APPENDIX A - INSTRUCTIONS FOR IMPLEMENTATION OF MANUAL LOAD SHEDDING

The following instructions are to be observed by the ISO Control Room Staff during the manual shedding of load.

I. WHEN SHEDDING LOAD NEW ENGLAND WIDE:

A. Communication With Local Control Centers

All Local Control Centers will be on the party line prior to the time the ISO Control Room Staff issues instructions.

B. Quantity of Load

The ISO Control Room Staff will direct the quantity of load to be shed or restored by specifying a step number.

$$\text{Step Number} = \frac{\text{Total MW Load to be Shed or Restored} \times 100}{\text{Instantaneous New England Load}}$$

Each step number equates to one percent of New England load. Each LCC will shed that percentage of their area load.

C. Instruction Messages

The ISO Control Room Staff will issue concise verbal instructions and await Local Control Center repeat back, which should be received from all Local Control Centers alphabetically. The ISO shall acknowledge Local Control Center repeat back of instructions as correct or reissue the instruction. Typical messages are as follows:

Implementation:

1. ISO to ALL: "Implement OP 7 - Manually shed load from step ____ through step _____."
2. ISO to ALL: "Implement OP 7 - Manually restore load from step ____ through step _____."

Acknowledgment by Local Control Center:

1. _____, "OP 7 Manually shed load from step _____through step _____."
2. _____, "OP 7 - Manually restore load from step _____ through step _____."

Acknowledgment by ISO:

1. ISO to ALL: "That is correct."

(If misunderstandings occur, then reissue the directive)

D. Examples: Typical Implementation and Acknowledgment Messages

New England Load - 21,400 MW

NEED - Shed 500 MW uniformly throughout New England.

Messages:

Implementation: 50,000 / 21,400 = 2.3

1. ISO to ALL: "Implement OP 7 - Manually shed load from step 1 through step 3."

Acknowledgment by Local Control Center:

1. CONVEX: "OP 7 - Manually shed load from step 1 through step 3."
2. MAINE: "OP 7 - Manually shed load from step 1 through step 3."
3. New Hampshire: "OP 7 - Manually shed load from step 1 through step 3."
4. NSTAR: "OP 7 - Manually shed load from step 1 through step 3."
5. REMVEC II: "OP 7 - Manually shed load from step 1 through step 3."
6. VELCO: "OP 7 - Manually shed load from step 1 through step 3."

Acknowledgment by ISO:

1. ISO to ALL: "That is correct."

(If misunderstandings occur, then reissue the directive)

E. Examples: Typical Implementation and Acknowledgment Messages

New England Load = 20,900 MW

NEED: Restore 500 MW of load that had been previously shed uniformly throughout New England.

Messages:

Implementation: 50,000 / 20,900 = 2.4

1. ISO to ALL: "Implement OP 7 - Manually restore load from step 3 through step 1."

Acknowledgment by Local Control Center:

1. CONVEX to ISO: "OP 7 - Manually restore load from step 3 through step 1."

(Other Local Control Centers respond in alphabetical order)

Acknowledgment by ISO:

1. ISO to ALL: "That is correct."

(If misunderstandings occur, then reissue the directive)

II. WHEN SHEDDING LOAD IN INDIVIDUAL LOCAL CONTROL CENTER(S)

A. Communication With Local Control Center(s)

The affected Local Control Center(s) will be contacted individually and instructions will be issued by the ISO Control Room Staff. The unaffected Local Control Centers will then be contacted individually and informed of the situation.

B. Quantity of Load

The ISO Control Room Staff will direct the quantity of load to be shed or restored by specifying a (MW) amount. The Local Control Center Operator will then be responsible for converting the MW amount into a step number if required.

> NOTE:
> Applicable Local Control Centers are those within the area in which load shedding will be effective in alleviating a problem.

C. Instruction Messages

The ISO Control Room Staff will issue concise verbal instructions and await Local Control Center acknowledgment. Typical messages are as follows:

Implementation:

1. ISO to ___: "Implement OP 7 - Manually shed (___) MW of load."

2. ISO to ___: "Implement OP 7 - Manually restore (___) MW of load."

Acknowledgment by Local Control Center:

1. _____, "OP 7 - Manually shed (___) MW of load."

2. _____, "OP 7 - Manually restore (___) MW of load."

Acknowledgment by ISO:

1. ISO to _____: "That is correct."

(If misunderstandings occur, then reissue the directive)

D. Examples: Typical Implementation and Acknowledgment Messages

NEED - Shed 200 MW of load in CONVEX.

Messages:

Implementation:

1. ISO to CONVEX: "Implement OP 7 - Manually shed 200 MW of load."

Acknowledgment by Local Control Center:

1. CONVEX to ISO: "OP 7 - Manually shed 200 MW of load."

Acknowledgment by ISO:

1. ISO to CONVEX: "That is correct."

(If misunderstandings occur, then reissue the directive)

E. Notification Messages

Unaffected Local Control Centers will be notified by the ISO Control Room Staff after specific Local Control Centers have been instructed to implement OP 7. A typical notification and message for the ISO Control Room Staff and System Operators is:

Implementation:

ISO to (Unaffected Local Control Centers): "This is a notification that OP 7 is being implemented in CONVEX. CONVEX has been instructed to manually shed/restore (___) MW load."

Acknowledgment by Local Control Center

1. (Unaffected Local Control Centers) to ISO: "CONVEX has manually shed/restored (___) MW of load."

Acknowledgment by ISO:

1. ISO to (Unaffected Local Control Centers): "That is correct."

(If misunderstandings occur, then reissue the directive)

OP 7 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
Rev 1	03/17/04	
Rev 2	02/01/05	Updated to conform to RTO
Rev 3	02/24/05	Updated for 2005 Peak Load Exposure
Rev 4	05/06/05	Update for initiation of VELCO Local Control Center and updated LCC area percentages
Rev 5	02/16/06	Updated for 2006 Peak Load Exposure
Rev 6	03/26/07	Updated for 2007 Peak Load Exposure
Rev 7	03/04/08	Annual Review by Procedure Owner. Revised for NSTAR LCC status and to use ISO-NE all time peak load value.
Rev 8	08/19/08	Old Appendix A Rev 7 has been retired (along with Appendix B). This new Appendix A Rev 8 is a revision of the former Appendix C Rev 3. Minor formatting for consistency; Added clarifying statement to end of Step I.B.; Deleted reference to old Appendix B in 1st paragraph Deleted the NOTE in Section I.D and I.E Modified the first l. in Section II. E