ISO new england	© *ISO New England Inc. 2021*	*Procedure: Update Outages Impacted by System Changes*
	Process Name: Maintain Outage Scheduling Software	
	Procedure Number: OUTSCH.0025.0010	*Revision Number: 14*
	Procedure Owner: Maya Ault	*Effective Date: October 11, 2023*
	Approved By: Director, Operations Support Services	*Valid Through: October 11, 2025*

SOP-OUTSCH.0025.0010
Update Outages Impacted by System Changes

Contents

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1. Objective

The objective of this procedure is to update the scheduled outages in the ISO Outage Scheduling software to reflect changes in system configuration. This procedure documents the responsibilities of ISO New England (ISO) staff.

Compliance with this procedure is necessary for reliable operation of the power system in accordance with 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), and ISO New England Operating Procedure No. 19 - Transmission Operations (OP-19). This procedure does **not** in any way change the intent of OP-3, OP-5, or OP-19. This procedure is intended to clarify some of the responsibilities delegated to ISO staff by those procedures. This procedure also supports cost-effective operation of the power system. Activities performed in this procedure can affect Market Operation and Settlement.

2. Background

The ISO Outage Scheduling software contains numerous transmission and Resource outages. When the energy management system (EMS) Power System Model is updated, the resulting new system configuration may affect some of the equipment status/condition data contained in these outages. The outages impacted must be appropriately redefined to reflect the new system configuration and to align with new contingency definitions.

When an updated EMS Power System Model includes new equipment, it is typically necessary to initially outage the new element until the equipment goes into service.

Proper modeling of system outages is necessary for reliable and cost effective operation of the power system following any EMS Power System Model update.

3. Responsibilities

1. The Supervisor, Short-Term Outage Coordination is responsible for executing this procedure.

2. The Short Term Outage Coordinator is responsible for performing the directed actions provided in Section 5 of this procedure.

4. Controls

- The ISO Outage Scheduling software reflects the model running in the real-time system within the same business day of the completion of the "Install EMS Power System Model" process.

5. Instructions

5.1 Procedure Activation and Timing

NOTE

The new network model is installed on the ISO Outage Scheduling software servers on the same day the new network model is installed on EMS and ORACLE servers.

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1. The applicable actions of Sections 5.2 and/or 5.3 of this procedure shall be performed by the Short Term Outage Coordinator when notified by:

   A. Power System Model Management personnel when a new network model will be installed and migration schedule is established.

   B. Control Room personnel when new equipment is commercial and in service.

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5.2   Update Outages

1. When outage request updates are required due to a new network model release, the Short Term Outage Coordinator shall perform the following:

   A. Attend planning meetings supporting the new network model release.

   B. Obtain the timelines and steps to be performed by the Short Term Outage group from the Power System Modeling Management group.

   C. Obtain applicable engineering changes, model differences, migration schedules and other pertinent files supporting the new network model release from the Power System Modeling Management group.

   D. Evaluate equipment, line, station, unit, interface and contingency changes applicable to the EMS base cases, total transfer capability (TTC) calculator and Day-Ahead Market (DAM) application development.

   E. When notified by the Supervisor, Day-Ahead & Related Markets Application Support group of the new network model data staged in the ISO Outage Scheduling software Sandbox environment, reconcile the Sandbox environment as follows:

      (1) In the Administration menu, select "Begin NMM Import"

      (2) Click "Reconcile Equipment Data"

      (3) Click on the "Run Comparison" button

      (4) Compare each device to be added, deleted, retired, or updated against the differences file provided by the Power System Modeling Management group and click the "Reconcile" checkbox

         a. If there is an equipment change, click the "Promote" checkbox

         b. Enter any applicable information required by dialog boxes (i.e., "owner" or "reliability area")

   > **NOTE**
   >
   > If the equipment should **not** be changed for any reason (e.g., deleting the LCC back-up control center, etc.) the "Promote" box is **not** to be clicked.

      (5) In the Administration menu, select "Reconcile Outage Requests"

      (6) Click on the "Run Comparison" button

   > **NOTE**

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> When all retired equipment is removed from the outage requests within the Sandbox environment, the list will be empty.

    (7) If any outage request contains equipment to be deleted, remove those devices from the indicated application and click on the "Run Comparison" button

    (8) In the Administration menu, select "Reconcile Equipment Groups"

    (9) Click on the "Run Comparison" button

    (10) For each item listed, navigate to the equipment group listed in the "My Equipment Groups" in the "View" menu and remove the deleted equipment (by double clicking the equipment group, select the device and then cleck remove)

    (11) When each Equipment group has been modified, click on the "Run Comparison" button and verify the list is empty

F. When the Sandbox environment has been successfully reconciled (i.e., all "Reconciled" and the desired "Promote" check boxes in each category have been selected), notify the Day-Ahead & Related Markets Application Support group representative designated for the network model release.

G. Coordinate with Real-Time Market Support group and based on deleted, temporary and new contingencies listed in the differences file, update the contingency database for TTC Calculator.

H. When notified by the Supervisor, Day-Ahead & Related Markets Application Support group that the new network model data is staged in the ISO Outage Scheduling software Production environment, reconcile the equipment data and equipment groups by performing the applicable actions in Step 5.2.E (with the exception of the Outage Requests and Equipment Groups).

I. When the Production environment has been successfully reconciled (i.e., all "Reconciled" and desired "Promote" check boxes in each category have been selected), notify the Day-Ahead & Related Markets Application Support group representative designated for the network model release.

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(1) Inform Hourly Markets group of outage applications that need to be created to model the new equipment, **not** yet commercial, that is out-of-service.

NOTE

Log into the Network Model Release chat and track the completed steps using the schedule provided by Power System Modeling Management group. Notify the chat of Short Term Outage Coordinator's completed steps.

J. On the morning of the production migration, after the DA Hourly group notifies the Short Term Outage Coordinator that they have pulled in the most recent Outage Requests for the market run, the Short Term Outage Coordinator will do the following:

(1) Perform applicable steps in Section 5.2E for reconciling "Outage Requests" and "Equipment Groups".

(2) Notify the Day-Ahead & Markets Application Support group representative when reconciling is complete.

(3) Notify the Control Room to refrain from making changes to Outage Requests in the ISO Outage Scheduling software until they are notified to resume normal operations.

K. Coordinate with Day-Ahead & Markets Application Support group representative and resolve any errors obtained when promoting changes to the Production ISO Outage Scheduling software servers.

L. Verify Day-Ahead & Markets Applcation Support Group has completed their step of promoting changes to the Production environment and wait for instructions from the Network Model Release Coordinator when to commence creating new modeling outage requests and modifying existing outage requests with new equipment.

(1) The new outage applications shall have in the Short Term Study Summary the new model number and details of equipment and contingencies to activate when elements are placed in-service

M. Update new or pseudo equipment for proper flagging of:

(1) Major Transmission Element per Master/Local Control Center Procedure No. 7 - Processing Outage Applications (M/LCC 7) Attachment E - Major Transmission Element Listing

(2) Alert NPCC Member per NPCC Facilities Notification List

N. When step M is complete, all equipment in the ISO Outage Scheduling software should be updated to match:

(1) M/LCC 7 Attachment E - Major Transmission Element Listing

(2) NPCC Facilities Notification List

(3) Coordinate efforts with the appropriate members to determine flagging of newly added elements that were not previously modeled

5.3 Update Outages Due to New Commercial Equipment in-Service

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NOTE

Review upcoming new equipment energization plans and notify Power System Modeling Management group for SCADA updates.

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1. When notified of new equipment in service, the Short-Term Outage Coordinator shall perform the following:

   A. Review outage records in the ISO Outage Scheduling software and any related outages of existing equipment for proper alignment, completion and implementation.

   B. Review active contingencies in EMS and:

      (1) Determine if any:

         a. Temporary contingencies need to be disabled

         b. New contingencies need to be enabled

      (2) If any contingencies need to be enabled/disabled, notify Power System Modeling Management group, Control Room and Hourly Markets group

   C. Notify Real-Time Market Support group of any contingencies that need to be added/removed from the TTC Calculator.

   D. Notify the Real-Time Studies group if any related stability or operating guides need to be revised or approved for use.

6.   Performance Measures

This procedure is properly followed as evidenced by the correct topology being applied to the Day-Ahead Market software and Real-Time EMS base cases.

7.   References

Northeast Power Coordinating Council Directory #1, Attachment F, Appendix 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)

Master/Local Control Center Procedure No. 7 - Processing Outage Applications (M/LCC 7)

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8. Revision History

Rev. No.	Date	Reason	Contact
- -	11/07/17	For previous revision history, refer to Rev 10 available through Ask ISO	Norm Sproehnle
11	01/06/16	Biennial review by procedure owner; Updated section 5.2 for MTE and NPCC listing verification; Minor editing of entire document.	Norm Sproehnle
11.1	11/07/17	Periodic review performed requiring no changes: Made required administrative changes 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;);	Norm Sproehnle
12	10/15/19	Biennial review by procedure owner; All Headers and Section 8, updated procedure owner and contact; Globally made editorial changes consistent with current conditions, practices and management expectations; Section 1, 2nd paragraph and Section 7, updated OP-5 title; Section 2, modified 2nd and 3rd paragraph; Section 5.1.1.A, modified; Modified step 5.2.1.D,; Deleted former sub-steps 5.2.1.E(4) and (6) and re-numbered remaining sub-steps; Modified step 5.2.1.K	Maya Ault
13	10/13/23	Biennial review by procedure owner; Modified step 5.2.E to align with current practices; Removed step 5.2.E.(5) due to STOC not being responsible for updating resources;	Maya Ault
14	10/11/23	Biennial review by procedure owner; Minor administrative changes; Clarified steps within the procedure; Added a step for STOC to check flagging for newly modeled elements	Maya Ault

9. Attachments

None.