



Operating Procedures

ISO New England Operating Procedure No. 1

Central Dispatch Operating Responsibility and Authority of ISO New England, the Local Control Centers and Market Participants – Appendix A

Effective Date: June 1, 2010

Revision No. 6

OP 1 – Central Dispatch Operating Responsibility and Authority of ISO New England, the Local Control Centers and Participants Appendix A

REFERENCES:

1. NERC Reliability Standard NUC-001 – Nuclear Plant Interface Coordination (NERC NUC-001)
2. ISO New England Market Rule 1
3. ISO New England Manual for Market Operations, (M-11)
4. ISO New England Manual for Registration and Performance Auditing, (M-RPA)
5. ISO New England Operating Procedure No. 1 – Central Dispatch Operating Responsibility and Authority of ISO New England, the Local Control Centers and Participants (OP-1)
6. ISO New England Operating Procedure No. 2 – Maintenance of Communications, Computers, Metering and Computer Support Equipment (OP-2)
7. ISO New England Operating Procedure No. 3 – Transmission Outage Scheduling (OP-3)
8. ISO New England Operating Procedure No. 4 – Action During a Capacity Deficiency (OP-4)
9. ISO New England Operating Procedure No. 5 – Generation and Dispatchable Asset Related Demand Maintenance and Outage Scheduling (OP-5)
10. ISO New England Operating Procedure No. 7 – Action in an Emergency (OP-7)
11. ISO New England Operating Procedure No. 8 – Operating Reserve and Regulation (OP-8)
12. ISO New England Operating Procedure No. 9 – Scheduling and Dispatch of External Transactions (OP-9)

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13. ISO New England Operating Procedure No. 14 – Technical Requirements for Generation, Demand Resources and Asset Related Demands (OP-14)
14. ISO New England Operating Procedure No. 16 – Transmission System Data (OP-16)
15. ISO New England Operating Procedure No. 18 – Metering and Telemetry Criteria (OP-18)
16. CONVEX OI 0001 – Operating Responsibility and Authority of CONVEX
17. Maine MOP1 – Operating Responsibility and Authority of the Maine LCC
18. New Hampshire OP-0001 – Operating Responsibility and Authority of the ESCC
19. NSTAR OP1 – Operating Responsibility and Authority
20. REMVEC OP1 – Operating Responsibility and Jurisdiction
21. VELCO OP1 – Operating Responsibility and Jurisdiction

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I. INTRODUCTION

Consistent with the Principles and general responsibilities stated within this Procedure and to assure the effectiveness of the ISO New England (ISO) Balancing Authority Area (BAA) central dispatch through the ISO, Local Control Centers (LCCs) and Market Participant facilities, the following dispatch assignments are made. The listed assignments include most of the fundamental responsibilities of central dispatch but are not inclusive of all responsibilities assigned. It is expected that these responsibilities will receive continual review and will be updated as needed to assure efficient operation of the power system. It is further understood that all operating entities at the ISO, LCC and Market Participant level share a responsibility to protect proprietary and privileged information that may unduly influence the operation of the Market in the ISO BAA in accordance with the ISO New England Information Policy.

II. TRANSMISSION OPERATION

ISO

1. Monitor power flows on all non-radial transmission facilities operating at 115 kV and above, all non-radial inter-LCC transmission facilities, all inter-BAA transmission facilities and all facilities associated with pre-determined inter-BAA power flows.
2. Initiate dispatch actions, including the commitment/decommitment and MW adjustment of Generators, Dispatchable Asset Related Demands (DARDs) and Demand Resources, required to insure that the facilities noted in (1) above are operated in compliance with ISO New England Operating Procedures, ISO New England Market Rule, ISO New England Manuals and ISO New England Transmission Operating Guides.
3. Coordinate voltage and reactive dispatch of facilities when normal schedules are unable to be maintained by one or more LCCs.
4. Respond to system disturbances by initiating load management procedures with the LCCs, including voltage reduction, initiating the Load Response Program and load shedding. Coordinate system restoration after wide spread loss of load.

LCCs

1. Monitor power flows on all transmission facilities including voltages below 115 kV and interconnection points associated with each LCC region.
2. Dispatch voltage and reactive power of available facilities within the LCC as long as normal schedules can be maintained. MW re-dispatch orders to generating stations will be distributed through ISO unless emergency conditions or a mutual understanding with the ISO staff justifies direct LCC contact with the generation station.
3. Dispatch all transmission facilities radial, and/or operating at or below 345 kV, if assigned that responsibility by its member Market Participants.
4. Direct restoration of intra-LCC transmission facilities in accordance with Local Control Center Operating Procedures and ISO New England Operating Procedures.
5. Lead in communicating to ISO dispatch actions required when Market Participant facilities require operation under a higher level of reliability than would be achieved within normal procedures.
6. Assume other dispatch duties such as switching and tagging as agreements are reached between each LCC and its member Market Participants.
7. Direct implementation of load shedding as coordinated by ISO.
8. Direct implementation of system restoration as coordinated by ISO.
9. Direct implementation and restoration of voltage reduction as coordinated by ISO.

MARKET PARTICIPANTS

1. Shall at all times be the sole judge as to whether or not and to what extent environmental conditions, equipment conditions and/or safety requires any facilities to be operated at less than full capacity or not at all.
2. Assume responsibilities for local transmission facilities to the extent that the responsibility has not been transferred to an LCC.
3. Assume responsibility for facilities not directly assigned to the ISO or an LCC.

III. SECURITY ANALYSIS

ISO

1. Receive outage applications for transmission facilities in accordance with ISO New England Operating Procedure No. 3 – Transmission Outage Scheduling (OP-3). Evaluate, and approve or disapprove applications based on contingency analysis that will assure reliable operation.
2. Receive outage applications under ISO New England Operating Procedure No. 2 – Maintenance of Communications, Computers, Metering and Computer Support Equipment (OP-2). Evaluate, and approve or disapprove applications based upon projected system conditions.
3. Monitor power flows on transmission facilities operating at 115 kV and above. Based on contingency analysis, initiate dispatch actions to assure reliable operation.
4. Receive and administer requests for Planned and Maintenance Outage requests in accordance with ISO New England Operating Procedure No. 5 – Generation and Dispatchable Asset Related Demand Maintenance and Outage Scheduling (OP-5). ISO will forward requests to appropriate LCCs.

LCCs

1. Receive Generator and DARD outage applications from the ISO and transmission outage applications from the Market Participants. Evaluate applications based on contingency analysis to assure reliable operation. Disapprove any application of a Generating Capacity Resource affecting its Capacity Supply Obligation (CSO) that adversely impacts LCC operations and/or deemed to be in violation of ISO New England Operating Procedures, ISO New England Market Rule, ISO New England Manuals and/or ISO New England Transmission Operating Guides.
2. Using contingency analysis, review Generator/DARD commitment schedules issued by ISO to assure that the reliability standards specified by Local Control Center Operating Procedures, ISO New England Operating Procedures, ISO New England Market Rules, ISO New England Manuals and/or ISO New England Transmission Operating Guides are met.
3. Monitor Power flows on all transmission facilities including voltages below 115 kV and interconnection points associated with each LCC region. Inform ISO of any operating condition that has the potential to reduce reliability of the bulk power system below the level prescribed by Local Control Center Operating Procedures, ISO New England Operating Procedures, ISO New England Manuals, ISO New England Market Rules and/or ISO New England Transmission Operating Guides.

IV. ECONOMIC DISPATCH

ISO

Continuously monitor the bulk power system loading conditions and determine the most economical allocation of resources available for dispatch considering system frequency, system load, reserve, reliability, and other system-specific requirements.

V. REGULATION

ISO

1. Maintain Generators on regulation to satisfy Regulation requirements in accordance with ISO New England Market Rules, ISO New England Manuals, North American Electric Reliability Corporation (NERC) Standards and Northeast Power Coordinating Council, Inc. (NPCC) documents. Generators on Regulation should be selected to achieve the best economics possible in accordance with ISO New England Market Rules, ISO New England Manuals while maintaining system reliability and control performance.
2. Supply the Regulation assignment, which is the economic Desired Dispatch Point which in turn provides the AGC setpoint directives to Generators under Regulation on the approved Data Communications Network.

LCC OR MARKET PARTICIPANT/SCADA CENTERS

LCC or Market Participant/Supervisory Control And Data Acquisition (SCADA) Centers with Generators that are available to provide Regulation, will supply or support a data communications facility that can receive AGC set point data from ISO and re-transmit the control signals to the individual Generator controllers under the standards defined by ISO New England Operating Procedure No. 18 - Metering and Telemetry Criteria (OP-18).

VI. BAA INTERCHANGE AND INADVERTENT

ISO

1. Schedule, monitor, and maintain the ISO BAA Interchange with TransEnergie, New Brunswick System Operator and New York ISO while adhering to NERC, NPCC and ISO New England operating criteria.
2. Forecast inter-BAA transfer capabilities, consistent with scheduling periods, (hourly, weekly, and monthly) to be used as delimiters in the scheduling of inter-area transfers.

VII. EXTERNAL TRANSACTIONS ADMINISTRATION

ISO

Monitor, schedule for delivery, and/or suspend available External Transactions with other BAAs and external non- Market Participants based upon External Transaction availability criteria, the optimization of system economics and/or system reliability constraints and consistent with ISO New England Operating Procedure No. 9 – Scheduling and Dispatch of External Transactions (OP-9).

VIII. PUMPED STORAGE AND LIMITED ENERGY RESOURCE OPERATION

ISO

Monitor the Northfield and Bear Swamp (J. Cockwell) projects to determine MWh availability for those Generators/DARDs. Monitor MWh totals for the remaining Limited Energy Resources in accordance with the ISO New England Market Rules and or ISO New England Manuals to determine MWh availability for those Generators/DARDs.

MARKET PARTICIPANTS

1. Manage and operate all Generators/DARDs for which the Market Participant holds licenses unless otherwise assigned.
2. The Market Participants are solely responsible for meeting the license and environmental requirements for the Generators/DARDs they own and operate unless otherwise assigned.
3. Supply ISO with all Generator/DARD redeclarations unless otherwise assigned.

IX. INTERCONNECTION SCHEDULING

ISO

1. Develop and/or coordinate hourly, weekly, monthly, etc. interchange schedules for all interchange arrangements between and/or through the ISO BAA and neighboring BAAs. This includes Area-to-Area (for emergency transactions only), Market Participant and non- Market Participant interchange arrangements.
2. Incorporate appropriate scheduled External Transactions into the daily commitment process and communicate to all necessary external parties.
3. Maintain a record by External Transaction of interchange activity.

X. MAINTENANCE COORDINATION - GENERATION

ISO

Receive and administer requests for Planned and Maintenance Outages in accordance with ISO New England Operating Procedure No. 5 – Generation Maintenance and Outage Scheduling (OP-5). ISO will forward requests to appropriate LCCs.

LCCs (GENERAL)

Receive and study requests for Maintenance Outages and recommend approval/disapproval to ISO.

MARKET PARTICIPANTS

Submit requests for Generator Planned and Maintenance Outages directly to the designated ISO staff.

XI. GENERATOR/DARD/DEMAND RESOURCE TESTS AND AUDITS

ISO NEW ENGLAND

1. Initiate and administer:
 - Claimed Capability Audits
 - Nominated Consumption Level (NCL) Audits
 - MVAR testing for Qualified Reactive Resources
 - Bid parameter audits on Market Participant Generators/DARDs in accordance with ISO New England Manuals
 - Performance audits of Demand Resources in accordance with provisions in the Transmission, Markets & Services Tariff, Section III – Market Rule 1, ISO New England Manual for Registration and Performance Auditing, (M-RPA) and ISO New England Manual for Market Operations (M-11).
2. Give authorization for Market Participant initiated demonstrations.
3. Assure that the appropriate LCC is informed whenever an ISO or Market Participant initiated demonstration is scheduled.

XII. OPERATING RESERVE

ISO

Maintain a sufficient amount of Operating Reserve in accordance with ISO New England Operating Procedure No. 8 - Operating Reserve and Regulation (OP-8). If available capacity is insufficient to provide adequate Operating Reserve, the ISO will implement the various Actions of ISO New England Operating Procedure No. 4 - Action During a Capacity Deficiency (OP-4) and/or ISO New England Operating Procedure No. 7 - Action in an Emergency (OP-7).

LCCs

Support ISO in maintaining Operating Reserve by implementing the various Actions of OP-4 and/or OP-7. LCCs may unilaterally implement these procedures if local conditions warrant their use and time constraints do not allow consultation with ISO.

XIII. SYSTEM LOAD FORECASTING

ISO

Forecast and update the ISO BAA hourly loads for the purpose of performing Resource adequacy assessments in accordance with the ISO New England Market Rule, ISO New England Manuals and Procedures.

XIV. GENERATOR/DARD COMMITMENT

ISO

1. Develop commitment/de-commitment schedules for all Generators and DARDs available for central dispatch with consideration for system security and reliability constraints as well as the self-schedules of Generators/DARDs and External Transactions in accordance with ISO New England Market Rules, ISO New England Manuals and Procedures.
2. Supply the LCCs, and a contact point declared by the Lead Market Participant of Generators/DARDs with the most current commitment/de-commitment schedules. These schedules may be provided verbally or electronically at ISO discretion.
3. Coordinate activities between the ISO, LCC and Market Participant regarding the operation of Market Participant Generators/DARDs.

LCCs

Recommend changes to commitment or incremental loading of Generators/DARDs for maintaining area voltage, system stability, and/or meeting thermal transmission requirements. Requests will normally be made to ISO unless emergency conditions justify immediate communications with the Generators/DARDs.

MARKET PARTICIPANT DISPATCH/SCADA CENTERS

Recommend changes to commitment or incremental loading of Generators/DARDs to maintain area voltage and/or to meet thermal transmission requirements. Requests will normally be made to ISO via the appropriate LCC unless emergency conditions justify immediate communications with the Generators/DARDs.

XV. UNIT CONTROL MODES AND OPERATING LIMITS

ISO

1. Maintain the status of all control modes and operating limits on all Generators and DARDs under ISO direct generation control.
2. Maintain operating parameters, such as minimum run times, minimum down times, response rates, etc. as provided by Market Participant Generators and DARDs.
3. Compile and maintain all necessary information, as required by ISO Settlements, to properly reflect all redeclarations for Generators/DARDs under ISO direct control.
4. Notify appropriate LCC(s) whenever ISO identifies a Generator or DARD restriction or limitation that may affect system security. Make the appropriate limits available to the LCCs on the approved Data Communications Network.

LCCs

1. Incorporate known Generator/DARD operating restrictions into security analysis.
2. Notify ISO whenever the LCC identifies a Generator/DARD restriction or limitation that may affect system security.
3. Report all necessary information, as required by the ISO Operations and Settlements departments, to properly reflect all redeclarations for Generators or DARDs under the jurisdiction of the LCC.

MARKET PARTICIPANT GENERATORS OR DARDS

Generators and DARDs have an obligation to notify ISO directly or through a single point of contact of their restrictions or limitations and schedule changes in accordance with the ISO New England Market Rules and Manuals.

XVI. ISO BACK-UP FACILITIES

Develop and implement a back-up plan for all functions for which ISO is responsible including all necessary software, hardware and facility requirements.

XVII. COMMUNICATIONS - DATA**ISO**

Supply to the Data Communications Network, dispatch data that is needed by the ISO Energy Management System or the LCC or Market Participant Dispatch/SCADA centers.

MARKET PARTICIPANTS OR LCC

Provide facilities to collect the real-time data required to perform central dispatch and place the data onto the ISO Data Communications Network either directly or indirectly through an intermediary such as an LCC. ISO New England Operating Procedure No. 18 - Metering and Telemetry Criteria (OP-18) defines specific requirements.

MARKET PARTICIPANT GENERATORS, DARDS AND DEMAND RESOURCES

Meet all eligibility requirements for central dispatch in accordance with ISO New England Operating Procedure No.14 – Technical Requirements for Generators, Demand Resources and Asset Related Demands (OP-14).

XVIII. COMMUNICATIONS - VOICE**ISO**

Provide the necessary voice communications required to issue central dispatch instructions directly to Generators and the Dispatchable Asset Related Demands Designated Entity and Demand Designated Entity.

LCCs

Issue security related MW dispatch orders to ISO. Under emergency conditions the appropriate LCC can initiate direct contact with the Generators and DARDs or act as liaisons of dispatch orders from ISO.

XIX. DISPATCH COMPUTERS AND PERIPHERAL DISPATCH EQUIPMENT

ISO

Be responsible for scheduling and coordinating planned outages of the ISO, LCC, Market Participant Dispatch/SCADA operating computers, Data Communications Network, microwave communications channels, and any other equipment that deprives ISO, the LCCs or Market Participants of normal operating data, Regulation capability or voice communications. This is further defined in ISO New England Operating Procedure No. 2 - Maintenance of Communications, Computers, Metering, and Computer Support Equipment (OP-2).

XX. NUCLEAR PLANT INTERFACE COORDINATION AND OPERATION

ISO

1. Verify receipt of Nuclear Plant Interface Requirements (NPIRs), as defined in ISO New England Operating Procedure No. 14 - Technical Requirements for Generation, Demand Resources and Asset Related Demands (OP-14).
2. Monitor applicable limits, conduct operational analyses, communicate and coordinate information about the transmission system as pertains to the NPIRs.
3. Coordinate outages and maintenance activities which affect the NPIRs with the Nuclear Plant Generator Operator.
4. Notify appropriate LCC(s) and Nuclear Power Plant whenever ISO identifies a system limitation or configuration, as has been identified by the Nuclear Power Plant through OP-14 and agreed to by ISO that may affect the NPIRs
5. Notify appropriate Nuclear Power Plant when both ISO and the applicable LCC lose the ability to assess the operation of the electric system affecting the NPIRs.
6. Coordinate the time within which these notifications identified in items 4 and 5 must be made with the LCC and Nuclear Power Plant.
7. Inform the Nuclear Plant Generator Operator of actual or proposed changes to electric system design, configuration, operations, limits, protection systems, or capabilities that may impact the ability of the bulk electric system to meet the NPIRs.

8. At least once every three years, review applicable provisions of the Transmission Operating Agreement, Market Participant Services Agreement, Interconnection Agreements and Operating Procedures related to how the NPIRs are addressed, implemented, incorporated into operations analyses and included in training programs. These Agreements include administrative elements, technical requirements and analysis, operations and maintenance coordination, communication protocols and training programs necessary to implement the NPIRs.
9. Coordinate development and revisions to relevant operating guides, procedures and protocols with the LCC and Nuclear Power Plants
10. Incorporate NPIRs into training programs.

LCCs

1. Monitor applicable limits, conduct operational analyses, communicate and coordinate information about the transmission system as pertains to the NPIRs.
2. Inform ISO and the Nuclear Power Plant of any operating condition that has the potential to violate the NPIRs.
3. Coordinate outages and maintenance activities which affect the NPIRs with the Nuclear Plant Generator Operator.
4. Notify the ISO and applicable Nuclear Power Plant whenever the LCC identifies a system limitation or configuration that may affect the NPIRs. Coordinate the time within which these notifications must be made with the ISO and Nuclear Power Plants.
5. Work with ISO and applicable Nuclear Power Plant to develop and revise relevant operating guides, procedures and protocols.
6. Incorporate NPIRs into training programs.

MARKET PARTICIPANTS

1. The Nuclear Power Plant Market Participants are solely responsible for meeting the licensing and environmental requirements for the facilities they own and operate unless otherwise assigned.
2. The Nuclear Power Plant Market Participants must supply ISO and applicable Market Participants with the NPIRs in accordance with applicable ISO Operating Documents including OP-14.

3. The Transmission Owner Market Participants are required to inform the LCC of any operating condition that has the potential to violate the NPIRs, and are also required to supply ISO with facility parameters and limits in accordance with ISO Operating Documents including ISO New England Operating Procedure No. 16 - Transmission System Data (OP-16). Such information is essential to provide accurate models needed by ISO and the LCCs to conduct operational analyses.
4. The Nuclear Power Plant Market Participants and the Transmission Owner Market Participants shall coordinate outages and maintenance activities which affect the NPIRs with ISO and the applicable LCC.
5. The Nuclear Power Plant Market Participant and the Transmission Owner Market Participant shall incorporate NPIRs into training programs.
6. The Nuclear Power Plant Market Participants and the Transmission Owner Market Participant shall coordinate on the development and submittal to ISO of the one-line diagram(s) in accordance with ISO OP-16. Such one-line diagram(s) shall include a representation of the configuration of the electrical facilities and components at the interface between the electric system and the nuclear plant that are essential for meeting the NPIRs, and shall also identify and delineate ownership and operational jurisdiction of facilities.
7. Work with ISO and applicable LCC to develop and revise relevant operating guides, procedures and protocols.

OP 1 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	01/04/03	Updated by John Norden
Rev 2	02/01/05	Updated to conform to RTO terminology
Rev 3	10/01/06	Updated for ASM Phase 2
Rev 4	12/21/07	Revised as part of annual review
Rev 5	3/5/10	Added new Section XX to updated for NUC-001
Rev 6	06/01/10	Biennial review by procedure owner. Modified format, changed font to Arial and replaced Control Area with Balancing Authority Area and defined acronym BAA, defined acronyms for NERC, NPCC, ISO and LCC; added language to reflect FCM implementation; added clarifications for NUC-001 compliance.