

Appendix D - Voltage Schedule Annual Transmittal Form

Effective Date: August 7, 2024

Review By Date: August 7, 2026

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Voltage Schedule Annual Transmittal Form

[specify date]

Dear Lead Market Participant:

This letter serves as the annual confirmation of your voltage control responsibilities as a Lead Market Participant (Lead MP) for a Generator Asset in the ISO New England (ISO) Markets in accordance with ISO New England Operating Procedure No. 12 - Voltage and Reactive Control (OP-12). This letter also serves to meet the applicable requirements of the North American Electric Reliability Corporation (NERC) Reliability Standards VAR-001 - Voltage and Reactive Control and VAR-002 - Generator Operation for Maintaining Network Voltage Schedules, which require each Transmission Operator to specify a voltage or Reactive Power schedule to be maintained by each Generator.

This letter is being provided for: [**Market Asset name**], Asset # [**Market Asset ID #**].

The following pages specify the Generator Asset as either:

- Option A
- Option B

Follow up action to this letter is required. Within 30 days of receiving this letter, please review the tasks associated with the identified Generator Asset and record responses to the tasks via the web form, which is accessible via this link: <https://www.iso-ne.com/OP12D-voltage-schedule>

Questions?

Questions regarding the voltage schedules and requirements described in this letter should be directed to both the undersigned LCC contact and the following e-mail address:

vtfcontact@iso-ne.com

Sincerely,

[**LCC contact person name**]

[**LCC name**]

Cc:

Designated Entity Operations Management Contact

vtfcontact@iso-ne.com

OPTION A Generator Asset - Specific voltage requirements

OPTION A Generator Assets shall follow the noted transmission voltage schedule, within the noted voltage schedule tolerance band, as described in OP-12. Note: OP-12B is posted at: https://www.iso-ne.com/static-assets/documents/2020/07/op12b_rto_final.docx

Our records indicate that your voltage control requirements are as shown below.

Within 30 days of receiving this letter, please review voltage schedules below, perform listed tasks, and record responses to the tasks via the web form, which is accessible via this link: <https://www.iso-ne.com/OP12D-voltage-schedule>

The Generator Asset has a voltage schedule in OP-12B (or is in the process of being added to OP-

☐ 12B)

High Side Visibility (as provided in Asset's NX12D):					
Operational Voltage Schedules - On-Peak Period*			Operational Voltage Schedules - Off-Peak Period*		
kV Schedule	Tolerance Band		kV Schedule	Tolerance Band	
	kV High	kV Low		kV High	kV Low

OPTION A Tasks— Confirm Via Web Form: <https://www.iso-ne.com/OP12D-voltage-schedule>

1. Confirm that the voltage schedule and associated tolerance band are acceptable.

Response: Acceptable? Yes: ☐ No: ☐ (If "No", please provide an explanation)

2. If the voltage schedule and the associated tolerance band are confirmed to be acceptable, then:
 - a. Provide these voltage schedules and requirements information to the entity that controls or operates (either remotely or locally) the voltage control equipment for the Generator Asset described in this letter.

Response: Task complete? Yes: ☐

- b. Confirm that the entity that controls or operates (either remotely or locally) the voltage control equipment for the Generator Asset has incorporated these voltage schedules and requirements information into its operating procedures.

Response: Task complete? Yes: ☐

3. The NX-12D form shall be completed according to the instructions in OP-14B. Confirm voltage schedule, associated tolerance band, and high side visibility in the Asset's NX-12D form and update the NX-12D form if necessary.

Response: Task Complete? Yes: ☐ No: ☐

* Historically, OP-12B established two separate sets of schedules: an On-Peak and Off-Peak schedule which corresponded to times of the day and week. However, the On-Peak and Off-Peak schedule concept is no longer maintained. Units may still have different schedules, but distinctions between the two schedules is no longer On-Peak/Off-Peak. The On-Peak schedule field is now used as the default schedule, and the Off-Peak schedule field is used for alternate schedules.

OPTION B Generator Asset - Specific voltage requirements

OPTION B Generator Assets shall confirm the noted voltage schedule and voltage schedule maximum and minimum values. Per OP-14, ISO and the LCCs may revise the noted voltage schedule, as necessary.

Within 30 days of receiving this letter, please review voltage schedules below, perform listed tasks, and record responses to the tasks via the web form, which is accessible via this link: <https://www.iso-ne.com/OP12D-voltage-schedule>

- ☐ The Generator Asset is considered "OPTION B" and has the following voltage schedule:

High Side Visibility (as provided in Asset's NX12D):					
On-Peak Period *			Off-Peak Period *		
Schedule (kV)	Schedule max (kV)	Schedule min (kV)	Schedule (kV)	Schedule max (kV)	Schedule min (kV)

OPTION B Tasks – Confirm Via Web Form: <https://www.iso-ne.com/OP12D-voltage-schedule>

- Confirm that the voltage schedule and associated maximum and minimum values are acceptable.
Response: Acceptable? Yes: ☐ No: ☐ (If "No", please provide an explanation)
- If the voltage schedule and associated maximum and minimum values are confirmed to be acceptable, then:
 - Provide these voltage schedules and requirements information to the entity that controls or operates (either remotely or locally) the voltage control equipment for the Generator Asset described in this letter.
Response: Task complete? Yes: ☐
 - Confirm that the entity that controls or operates (either remotely or locally) the voltage control equipment for the Generator Asset has incorporated these voltage schedules and requirements information into its operating procedures.
Response: Task complete? Yes: ☐
- The NX-12D form shall be completed according to the instructions in OP-14B. Confirm voltage schedule, schedule max & min, and high side visibility in the Asset's NX-12D form and update the NX-12D form if necessary.
Response: Task Complete? Yes: ☐ No: ☐

* Historically, OP-12B established two separate sets of schedules: an On-Peak and Off-Peak schedule which corresponded to times of the day and week. However, the On-Peak and Off-Peak schedule concept is no longer maintained. Units may still have different schedules, but distinctions between the two schedules is no longer On-Peak/Off-Peak. The On-Peak schedule field is now used as the default schedule, and the Off-Peak schedule field is used for alternate schedules.

Background & References

Each Generator Asset in the ISO Markets shall either operate to a voltage schedule or receive an exemption of that obligation from the ISO. The voltage schedule may be either a transmission voltage schedule or a voltage schedule at less than transmission levels (< 69 kV).

- ISO New England Operating Procedure No. 14 - Technical Requirements for Generators, Demand Response Resources, Asset Related Demands and Alternative Technology Regulation Resources (OP-14)
 - OP-14 requires that each Lead MP keep and maintain an automatic voltage regulator (AVR) in-service and regulating to the voltage schedule on all generating units comprising a Generator unless granted an exemption.
- ISO New England Operating Procedure No. 14 Appendix B - Resource Reactive Capability Data Explanation of Terms and Instructions for Data Preparation for ISO Form NX-12D (OP-14B)
- ISO New England Operating Procedure No.12 - Voltage and Reactive Control (OP-12)
- ISO New England Operating Procedure No. 12 Appendix B - Voltage and Reactive Schedules (OP-12B)
- NERC Reliability Standard VAR-001 - Voltage and Reactive Control
- NERC Reliability Standard VAR-002 - Generator Operation for Maintaining Network Voltage Schedules

OP-12, Appendix D Revision History

Rev. No.	Date	Reason
Rev 0	01/23/14	Initial version
Rev 1	03/21/14	This revision (Rev 1) reflects clarifications and corrections to the approved Rev 0 template that would be used in actual transmittals sent to Lead Market Participants in Q1 2014. There are no changes to intent in these revisions. The revisions were made to avoid confusion and to minimize questions that could arise if the approved Rev 0 template were used.
Rev 2	12/09/14	Replaced Heavy Load with On-Peak and Light Load with Off-Peak consistent with changes made to both OP-12 and OP-12B; Removed all references correlating Heavy Load to On-Peak and Light Load to Off-Peak. Added On-Peak and Off-Peak definitions consistent with the change made in OP-12B.
Rev 3	02/18/16	Biennial review by Procedure Owner; Changes to reflect new fields in NX-12 Software for Voltage Schedules;
Rev 3.1	01/29/18	Biennial review by Procedure Owner completed requiring no changes; Made administrative changes required to publish a Minor Revision;
Rev 4	08/02/19	Biennial review by procedure owner; Globally, made editorial changes consistent with current conditions, practices and management expectations; Created a new "References" section which lists associated documents instead of describing them in the "General Responsibilities" section.; Removed 69 kV threshold from Option A and B classification; Clarified that the NX-12D form must be submitted according to OP-14B instructions;
Rev 5	03/04/21	Biennial review by procedure owner Streamlined the instructions that delineate the action items for the transmittal recipient Replaced hyperlink to OP-12B document Specified that Option C units are receiving their last voltage schedule transmittal Requested Option C units to provide a description of their reactive controls in their NX12D form Renamed "General Responsibilities" to "Background" and moved to the end
Rev 6	01/20/22	Biennial review by procedure owner Provided URL for OP-12D web form, which is where responses are expected to be recorded Deleted the old definition of on and off peak schedules since the on and off peak schedule concept is no longer maintained Deleted reference to and instructions for Option C units, as these units do not control voltage
Rev 7	08/15/22	Periodic review by the procedure owner; For Option A & B tasks on pages 3 & 4: Modified Question 3 and added high side visibility parameter to the table
Rev 7.1	08/07/24	Biennial review completed by Procedure Owner requiring no intent changes; Updated title of OP-14B; Made administrative changes required to publish a Minor Revision.