

**APPENDIX A - ESTIMATES OF ADDITIONAL GENERATION AND LOAD RELIEF
FROM SYSTEM WIDE IMPLEMENTATION OF ACTIONS IN
ISO NEW ENGLAND OPERATING PROCEDURE NO. 4 - ACTION DURING A
CAPACITY DEFICIENCY BASED ON A 25,000 MW SYSTEM LOAD**

Effective Date: November 29, 2023

Review By Date: November 29, 2024

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APPENDIX A

(Actual MW available may be greater or less than indicated values depending on system conditions and the circumstances of the implementation)

<u>Action #</u>	<u>Description</u>	<u>MW</u>
1	Implement Power Caution and advise Resources with a Capacity Supply Obligation to prepare to provide all associated capacity.	0
	Notify Settlement Only Resources with a Capacity Supply Obligation (CSO) to monitor the status of reserve pricing to meet those obligations.	0 ⁽¹⁾
	Begin to allow the depletion of Thirty-Minute Operating Reserve.	About 600 MW
2	Declare Energy Emergency Alert (EEA) Level 1 ⁽⁴⁾	0
3	Voluntary load curtailment of Market Participants' facilities	40 ⁽²⁾
4	Implement Power Watch	0
5	Schedule Market Participant-submitted EETs	Variable (could be between 0 and 1,000 MW)
	Arrange to purchase Control Area-to-Control Area emergency capacity and energy or energy only (if capacity is not available)	
6	Implementation of 5% voltage reduction requiring more than ten (10) minutes	Variable (could be between 0 and 125 MW) ⁽³⁾
	Declare EEA Level 2 ⁽⁴⁾	
7	Request Resources not subject to a CSO to voluntarily provide energy for reliability purposes.	Variable (could be between 0 and 1,500 MW)
8	Implementation of 5% voltage reduction requiring ten (10) minutes or less	Variable (could be between 0 and 250 MW) ⁽³⁾
	Declare EEA Level 2 ⁽⁴⁾	
9	Transmission customer generation not contractually available to Market Participants during a Capacity Deficiency	5
	Voluntary load curtailment by large industrial and commercial customers	200 ⁽²⁾

<u>Action #</u>	<u>Description</u>	<u>MW</u>
10	Radio and TV appeals for voluntary load curtailment Implement Power Warning Declare EEA Level 2 ⁽⁴⁾	200 ⁽²⁾
11	Request New England state Governors to reinforce power warning appeals Declare EEA Level 2 ⁽⁴⁾	100 ⁽²⁾
Total		1145 - 4020

- NOTES:
- (1) *Based on Summer Ratings. Assumes 25% of total MW Settlement Only Resources <5 MW will be available and will respond.*
 - (2) *The actual load relief obtained is highly dependent on circumstances surrounding the appeals, including timing and the amount of advance notice that can be given.*
 - (3) *The MW values are based on a 25,000 MW system load and verified by the most recent voltage reduction test.*
 - (4) *EEA Levels are described in Attachment 1 to NERC Reliability Standard EOP-011 - Emergency Operations*

OP-4 Appendix A Revision History

Document History (This Document History documents action taken on the equivalent NEPOOL Procedure prior to the RTO Operations Date as well revisions made to the ISO New England Procedure subsequent to the RTO Operations Date.)

Rev. No.	Date	Reason
--	05/11/17	For previous revision history, refer to Rev 20 available through Ask ISO:
Rev 20	12/15/11	Annual review by procedure owner; Deleted the 2 nd paragraph of the 1 st page footer; Updated 50/50 forecast dependent estimates (Voltage Reduction) to match current 50/50 forecast; Updated Demand Response estimates to reflect current auction trends; corrected footnote 2 attribution, removed from action 1, added to actions 3,10 & 11
Rev 21	12/15/12	Annual review by procedure owner; Change values of: Step 2 from 500 to 600, Step 6 from 350 to 400, Step 8 from 270 to 260 and Grand Total from "2395 – 4895" to "2535 – 5035"; NOTES (4) replaced 26,776 with 26,462, added "verified by: and deleted "% achieved"
Rev 22	10/29/13	Annual review by procedure owner; Updated Demand Response MW availability;
Rev 23	08/12/14	Annual review by procedure owner; Title, replaced "26,690 MW" with "26,658 MW"; Action 6, replaced "134 MW" with "133 MW"; Grand Total, replaced "2012 – 4521" with "2020 – 4521"; NOTES (4) replaced "26,690 MW" with "26,658 MW"
Rev 24	06/24/15	Annual review by procedure owner; Title, replaced "26,658 MW" with "26,930 MW"; Action 2, replaced "325 MW" with "250 MW" Action 6, replaced "133 MW" with "135 MW" and "150 MW" with "125 MW"; Action 8, replaced "267 MW" with "269 MW" Grand Total, replaced "2020 – 4521" with "1949 - 4449"; NOTES (4) replaced "26, 658 MW" with "26,930 MW"
Rev 25	06/08/16	Annual review by procedure owner; Title, replaced "26,930 MW" with "26,704 MW"; Action 2, replaced "250" with "272" Action 6, replaced "135" with "134"; replaced "125" with "70" Action 8, replaced "269" with "277" Grand Total, replaced "1949 – 4449" with "1888 - 4388"; NOTES (4) replaced "26,930 MW" with "26,704 MW"; Appendix A NOTES. added footnote explaining MW load value
Rev 25.1	05/11/17	Periodic review performed requiring no changes; Made administrative changes required to publish a Minor Revision (added required corporate document identity to all page footers and truncated the Revision History per SOP-RTMKTS.0210.0010 Section 5.6 ;
Rev 26	07/05/17	Annual review by procedure owner; Title, replaced "26,704 MW" with "26,265 MW"; Action 2, replaced "272 MW" with "380 MW"; Action 6, replaced "134" with "133"; replaced "70" with "2"; Action 8, replaced "267" with "265"; Grand Total, replaced "1949 - 4449" with "1921 - 4421"; NOTES (3) replaced "26,704 MW" with "26,482 MW" and in the footnote replaced "2016" with "2017";

Rev. No.	Date	Reason
Rev 27	06/01/18	Annual review by procedure owner; Title, replaced "26,482 MW" with "26,458 MW"; Globally, minor editorial changes to be consistent with current conditions, practices, and management expectations; Action 2 replaced "Real Time Demand Response in the amount and location required" with "Declare Energy Emergency Alert (EEA) Level 1 ⁽⁴⁾ ", replaced "380 MW" with "0", and deleted ⁽³⁾ ; Action 6, deleted "Real Time Demand Response in the amount and location required", added "Declare EEA Level 2 ⁽⁴⁾ ", replaced 133 MW with 132 MW, and replaced ⁽⁴⁾ with ⁽³⁾ ; Action 7, replaced ⁽⁴⁾ with ⁽³⁾ ; Action 8, added "Declare EEA Level 2 ⁽⁴⁾ "; Action 10, added "Declare EEA Level 2 ⁽⁴⁾ "; Action 11, added "Declare EEA Level 2 ⁽⁴⁾ " Grand Total, replaced "1925 - 4425" with "1542 - 4042" NOTES, ⁽¹⁾ replaced "units" with "Resources" and added "will"; Appendix A former NOTE (4), deleted, replaced former NOTE (4) with former NOTE (3); Added new NOTE (4) added "EEA Levels are described in Attachment 1 to NERC Reliability Standard EOP-001" - Emergency Operations;
Rev 28	05/07/19	Annual review by procedure owner; Title replaced "26,458 MW" with "25,000 MW"; Action 1 2 nd sentence deleted the parentheses around Settlement Only; Action 6, modified MW value; Action 8, modified MW value and replaced EEA Level 2 footnote "4" with "3"; Grand Total, replaced "1942 - 4042" with "1920 - 4020"; NOTES section, item (3) updated MW system load value and removed the footnote ⁽¹⁾ explaining it;
Rev 28.1	04/27/20	Annual review completed by procedure owner requiring no changes
Rev 29	03/04/21	Annual review completed by procedure owner. Removed reference to sharing of reserves among NPCC areas in Action 6, this has been removed from NPCC Directory 5. Modified estimates of VR available MW.
Rev 29.1	02/15/22	Periodic review completed by Procedure Owner, no changes required.
Rev 29.2	11/30/22	Annual review completed by procedure owner requiring no changes.
Rev 29.3	11/29/23	Annual review completed by procedure owner requiring no intent changes; Corrected minimum Total Value from table; Made administrative changes required to publish a Minor Revision.