




# System Operating Procedures

SOP-OUTSCH.0025.0010

Update Outages Impacted by System Changes

Effective Date: March 21, 2011  
Revision No. 8

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	Procedure Number: OUTSCH.0025.0010	Revision Number: 8
	Procedure Owner: Mike Courchesne	Effective Date: March 21, 2011
	Approved By: Director, Operations Support Services	Valid Through: March 21, 2013

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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 to ensure the 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 - Generator and Dispatchable Asset Related Demand 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 but rather is intended to clarify some of the responsibilities delegated to ISO staff by those procedures. This procedure also supports the cost-effective operation of the power system. Activities in this procedure can affect market operation and settlement.

## 2. Background

The ISO Outage Scheduling software at any given time contains numerous outages. When the EMS Power System Model is updated changes in system configuration may impact some of these outages. Outages that are impacted must be appropriately redefined to reflect the new system configuration.

Additionally, when a new EMS Power System Model includes new equipment it is typically necessary to initially outage the equipment until such time as it actually goes into service.

Proper modeling of system outages in accordance with this procedure is necessary to insure reliable and cost effective operation of the power system following updates to the EMS Power System Model.


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### 3. Responsibilities

1. The Supervisor, Short-Term Outages 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

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## 5. Instructions

### 5.1 Procedure Activation and Timing

#### NOTE


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

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 that a new network model will be installed and the migration schedule is established.
  - B. The control room there is new equipment in commercial service.

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## 5.2 Update Outages

1. When an update to outages is 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.
  - 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, lines, station, unit, interface and contingency changes applicable to the EMS base cases, TTC calculator and Day Ahead market application development
  - E. When notified by the Supervisor, Day Ahead and Related Market Applications Support group of the new network model data staged in the ISO Outage Scheduling Software Sandbox environment, use the Network Model Maintenance Fact Sheet as a guide and reconcile the Sandbox environment as follows:
    - (1) In the Administration menu, select “Reconcile Equipment Data”
    - (2) Click on the “Run Comparison” button
    - (3) Compare each device to be added, deleted, retired, or updated against the differences file provided by the Power System Modeling Management group.
    - (4) For all added equipment, verify “Alert NPCC” and “MTE” flags are set to “False”.
    - (5) Enter any applicable information required by dialog boxes (i.e., “owner” or “reliability area”)
    - (6) For new Generators, set “SCC” to “0 MW” and “Black Start Capability” to “No”.

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- (7) When satisfied all information is correct, click in the “Reconciled” check box.

**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.

- a. If an equipment change is to be made, click the “Promote” checkbox.

- (8) In the Administration menu, select “Reconcile Outage Requests”.

- (9) Click on the “Run Comparison” button.

**NOTE**

When all applications with equipment to be deleted have been modified, the list will be empty.

- (10) If any outage requests contain equipment to be deleted, remove those devices in the indicated application and click on the “Run Comparison” button.


- (11) In the Administration menu, select “Reconcile Equipment Groups”

- (12) Click on the “Run Comparison” button.

- (13) For each item listed, navigate to the equipment group listed in the “My Equipment Groups” in the “View” menu and remove the deleted equipment.

- (14) 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 and Market Related Applications support group representative designated for the network model release.


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- G. Coordinate with Hourly Markets group and determine outage applications that need to be created to model the new equipment, not yet commercial, that is out of service.
- H. 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.
- I. When notified by the Supervisor, Day Ahead and Related Market Applications 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).
- J. 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 and Related Market Applications Support group representative designated for the network model release.

**NOTE**


If available, log into the Chat room designated for the new network model release and enter notes signifying completion of network model maintenance activities and Day Ahead market outage record creation per the production migration schedule.

- K. On the morning of the production migration:
  - (1) In the Administration menu:
    - a. Click on the “Run Comparison” button in the “Reconcile Outage Requests” display.
    - b. Remove retired/deleted equipment indicated on the list from the existing and new outage applications
  - (2) Contact and direct the Day Ahead and Market Applications Support group representative to run “Data Validation”.

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L. Coordinate with Day Ahead and Market Applications Support group representative and resolve any errors obtained when promoting changes to the Production ISO Outage Scheduling software servers.

M. When notified by the Day Ahead and Market Applications Support group representative the new network model is in place on the Production ISO Outage Scheduling software servers, create new outage applications for the equipment determined in step 5.2.G

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### 5.3 Update Outages Due to New Commercial Equipment in Service

1. When notified of new equipment in service, the Short Term Outage Coordinator shall perform the following:
  - A. Review outage records and determine which applications should be completed and, if any exist, complete the outage records that were not completed by the control room staff
  - 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 enabled/disabled, notify Power System Modeling Management group 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 Operations Support Services group if any related stability or operating guides need to be revised or approved for use.
  - E. If new equipment is considered a Major Transmission Element (MTE), refer to Master/Local Control Center Procedure No. 7 - Processing Transmission Outage Applications (M/LCC 7), Attachment E - Major Transmission Element Listing and coordinate with the appropriate LCC to update the MTE listing.
  - F. If new equipment is considered an NPCC Facility that requires Notification to RCAs/BAAAs:
    - (1) Coordinate with the Reliability & Operations Compliance group to add the equipment to the NPCC Facilities Notification List
    - (2) Select “Yes” for the Alert NPCC Flag in the ISO Outage Scheduling software
    - (3) Notify the appropriate NPCC Reliability Coordinator/ Balancing Authority of the new equipment in service.

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## 6. Performance Measures

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

## 7. References

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


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. 19 - Transmission Operations (OP-19)

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

## 8. Revision History

Rev. No.	Date	Reason	Contact
A	09/27/02	Initial draft procedure	
B	10/16/02	Revised to reflect comments	
0	02/12/03	Initial procedure for SMD	Dave Bertagnolli
1	6/16/03	Update procedure to current practice	Dave Bertagnolli
2	11/13/03	Modified Controls and Performance Measures to align with ISO 9001 standards	Dave Bertagnolli
3	02/01/05	Updated SOP for RTO terminology	Pete Harris
4	02/16/05	Update to include revising NPCC Critical Facilities listing in OS when EMS is updated	Pete Harris
5	06/05/06	Updated for annual review and revised responsible parties	Pete Harris
6	09/14/06	Revised for ASM Phase 2	Pete Harris
7	03/27/09	Updated for annual review and revised responsible parties	Mike Courchesne

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8	03/21/11	Biennial review by procedure owner; Replaced page numbering in footer with Page X of Y; Global corrected the title Supervisor, Short Term Outages and Supervisor, Day Ahead & Related Markets Application Support; Global update by replacing all other terms with ISO Outage Scheduling software; Modified Section 3.1 and added new 3.2 Modified Section 5.1 Replace entire Section 5.2 and 5.3 Modified Section 6. Section 7 deleted SYSMOD.0060.0000 – Install EMS Power System Model and added M/LCC 7	Mike Courchesne

## 9. Attachments

None.