage reduction test date.
2. At least four (4) weeks in advance of the scheduled test date, the Administrative Assistant, System Operations and Market Administration, shall email the following (or similar) forms to the MP/TO to be used for communication about the voltage reduction test:
 - Attachment A - Notification and Test Plan For System-Wide Voltage Reduction Testing, inserting applicable dates and other necessary information pertaining to the test
 - Attachment B - ISO New England Voltage Reduction Test Participant Questionnaire

NOTE

The purpose of Attachment B - ISO New England Voltage Reduction Test Participant Questionnaire is to document the voltage reduction capability demonstrated by each applicable MP/TO during the test.

3. The Administrative Assistant, System Operations and Market Administration, shall notify the following of the ISO New England Voltage Reduction Test by email:
 - ISO personnel
 - M/LCC Heads
 - M/LCC Trainers
 - Appropriate Committees

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5.2 Initiate Voltage Reduction Test

NOTE

CROP.44001 Perform a Voltage Reduction Test contains instructions for Control Room Operators to perform the voltage reduction test.

5.3 Analysis and Reporting Test Data

1. The Lead Compliance Analyst, ROC shall verify Attachment B - ISO New England Voltage Reduction Test Participant Questionnaire sheets (or similar form) is submitted by each applicable MP/TO and analyze the results from each MP/TO to determine compliance with applicable OP-13 requirements.
2. The Lead Compliance Analyst, ROC shall report individual non-compliant MP/TO test results to the appropriate Committees, TOs, M/LCC Heads and ISO management.
3. The OAI Analyst shall provide the Lead Compliance Analyst, ROC the New England estimated load relief from the less than ten (10) minutes and greater than ten (10) minutes voltage reduction tests.
4. The Lead Compliance Analyst, ROC shall report on the estimated New England load relief from the Voltage Reduction Tests to Reliability Committee and the M/LCC Heads.

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6. Performance Measures

This procedure is competently performed when voltage reduction testing and reporting occurs as scheduled

7. References

ISO New England Operating Procedure No. 4 - Action During a Capacity Deficiency (OP-4)

ISO New England Operating Procedure No. 7 - Action in an Emergency (OP-7)

ISO New England Operating Procedure No. 13 - Standards for Voltage Reduction and Load Shedding Capability (OP-13)

CROP.44001 Perform a Voltage Reduction Test


8. Revision History

Rev. No.	Date	Reason	Contact
- -	04/18/18	For previous revision history, refer to Rev 20 available through Ask ISO	Dean LaForest
21	04/18/18	Biennial review completed by procedure owner; Added required corporate document identity to all page footers; Made minor editorial changes;	Steve Gould
21.1	04/18/18	Minor Revision to correct typo in the corporate identity on all pages except for page 1. No content changes made only the typo correction..	Steve Gould
21.2	02/26/20	Periodic review performed requiring no changes	Steve Gould
21.3	02/4/22	Periodic review performed requiring no changes	Steve Gould
22	10/17/22	Added new responsibilities for OAI; Modified responsibilities for ROC; Updated Procedure Owner.	Jon Gravelin
22.1	10/16/24	Biennial review performed by procedure owner requiring no changes.	Jon Gravelin

9. Attachments

Attachment A - Notification and Test Plan For System Wide-Voltage Reduction Testing

Attachment B - ISO New England Voltage Reduction Test Participant Questionnaire

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Attachment A - Notification and Test Plan for System-Wide Voltage Reduction Testing

TO: Participants Committee
Markets Committee
Transmission Committee
Reliability Committee

(Date)

FROM: Peter Brandien

SUBJECT: (Year) (Fall / Spring)

System Wide Voltage Reduction Test

ISO New England will conduct a **(fall/spring)** system-wide voltage reduction test on **(Day, Date)** with an alternate test date of **(Day, Date)**. This applies to **Subtransmission/Distribution facilities ONLY (note: this is informational only for generating units)** and will allow ISO New England to assess the compliance of each Market Participant (MP)/Transmission Owner (TO) that has control over transmission/distribution facilities with the voltage reduction requirements of ISO New England Operating Procedure No. 13, Standards for Voltage Reduction and Load Shedding Capability (OP-13).

Attached are:

1. The Voltage Reduction Test Plan.
2. The “Voltage Reduction Test Participant Questionnaire” form to be completed by the applicable MP/TO and submitted to ISO New England on or before (Date/Year) (attention Kathleen Goodman, email: kgoodman@iso-ne.com). The purpose of the information form is to identify individual MP/TO performance. **All responses must be submitted electronically.**
3. The messages to be used to implement and terminate the voltage reduction test.


Please consider this letter as advance notification to the applicable MP/TO responsible for voltage reduction capability as detailed in OP-13. Each Markets, Transmission, and Reliability Committee member who represents more than one MP/TO is hereby requested to notify each of the MPs/TOs they represent, of the upcoming test.

Again, this test only applies to Subtransmission/Distribution facilities. Generating units are receiving this e-mail for informational purposes only.

If you have any questions regarding the test, please either contact me at (413) 535-4022 or Kathleen Goodman at (413) 535-4111.

Sincerely,

cc: Master/Local Control Center Heads, ISO Operations, ISO System Planning

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ISO NEW ENGLAND VOLTAGE REDUCTION TEST PLAN

Date: **Month/Day/Year**

Alternate Date: **Month/Day/Year**

Implementation:

The actual implementation of a 5% voltage reduction that is attainable within ten (10) minutes will be initiated at **1000** and terminate at **1030**.

The actual implementation of a 5% voltage reduction requiring more than ten (10) minutes to implement will be initiated at **1400** and terminate at **1430**. Personnel responsible for this portion of the test should be in place prior to **1400**. It is recognized that certain personnel must cover more than one location to implement this action.

Notification:

All MPs/TOs that have control over transmission/distribution facilities should consider this as the written advance notice of the test date. All preparations for the test should be initiated. If system conditions warrant cancellation of the test, an alternate date of (Month/Year) has been set and this memo also serves as the advance notification for the alternate date.

Measurement:

ISO New England and each Local Control Center will conduct separate measurements of load relief attained during the test. In addition, each applicable MP/TO must perform its own measurements and report back to the ISO on the appropriate form.


Constraints:

Scheduled outages of computers or telemetry will **not** be allowed during the test.

All generation will be held at as near constant a level as possible during the actual voltage reductions.

Report:

A report on the results of the test will be issued to: the Reliability Committee, and the Master/Local Control Center Heads. All applicable MPs/TOs are expected to attain 100% compliance with the applicable requirements of ISO New England Operating Procedure No. 13 - Standards for Voltage Reduction and Load Shedding Capability (OP-13).

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Participant Company:
Contact Name:

Email:
Telephone #

Part II: Implementation of a 5% voltage reduction requiring more than ten minutes to attain.

Load Data (actual or estimated) to two decimal points if possible

1	@ 1350		MW
2	@ 1400		MW
3	@ 1410		MW
4	@ 1420		MW
5	@ 1430		MW
6	@ 1440		MW
7	Load @ 1430 – Load @ 1400		MW
8	Calculated Load Relief		MW
9	Load Relief Attained		MW

If values of #7 and #9 are different, please explain why:

Were any feeders excluded from the test that would normally be included in voltage reduction?

Y/N

If so, how many?
Why?

If these feeders had been included, what is your estimate of additional load relief that would have been attained?

MW

Did you receive any customer voltage complaints as a result of the test?

Y/N

If yes, please explain

Additional Comments: