Master/Local Control Center Procedure No. 7

(M/LCC 7)

Processing Outage Applications

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1. References

Northeast Power Coordinating Council Inc.(NPCC) Regional Reliability Reference Directory #1 - Design and Operation of the Bulk Power System (Directory #1), Appendix F - Procedure for Operational Planning Coordination, Attachment D - NPCC Facilities Notification List

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

ISO New England Operating Procedure No.5 – Resource Maintenance and Outage Scheduling (OP-5)

ISO New England Operating Procedure No.19 – Transmission Operations (OP-19)

ISO New England Operating Procedure No. 23 – Resource Auditing (OP-23)

ISO New England Operating Procedure No.24 - Protection Outages, Settings and Coordination (OP-24)

Master/Local Control Center Procedure No.1 - Nuclear Plant Transmission Operations (M/LCC 1)

Master/Local Control Center Procedure No.11 - Maintenance and Verification of New England System Restoration Plan (M/LCC 11)

Master/Local Control Center Procedure No.18 – New England System Restoration Plan (M/LCC 18)

2. Purpose

This procedure is applicable to both the transmission and Resource Outage Scheduling processes as defined within ISO New England Operating Procedure No. 3 - Transmission Outage Scheduling (OP-3) and ISO New England Operating Procedure No. 5 – Resource Maintenance and Outage Scheduling (OP-5).

Outage requests containing Major Transmission Elements (MTE), critical 345kV line paths, or stability-related reactive devices require greater coordination as they may have a significant impact on the reliable and/or economic operation of the New England Transmission System and as a result, may have greater potential to being cancelled or denied due to economic impacts, than other transmission facilities. A list of MTE equipment can be found in Attachment E - Major Transmission Element Listing, critical 345kV line paths can be found in Attachment F - Critical 345 kV Power Transfer Paths and stability-related reactive devices can be found in Attachment I – Coordination of Stability-Related Reactive Device Outages. The transmission outage coordination

process is driven by the categorization of Bulk Electric System (BES) facilities. The process for verifying and updating of these transmission facilities can be found in Attachment C - Outage Coordination Verification and Revision Process for BES Category A and Category B Facilities. A complete list of BES Category A and B Facilities can be found on the ISO New England (ISO) OASIS website using the following link:

https://www.oasis.oati.com/woa/docs/ISNE/ISNEdocs/TOA__Sched__2-01A_and_B_and_BES__Facilities.pdf

This procedure describes the process of submitting and reviewing outage applications internally within the New England Reliability Control Area/Balancing Authority Area (RCA/BAA) between the Local Control Centers (LCCs) and ISO.

Repositioning or cancelling of planned transmission outages that may affect the reliability of the power system is driven by the process indicated in Attachment J – Anticipated Adverse Conditions Requiring Outage Evaluation.

The ISO Outage Scheduling software is the primary tool used to process all basic information required for each outage application. The use of the ISO Outage Scheduling software also allows ISO to efficiently communicate its study results to an LCC.

This procedure is **not** intended to replace the telephone conversations held between ISO and any LCC concerning the impact of any transmission outage application on the operation of the New England Transmission System. It is merely intended to streamline the process of submitting transmission outage applications from the LCCs to ISO. When the ISO Outage Scheduling software is **not** available, email is used to communicate transmission outage applications.

3. Procedure

NOTE

The ISO Outage Scheduling software is used to communicate transmission outage applications.

- The intent of this software is to allow each LCC to submit all pertinent information regarding each transmission facility outage.
- The ISO Transmission Outage Coordination group and the ISO Security Operator will evaluate transmission outage applications submitted using the ISO Outage Scheduling software.
- The ISO Outage Scheduling software will automatically log transmission outage applications as they are submitted to ISO.

ISO and each LCC responsibilities associated with processing transmission outage applications are clearly defined in OP-3. Planned transmission outages must be submitted within the prescribed timelines provided in this Procedure - Attachment D - Minimum Advance Notice Times - Outage Requests for Specific Equipment.

ISO and each LCC are responsible for the communication and coordination of transmission outage applications that directly affect any element that is defined in Master/Local Control Center Procedure No. 1 - Nuclear Plant Transmission Operations (M/LCC 1) as specified in the following Attachments:

- M/LCC 1 Attachment C - Millstone Nuclear Power Station
- M/LCC 1 Attachment D - Seabrook Nuclear Power Station

Outside of normal working hours or in the absence of personnel from the ISO Transmission Outage Coordination group, the ISO Security Operator and each applicable LCC Operator is responsible for processing transmission outage applications.

ISO does **not** perform voltage reliability studies prior to Real-Time for reactive tests on Resources with reactive capability less than ten (10) MVAr.

1. The transmission outage application process for ISO and each LCC shall be performed as follows:

NOTE

The transmission outage application transmittal is available to ISO in the ISO Outage Scheduling software as a Submitted Application.

A. The LCC shall prepare all necessary LCC informational items using the ISO Outage Scheduling software. Transmission outage applications identified as Non-Reclosing Assurance (NRA) or relay work shall be prepared and submitted in accordance with M/LCC7 Attachment D, and OP24 Appendix C, respectively.

1) When the LCC has completed the informational items, the transmission outage application shall be transmitted (Submitted) to ISO.

   a. To promote efficient coordination, if the transmitted transmission outage application has associated or supporting outages (e.g., transmission switching, creating air gap, etc.) ISO shall request the LCC to link these outages.

B. If ISO Outage Scheduling software is **not** available, the LCC shall:

1) On M/LCC 7 Attachment A - ISO Transmission Facility Outage Request Form enter all necessary items listed in the "To Be Completed by Local Control Center" section.

2) Email the completed Attachment A to ISO.

C. If a transmission outage application is transmitted by an email outside of normal working hours, the LCC shall make a telephone call to notify the ISO Security Operator of the email.

NOTE

The ISO Outage Scheduling software automatically assigns application numbers when the transmission outage application is submitted to ISO. Receipt by ISO is understood to have occurred when an application number is assigned.

D. When a transmission outage application is being studied, the ISO Transmission Outage Coordination group/ISO Security Operator shall place the transmission outage application in the Study mode in the ISO Outage Scheduling software.

NOTE

Until a transmission outage application is placed in the Study mode by ISO, that application can be altered by the LCC.

1) ISO shall update the ISO Outage Scheduling software with the necessary changes to the transmission outage application.

E. If an email is used, upon receipt of the transmission outage application form by email, the ISO Transmission Outage Coordination group/Security Operator shall:

1) Call the LCC to acknowledge receipt of the transmission outage application form by email. See Note 3.1.C above.

2) Assign the transmission outage application received by email, an ISO application number by entering the transmission outage application into the ISO Outage Scheduling software.

F. If the ISO Outage Scheduling software is **not** available, by 1600 hours each day, the

LCC shall verify that an application number has been received for each application transmitted by email to ISO that day.

1) Any discrepancies shall be reported to ISO to verify that an application has **not** been inadvertently overlooked or lost in the email process.

2) Once the ISO Outage Scheduling software is returned to service, the ISO Transmission Outage Coordination group shall enter the outage information received by email.

G. The ISO Transmission Outage Coordination group/ISO Security Operator shall discuss the details of the transmission outage application with the LCC and validate the necessary documentation have been attached, when additional analysis is required to provide complete understanding of the transmission outage application and to obtain all necessary inputs to the ISO study and decision-making process.

1) Items to be discussed/validated may include, but are **not** limited to:

- Facility (name and nomenclature)
- Outage Cause Code and Sub-Cause Code
- Recall Load
- Reason for application (description of work to be performed)
- Emergency restoration time
- Time and date switching is to begin
- Time and date the facility is to be restored to normal operation
- Any LCC and/or system outside of the New England RCA/BAA to whom notifications have been given
- Other information pertinent to the application that may affect an ISO decision, such as a request to revise a Resource outage schedule to address congestion issues with the transmission outage
- LCC analysis results and approval, including contingencies and limiting elements, local voltage constraints, overlapping transmission outages, must-run Resource and restricted Resources.
- Resource's capability to generate on distribution

- Relevant ISO/LCC communication and coordination efforts that have been performed with nuclear power stations for those elements identified in M/LCC 1 and Attachments C or D that affect one or more Nuclear Plant Interface Requirements (NPIRs).

NOTE

The coordination and communication of planned transmission outages must be conducted in a manner that respects the potential need to perform system restoration when planned or unplanned outages occur. The concurrent scheduling of planned transmission outages that impact the Primary and Alternate Paths of a restoration plan should be avoided.

- Requests that identify a Primary or Alternate Restoration Path which may be interrupted. Overlaps of Primary and Alternate Paths should be avoided. If an overlap is unavoidable, the System Restoration Working Group (SRWG) and LCC outage coordination staff will need to supply the following, prior to the planned outage submittal:
  - Provide a SRWG reviewed and accepted Temporary Restoration Path (M/LCC 7 - Attachment H - Temporary Restoration Path); **Or**
  - Evaluate the outage Recall Time of the outages and determine which can be modified to less than or equal to (≤) 24 hours.
  - If one of these **cannot** be provided upon Submittal, the outage request will be **Denied**.
- All protection system, and/or related communication system outage(s) shall include an OP24 Appendix D - Required Protection Outage Request Form and Examples Attachment if one or more substation(s) is/are listed on OP24 Appendix C – Transmission Facilities Required to Report Protection Characteristic, Failures or Degradation.

NOTE

Protection system clearing time information is needed by the ISO New England Operations Support Services (OSS) Real-Time Studies group to evaluate the potential impact of the protection/communication system outage on system stability performance. ISO will determine if the submitted relay information is adequate for engineering analysis or if additional information is required.

- For testing of new or existing dynamic reactive devices connecting to the Bulk Electric System (BES), requests shall be submitted in accordance with OP23, include Appendix H – Reactive Capability Audit Request Form, as well as:
  a. All planned transmission outage dates that are associated with the new equipment commissioning

b. Testing plans and their associated outage dates which will be documented in the ISO Outage Scheduling software (leading and lagging test should be submitted in separate forms)

c. Any deviations from the planned outage and testing schedule for the new reactive equipment

d. Commissioning date of new reactive equipment for utilization in Real-Time operations

NOTE

Using the ISO Outage Scheduling software, the LCC can view the status of the transmission outage application and the results of the study.

H. The ISO Transmission Outage Coordination group/ISO Security Operator shall;

1) Confirm the decision to Approve or Deny a transmission outage application contained within the ISO Outage Scheduling software using one of the following transmission outage application status modes:

- Interim Approved
- Approved
- Denied
- Cancelled

2) If necessary, notify the LCC by telephone.

I. Upon completion of the study at ISO, the study results shall be made available to the appropriate LCC:

NOTE

Normally, the study results are available through the ISO Outage Scheduling software.

- If the ISO Outage Scheduling software is **not** available, the ISO Transmission Outage Coordination group/ISO Security Operator shall list the study results on page 2 of Attachment A - ISO Transmission Facility Outage Request Form and send an email to the appropriate LCC.
- If a Transmission Outage request is Denied or Cancelled, the ISO Transmission Outage Coordination group/ISO Security Operator shall verify that any applicable associated or supporting outages (e.g., transmission switching, creating air gap, etc.) in the ISO Outage Scheduling software are also Denied or Cancelled.

NOTE

Leading up to the transmission facility outage, the ISO Transmission Outage Coordination group, ISO Security Operator and the LCC each review the transmission outage application to verify that the studies that have been performed are complete, accurate and reflect the impact of current or anticipated operating conditions during the outage.

J. The ISO Transmission Outage Coordination group, ISO Security Operator and the LCC shall conduct a transmission outage application review including an assessment to verify that the studies that have been performed include the following:

- Accurate system topology.
- Accurate study load data from the 7-Day, 21-Day, or 50/50 load forecast, as applicable.
- Accurate wind data per the 7-Day Forecasted Wind Plant Output as applicable.
- Accurate solar forecast when available
- A load level at which transmission work will be recalled, if applicable.

NOTE

During the summer and winter seasons, when higher forecasted loads are prevalent, Transmission outages that restrict Resources, impact transfer capability on interfaces internal and external to ISO New England or have a recall time exceeding 24 hours are more at risk of potential recall, denial or repositioning based on system conditions, as outlined in Attachment J – Anticipated Adverse Conditions Requiring Outage Evaluation.

- Must-run Resource identified (if required) and the conditions that require the must-run Resource to operate.
- Low load, high voltage studies shall be conducted when devices that significantly affect the reactive capability of the BES are removed from service.
- Applicable Transmission Operating Guides identified.
- Verification that a switching application exists when:
  - Resource is further restricted during switching
  - An interface is further restricted during switching
  - An identified NPIR element requirement is operated during switching
  - Directed by the ISO

- Ensure Relay/ Communications (RLY/COM) and Non-Reclosing Assurance (NRA) applications contain relevant information.
- Identify and list overlapping outages of concern.
- If required, complex studies are completed.
- ISO engineering review is conducted when an "abnormal" system topology is expected. This would include but is not limited to:
    - Closing normally open devices
    - Energization of new facilities
    - Retirement of facilities
    - Utilization of temporary bypass configurations
- If required, temporary guides are issued.
- Electronic documentation of weather-sensitive transmission facility ratings shall be provided to ISO, if authorized by the LCC. ISO may use the weather-sensitive transmission facility ratings in the Outage Coordination process.
- All documentation is complete, accurate and references the correct outage and time frame.
- Confirm LCC/ISO communication and coordination efforts have been performed with nuclear power stations for those elements identified in M/LCC 1 and Attachments C or D that affect one or more NPIR(s).
- Confirm LCC/ISO communication and coordination efforts have been performed with Resources that are limited or isolated due to transmission work identified by a guide, topology or thermal restrictions. Ensure specified limits identified in a guide are communicated to the applicable Resource.

K. If it is determined that a Planned Outage for the upcoming Operating Day has **not** been studied as required, and if time permits, further studies to correct the transmission outage application will be referred to the affected LCC(s) and either the ISO Transmission Outage Coordination group or the ISO OSS Real-Time Study group on-call engineer.

- If time does **not** permit further study by these groups, the ISO Control Room will **not** allow the Planned Outage to start and will delay or cancel the outage, if required.

L. Within 60 minutes prior to the scheduled switching time, each LCC shall perform the following, prior to requesting permission from ISO to remove equipment from service:

- Review the applicable application in the ISO Outage Scheduling software for Resource must-run requirements and/or Resource restrictions.
- Review the applicable application in the ISO Outage Scheduling software for interface limits in accordance with permanent or temporary transmission guides or detailed information in the transmission application.
- Perform a Real-Time power flow security analysis with the requested element removed from service.

M. In cases where reconfiguration of the transmission system is required, each LCC shall perform a Real-Time power flow security analysis prior to requesting permission from ISO to restore equipment to service.

N. Transmission outage start and completion times shall be entered into the ISO Outage Scheduling software by the ISO Control Room Operator.

O. In the event of an Unplanned Outage, the LCC shall notify the ISO Transmission Outage Coordination group or ISO Security Operator of the outage and submit an Outage Request into the ISO Outage Scheduling software as soon as possible.

1) ISO/LCC shall conduct communication and coordination efforts with the affected nuclear power station, Resource and/or Reliability Coordinator, as soon as possible for those Unplanned Outage Requests that include elements identified in:

- Master/Local Control Center Procedure No. 1 - Nuclear Plant Transmission Operations (M/LCC 1) and Attachments C or D that affect one or more NPIR(s)
- Northeast Power Coordinating Council Inc.(NPCC) Regional Reliability Reference Directory #1 - Design and Operation of the Bulk Power System (Directory #1) - Appendix F - Procedure for Operational Planning Coordination, Attachment D - NPCC Facilities Notification List
- Permanent or temporary transmission guides

NOTE

A Planned Outage may be started early when that outage has been approved by the Transmission Outage Coordination group and is **not** expected to cause congestion.

P. When system conditions are favorable, the LCC may request to start an approved outage early to enhance reliability or outage coordination efficiency.

1) If an Approved Planned Outage is to be started early, the LCC shall notify the ISO Security Operator of the future Planned Outage application and make a request to start the outage.

2) The ISO Security Operator shall discuss the detailed transmission outage application with the LCC to ensure complete understanding of the transmission outage application and to obtain all necessary input to the ISO decision-making process. The ISO Security Operator may grant a request to start an approved outage early if it is determined that the outage will **not** adversely impact reliability or market efficiency. It is the sole discretion of the ISO Control Room System Operators to grant such a request.

NOTE

ISO will accept relay protection outages on a temporary basis under acceptable conditions for maintenance of single protection groups for an element with redundant local protective relay groups.

Extended outages for long periods affecting one protection group for a transmission element with redundant local protection are generally unacceptable.

Q. Transmission Owners (TOs) and Lead Market Participants (Lead MPs) for Generator Owners (GOs) shall avoid Protection System Component outages that last longer than thirty (30) calendar days. If a Protection System Component that is involved in the protection of equipment listed in OP-24C is out-of-service for longer than thirty (30) calendar days, then the Transmission Operator (TOP) with information from the TO or Lead MP for the GO shall provide:

1) An attachment to the outage request showing progress in restoring the Protection System Component to service; And

2) A corrective action plan describing the steps that will be undertaken to restore the Protection System Component to service.

4. Revision History

Rev. No.	Date	Reason
- -	02/01/19	For previous revision history, refer to Rev 20 available through Ask ISO;
20	02/01/19	Biennial review completed by procedure owner; Attachment D, the relay outage content in Table 1 is being moved to OP-24 and the remaining content in Table 1 is being declassified (i.e., M/LCC 7 Att D corporate identity of "Confidential" is being replaced with "ISO-NE PUBLIC"); Attachment G is being retired, 02/01/19, (The content in the Table in this Attachment is being modified and moved into OP-24); Truncated the Revision History per SOP-RTMKTS.0210.0010 Section 5.6;
21	06/04/19	Modified Section 3.G to memorialize outage process for dynamic reactive devices; modified Section 3.J to provide direction addressing the submittal of studies that include conditional load limitations. Globally deleted references to retired MLCC1 Attachment A.
22	07/16/20	Updated link to OASIS for CAT A & B listing; Clarified load forecast to be utilized for analysis; Guidance on when switching applications should be submitted; ; Specified that relay/NRA applications identified overlapping outages; Modified document title to allow addition of content applicable for Resource outages
23	11/10/20	Biennial review completed by procedure owner; Updated reference section to include Lake Road Breaker Out Guide.
24	08/31/22	Removed FERC metric criteria for >200kV; Included NPIR switching requirements; Updated winter and high load concerns and outage expectations; Aligned long duration relay outage process with OP-24; Clarified OP-24 Appendix D outage requirements; Addressed temporary ratings in the Outage Coordination process; Documented expectations for potential recall of transmission work due to seasons for system reliability; Updated NRA process.
25	02/01/24	Biennial review completed by procedure owner; Added verbiage for NRA applications to be submitted in accordance with M/LCC7 Attachment D, and relay applications to be submitted in accordance with OP24 Appendix C; Added verbiage to conduct low load, high voltage studies when reactive equipment is removed from service; Removed NOTE referencing when to submit NRA applications as this is covered in M/LCC7 Attachment D; Added requirements for engineering review when abnormal system topology is being evaluated.
26	06/18/25	Periodic review completed by procedure owner; Updated procedure owner; Minor administrative review throughout; Added OP5 and OP23 reference; Updated language to make a general reference to outage applications; Clarified process for testing of reactive resources; Generator updated to Resource to align with ISO terminology; Clarified responsibility of OC group based on re-organization structure.
27	05/27/26	Periodic review completed by procedure owner; Added references to missing and new attachments (Attachments H, I, & J); Removed references to retired procedures; Updated CAT A & B BES listing; Clarified actions taken for Resources with specified limits identified in a published guide.

5. Attachments

Attachment A - ISO Transmission Facility Outage Request Form.

Attachment B - Retired (06/30/16)

Attachment C - Outage Coordination Verification and Revision Process for BES Category A and Category B Facilities

Attachment D - Minimum Advance Notice Times - Outage Requests for Specific Equipment

Attachment E - Major Transmission Element Listing (Confidential)

Attachment F - Critical 345 kV Power Transfer Paths (Confidential)

Attachment G - Retired (02/01/19)

Attachment H - Temporary Restoration Path

Attachment I - Coordination of Stability-Related Reactive Device Outages

Attachment J - Anticipated Adverse Conditions Requiring Outage Evaluation