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<b>Contact: ISO Director, Operations</b>		<b>Approved by: M/LCC Heads</b>
		<b>Review Due Date: June 1, 2012</b>

## Master/Local Control Center Procedure No. 2


### (M/LCC 2)

### Abnormal Conditions Alert

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## 1. References

ISO New England Manual for Market Operations Manual M-11 (M-11)

ISO New England Operating Procedure No. 2 - Maintenance of Communications, Computers, Metering, and Computer Support Equipment (OP-2)

ISO New England Operating Procedure No. 3 - Transmission Outage Scheduling (OP-3)

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

ISO New England Operating Procedure No. 5 - Generator and Dispatchable Asset Related Demand Maintenance and Outage Scheduling (OP-5)

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

ISO New England Operating Procedure No. 9 - Scheduling and Dispatch of External Transactions (OP-9)


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

Master/Local Control Center Procedure No. 8 - Coordination of Generator Voltage Regulator and Power System Stabilizer Outages (M/LCC 8)

SOP-RTMKTS.0120.0010 – Implement Operations During Abnormal Conditions

## 2. Purpose

This procedure, Master Local Control Center Procedure No. 2 (M/LCC 2) - Abnormal Conditions Alert, is used to alert power system operations, maintenance, construction and test personnel as well as Market Participants (MPs) when abnormal conditions affecting the reliability of the power system exist or are anticipated. Once notified of an M/LCC 2 Abnormal Conditions Alert, these entities are expected to take precautions so that routine maintenance, construction and test activities associated with generating stations, Dispatchable Asset Related Demands (DARDs), Real-Time Demand Response, Real-Time Emergency Generation, transmission lines, substations, dispatch computers, and communications equipment do not further jeopardize the reliability of the power system. If maintenance, construction and test activities could jeopardize the reliability of the power system, such activities shall be stopped and/or postponed during the M/LCC 2 Abnormal Conditions Alert.

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### 3. Introduction

Established operating procedures provide an approval process for outages of the following:


- Generators and DARDS in ISO New England Operating Procedure No. 5 - Generator and Dispatchable Asset Related Demand Maintenance and Outage Scheduling (OP-5),
- transmission maintenance in ISO New England Operating Procedure No. 3 - Transmission Outage Scheduling (OP-3), and
- maintenance of dispatch computer and communications equipment in ISO New England Operating Procedure No. 2 - Maintenance of Communications, Computers, Metering, and Computer Support Equipment (OP-2).

Applications for work involving the above areas shall be approved before maintenance and test activities are conducted which take equipment out-of-service or obviously impact the reliability of the power system. Some maintenance, construction and test activities are routinely undertaken that do not require approval, when in the judgment of operations, construction and maintenance personnel these activities have a negligible reliability impact. These activities include preventive maintenance, construction, preparatory work for outages, routine maintenance that can be accomplished with equipment on-line, equipment tests, etc.

However, if abnormal conditions exist or are anticipated and maintenance, construction and test activities, such as nuclear surveillance tests and/or preparatory work for future equipment outages which may trip a Generator/DARD and/or transmission facility, and degrade the reliability of the power system, these activities should not be conducted. If these activities cannot be stopped and/or postponed, operations, maintenance, construction and test personnel shall take precautions to prevent the on-going work from posing further risk to the reliability of the power system. This procedure provides guidelines for M/LCC 2 Abnormal Conditions Alert notification and for actions to be taken to limit risk.

This procedure does not in any way affect the application of OP-2, OP-3, or OP-5. When an M/LCC 2 Alert notification occurs, the curtailment of work approved under those procedures is to be considered on an individual application basis, according to the provisions of those procedures.

Some abnormal conditions affect the reliability of the entire New England Reliability Coordinator Area/Balancing Authority Area (RCA/BBA) or just a local reliability area. Some abnormal conditions may be limited to a single Local Control Center (LCC). Accordingly, provision is made in this procedure for separate ISO M/LCC 2 Abnormal Conditions Alert and LCC M/LCC 2 Alert notifications.

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#### 4. Definition of Abnormal Conditions

The determination that abnormal conditions affecting the reliability of the power system exist or are anticipated is a decision made by the ISO Operations Shift Supervisor or the LCC System Operator. Abnormal conditions exist when the reliability of the New England RCA/BAA is degraded. Typical indicators of abnormal conditions are:

- Forecasted or actual deficiency of operating reserves requiring implementation of OP-4 or OP-7
- Low transmission voltages and/or low reactive reserves
- Inability to provide first contingency protection when undesirable post-contingency conditions might result; e.g., load shedding
- Solar Magnetic Disturbances
- Cold Weather Event is declared
- Credible threats to power system reliability such as sabotage or approaching storms
- Operational staffing shortages impacting normal power system operations within New England
- Other conditions that may occur as determined by the ISO Operations Shift Supervisor or the LCC System Operator

#### 5. Types of M/LCC 2 Abnormal Conditions Alert Notifications


For the purposes of this procedure, two types of notifications shall be issued:

**ISO M/LCC 2 Abnormal Conditions Alert** - This notice is issued when:

- Abnormal conditions exist or are anticipated which affect the reliability of the ISO RCA/BAA
- Abnormal conditions which affect the reliability of the power system exist or are anticipated within one LCC and these conditions could further degrade as a result of maintenance, construction and/or test activities and affect another LCC

**LCC M/LCC 2 Abnormal Conditions Alert** - This notice is issued when:

An LCC M/LCC 2 Abnormal Conditions Alert shall be issued when abnormal conditions which affect the reliability of the power system exist or are anticipated solely within one LCC local reliability area and these conditions could not become further degraded by the consequences of maintenance, construction and/or test activities in another LCC local reliability area.


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## 6. Criteria to Stop and/or Postpone Maintenance, Construction and Test Activity

When an M/LCC 2 Alert notification is issued, maintenance, construction and test activities shall be stopped and/or postponed, if the following could occur:

- Reduction in reliability or output of a Generator
- Increased reliability exposure (decreased reliability) to the loss of a critical transmission facility
- Reduced staffing that restricts operability of Generator and or Transmission facilities
- Interruption of voice or data communications used for dispatching purposes
- Operation of the ISO, LCC, or MP SCADA computers become degraded or fail

If maintenance, construction and test activities cannot be stopped and/or postponed, precautions shall be taken to prevent the activities from posing further risk to the power system.

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## 7. Procedure

The following steps outline the responsibilities of ISO; the LCCs; Generator/DARD Designated Entities (DEs); Demand Designated Entities (DDEs); and Transmission Owner maintenance, construction and test personnel.

### 7.1 ISO New England M/LCC 2 Abnormal Conditions Alert

#### **ISO Responsibilities:**

Perform the following in accordance with SOP-RTMKTS.0120.0010 - Implement Operations During Abnormal Conditions:


- Determine if an ISO M/LCC 2 Abnormal Conditions Alert shall be declared or cancelled
- Use the Emergency Notification System (ENS) software to notify Generator/DARD DEs and DDEs that an M/LCC 2 Abnormal Conditions Alert has been declared or canceled
- Verbally notify the LCCs, NYISO, TransEnergie, IESO, NBSO, and internal ISO personnel that an ISO New England M/LCC 2 Abnormal Conditions Alert has been declared or canceled
- Review and, as appropriate, curtail, cancel, postpone or reactivate maintenance, testing and construction activities curtailed during the M/LCC 2 Abnormal Conditions Alert

#### **LCC Responsibilities:**

- Receive notification from ISO that an ISO M/LCC 2 Abnormal Conditions Alert has been declared or canceled
- Notify dispatch centers, and other appropriate personnel which impact the New England Transmission system that an ISO M/LCC 2 Alert has been declared or canceled
- REMVEC shall make notifications as required by their internal operating procedures that an ISO M/LCC 2 Abnormal Conditions Alert has been declared or canceled
- CONVEX shall make notifications as required by their internal operating procedures that an ISO M/LCC 2 Abnormal Conditions Alert has been declared or canceled
- Review and, as appropriate, curtail or cancel maintenance, testing and construction work

#### **Generator/DARD DEs; DDEs; and Transmission Owner Maintenance, Construction, & Test Personnel Responsibilities:**


- Receive notification that an ISO M/LCC 2 Alert has been declared or canceled
- Take appropriate actions to curtail testing, construction and maintenance activities
- Ensure that automatic voltage regulators are in service (unless grandfathered per M/LCC 8)

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- Ensure that Power System Stabilizer (PSS) devices are in service if required
- Resume normal maintenance, construction and test activities once ISO M/LCC 2 Alert has been canceled

**MP Responsibilities (Applies only to those MPs listed in CONVEX and REMVEC internal procedures.**

- Receive notification that an ISO M/LCC 2 Alert has been declared or canceled

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## 7.2 Local Control Center M/LCC 2 Abnormal Conditions Alert

### LCC Responsibilities:

- Determine if a LCC M/LCC 2 Alert must be declared or cancelled
- Request ISO use the ENS software in accordance with SOP-RTMKTS.0120.0010 - Implement Operations During Abnormal Conditions to notify applicable Generator/DARD DEs and DDEs an LCC M/LCC 2 Alert has been declared or canceled within the LCC local reliability area
- REMVEC (If REMVEC or NSTAR declares the LCC M/LCC 2 Alert) shall make notifications as required by their internal operating procedures that an LCC M/LCC 2 Abnormal Conditions Alert has been declared or canceled
- CONVEX (If CONVEX declares the LCC M/LCC 2 Alert) shall make notifications as required by their internal operating procedures that an LCC M/LCC 2 Abnormal Conditions Alert has been declared or canceled
- Review and as appropriate, cancel maintenance, testing and construction work

### ISO Responsibilities:

- Receive notification that an LCC M/LCC 2 Alert has been declared or canceled.
- Use the ENS software in accordance with SOP-RTMKTS.0120.0010 - Implement Operations During Abnormal Conditions to notify applicable Generator, DARD **and Demand** Designated Entities an LCC M/LCC 2 Alert has been declared or canceled within the LCC local reliability area

### Generator/DARD DEs; DDEs; and Transmission Owner Maintenance;

### Construction; & Test Personnel Responsibilities:


- Receive notification that an LCC M/LCC 2 Alert has been declared or canceled
- Take appropriate actions to stop and/or postpone testing, construction and maintenance activities

### MP Responsibilities (Applies only to those MPs listed in CONVEX and REMVEC internal procedures.

- Receive notification that a LCC M/LCC 2 Alert has been declared or canceled


## 8. Logging Requirements

ISO and each LCC shall record all M/LCC 2 Abnormal Conditions Alert notifications.

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## 9. Revision History

Rev. No.	Date	Reason
0	04/06/88	
1	02/24/89	
2	02/21/90	
3	05/16/91	
4	08/25/97	
5	11/19/01	
6	09/01/04	Standardize procedure format and incorporate RTO language changes
7	04/20/06	Updated for annual review and clarified communications
8	05/30/06	Added additional activities that could impact the reliability of the system
9	10/01/06	Revised for Ancillary Services Market (ASM) Phase 2
10	10/18/07	Revised as part of annual review
11	12/14/07	Revised to reflect NSTAR as a LCC
12	06/03/08	Annual Review by Procedure Owner. Revised to add M/LCC2 Abnormal Conditions Alert used when certain External Transactions are reduced to preclude Operating Reserve deficiency. Deleted any reference to NSTAR notification of MP to staff stations listed in Att. A Global changes to use current terminology and define acronyms for frequently used terms. Removed references to MPs manning substations during M/LCC 2. Referenced LCCs making notifications IAW their local operating procedures. Removed references to Attachment A.
13	03/12/09	Biennial Review by Procedure Owner; Change Contact in header from Manager to Director; Changed header Review Due Date: from a fixed calendar date to be 24 months from the Revision Date:
14	06/01/10	Biennial review by procedure owner; Various locations made changes to reflect the implementation of Demand Designated Entities under the Demand Response Integration Project and also to remove the requirement to implement M/LCC #2 prior to curtailing external transactions that did not clear in the Day Ahead Markets (note that the implementation of M/LCC #2 will be replaced with a notice to the ISO New England website for external transactions).

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15	12/16/10	Format change, text to Arial, page numbering to Page X of Y; Minor grammar, punctuation and format changes; Section added SOP-RTMKTS.0120.0010 to references list; Section 3 added correct titles for documents being referred to; Globally changed Control Area (CA) to Reliability Coordinator Area (RCA); Section 4 added Cold Weather Event; Globally replaced "curtailed" with "stopped and/or postponed"; Section 7.1 ISO Responsibilities: deleted the 2 <sup>nd</sup> and 3 <sup>rd</sup> bullets and added a new 3 <sup>rd</sup> bullet; Section 7 Generator/DARD subsection: corrected entities being referred to; Section 7.2 LCC Responsibilities: deleted 2 <sup>nd</sup> and 3 <sup>rd</sup> bullets, added "within that LCC region" to 2 <sup>nd</sup> bullet; Section 7.2 ISO Responsibilities: deleted 2 <sup>nd</sup> bullet and added "within that LCC region" to 2 <sup>nd</sup> bullet

## 10. Attachments

None