SOP- OUTSCH.0030.0025 - Perform Long Term Outage Coordination - Transmission

Contents

1. Objective

The objective of this procedure is to document the responsibilities of ISO New England (ISO) staff assigned to the Long-Term Outage Coordination (LTOC) business unit with regard to transmission outage coordination and the support of annual and monthly Forward Capacity Markets (FCM). This procedure involves the process of accepting a Long-Term transmission outage request from a Local Control Center (LCC), performing outage analysis with respect to system reliability and market efficiency, performing reliability reviews in support of the annual and monthly FCM, and approving or denying the Long-Term transmission outage request. Long-Term transmission outage requests are defined as outage requests submitted to the ISO 21 days or greater before the proposed outage start date.

This procedure does **not** in any way change the intent of ISO New England Operating Procedure No. 3 - Transmission Outage Scheduling (OP-3) but rather is intended to clarify responsibilities delegated to ISO staff by OP-3.

Compliance with this procedure is necessary to support the reliable and cost-effective operation of the power system.

2. Background

OP-3 establishes the procedure by which Market Participants (MPs), Local Control Centers (LCCs), and ISO interact to develop transmission equipment outage plans, both Long-Term ($\geq$ 21 days in advance) and Short-Term (< 21 days in advance). This procedure covers the Long-Term transmission outage coordination process.

As the date of a proposed outage is confirmed, the applicable LCC along with each applicable neighboring Reliability Coordinator/Balancing Authority (RC/BA) coordinate, review and initially approve, pending ISO final approval, each proposed transmission equipment outage request in its region prior to ISO logging and evaluating the proposed outage. Each transmission equipment outage is submitted using the ISO Outage Scheduling software as a primary method or by using email as a backup method [Refer to Master/Local Control Center Procedure No. 7 - Processing Outage Applications (M/LCC 7)]. The ISO Outage Scheduling software uses internet based communications to schedule, monitor and each track each transmission outage request. Submittal of a transmission outage request should occur primarily through the ISO Outage Scheduling software. ISO evaluates the submitted outage request for the forecasted operating conditions at the time requested and in accordance with the criteria contained in ISO New England Operating Procedure No. 19 - Transmission Operations (OP-19). ISO will also re-evaluate the outage request as forecasted operating conditions change over time. To conduct reliability analysis, ISO uses advanced tools and software including; PSS/E, Powerworld, Power Flow, Contingency Analysis, Transmission Adequacy Reliability Assessment (TARA) and an Interface Transfer Limits Calculator (ILC) that models the Bulk Electric System (BES) and applies contingencies against the system for analysis in approval/denial of proposed outages. ISO communicates the transmission outage

evaluation results to each applicable LCC and neighboring RC/BA and also posts transmission outages to the ISO website to comply with the Federal Energy Regulatory Commission (FERC) requirements.

The FCM is described in ISO New England Inc. Transmission, Markets, and Services Tariff - Section III, Market Rule 1 - Standard Market Design (Market Rule 1) Section 13 Forward Capacity Market. Specific to Outage Coordination are the Reliability Reviews performed to approve Bilateral and Reconfiguration Auction transactions. The LTOC is responsible for running Capacity Supply Obligation (CSO) Bilateral reliability reviews as well as the Monthly Reconfiguration Auction reliability reviews.

3. Responsibilities

1. In conjunction with the LCCs and MPs, the Director, Operations Support Services (OSS) is responsible for verifying actions specified in this procedure are adhered to for the mitigation of risk.

2. The Manager LTOC is responsible for responding to relevant Corrective Action Preventive Action (CAPA) issues and performing corrective actions to resolve discrepancies.

3. The LTOC Outage Coordinator is responsible for:

    - Performing the Daily Checkout.
    - Performing reliability studies of outage requests in accordance with OP-3 and OP-19 criteria
    - Communicating transmission outage information to Resources that may be restricted or required to operate for reliability
    - Conducting the 14-Day Look Ahead meetings weekly to discuss upcoming outages with the Short-Term Outage Coordination (STOC) business unit.
    - Providing the M/LCC Heads with the monthly impactive Transmission and Generation outage reports
    - Performing reliability reviews in support of the FCM
    - Reporting issues of non-conformance through the CAPA process
    - Assisting the Manager, LTOC in conducting transmission system reliability analysis, forecasting capacity margins for both local and system requirements and assisting in identification of potential operational risks when forecasting system conditions

4. In accordance with SOP OUTSCH.0030.0040 - Perform Long Term Resource Outage Coordination, LTOC is responsible for reviewing and either approving or denying each Resource outage request. The review includes:

    - Completing an Operable Capacity analysis and a reliability review
    - Verifying there is adequate capacity to support the forecasted system demand and transmission topology

5. In accordance with SOP OUTSCH.0030.0070 - Long Term Outage Economic Analysis, LTOC is responsible for:

> **NOTE**
>
> Economic studies may be the result of an LCC request or by an observation that an outage request may cause increased production costs.

    A. Evaluating Long-Term transmission outage requests for a given Operating Day based on load forecasts, network configuration and Resource outages to:

        (1) Determine the incremental production cost of the outage request

        (2) Consider repositioning the outage request if the incremental production cost exceeds a certain cost level

    B. Additionally if time permits, conducting an Economic study outside of the criteria above may be warranted if significant uplift cost is anticipated based on experience

6. When requested by LTOC personnel and in accordance with SOP OUTSCH.0050.0010 - Determine Study Requirements, OSS is responsible for performing complex studies or advanced analysis of outage requests, including determining the adequacy of existing transmission limits and developing new limits based upon complex studies.

4. Controls

1. The Director, Operations Systems Support (OSS), or designee shall designate ISO personnel (LTOC) to perform functions pertaining to the Long-Term transmission outage coordination process.

2. The Manager, LTOC shall attend monthly meetings as needed to respond to relevant CAPA issues and other discrepancies and identify corrective actions.

3. Transmission outage requests submitted for a given day shall be evaluated based on priority and by using appropriate tools for analysis.

4. The Manager, Real-Time Studies (RTS) group shall designate personnel in OSS to conduct special or complex studies.

5. LTOC personnel work schedule is normally 8 hours per day, Monday through Friday. Typically, the core hours of the work day start at 0800 and end at 1630.

5. Instructions

5.1 General Instructions

NOTE

Attachment A - Long-Term Outage Coordination Process is a flowchart of the OP-3 Long-Term Transmission Outage Request process.

The ISO Outage Scheduling software design requires certain data fields to be populated to allow an outage request application to be sent to the ISO.

1. In accordance with M/LCC 7 instructions, an LCC shall complete and submit a Long-Term Transmission Outage Request through the ISO Outage Scheduling software (or via email as a backup method if the ISO Outage Scheduling software is inaccessible).

2. For those transmission elements listed or treated as Category A, the LCC shall complete and submit Long-Term Transmission Outage Requests to ISO for review.

NOTE

The order that the emailed Long-Term Transmission Outage Request is entered into the ISO Outage Scheduling software determines the outage request ID assigned by the ISO Outage Scheduling software.

3. When an LCC submits a Long-Term Transmission Outage Request by email, the LCC shall send the notification to the LTOC Outage Coordinator.

NOTE

The final state for a Long-Term Transmission Outage Request will be one of the following states:

(1) Interim Approved, which indicates the outage is ready to be considered in Monthly Market Assumptions and ready for Short-Term processing.

(2) Denied, which indicates the outage is **not** acceptable due to Reliability and/or Economic impacts. The LCC may elect to reapply when forecasted system conditions have improved.

(3) Cancelled, which indicates the LCC chose **not** to proceed with the scheduled outage request.

A. The LTOC Outage Coordinator shall communicate the following information for all transmission outage requests that directly or indirectly impact Nuclear Plant Interface Requirements (NPIRs) to the Nuclear Power Generating Facility affected in accordance with MLCC 7, MLCC 1 and ISO New England Operating Procedure No.1 - Central Dispatch Operating

Responsibilities and Authority (OP-1), Appendix A - Assignment of Responsibilities (OP-1A):

- Outage Planned Start Date/Time
- Planned End Date/Time
- Any other information necessary for safe and reliable operation

NOTE

For transmission outage requests submitted in the moratorium for an outage in the obligation month, the outage requests will be time-stamped to establish a review priority and held until the moratorium is completed by the end of the month.
LTOC studies the request and responds shortly after the Reconfiguration Auction and Bilateral transaction results have been accepted by Market Administration.
For outage requests submitted in or after the moratorium for an outage in the obligation month, there is a risk that Resources needed for the outage may **not** be available due to the results of the approved and accepted Reconfiguration Auction and Bilateral transactions.

NOTE

For FCM, the monthly Bilateral and Reconfiguration Auction transactions are run two months prior to the obligation month or monthly commitment period. Outage requests which are in the Approved or Interim Approved state before the monthly moratorium will be used to set the topology for the monthly commitment period. The monthly moratorium is comprised of two time periods; the Reconfiguration Auction and Bilateral Period, and the ISO Review Period.
The Reconfiguration Auction and Bilateral Review period starts on or about the 12th to the 15th of the month and concludes when all Reconfiguration Auction and Bilateral transactions are approved and accepted by Market Administration. Typically, the end of the Reconfiguration Auction and Bilateral period will occur prior to the end of the auction month.
The ISO Review Period runs from the 9th to the 15th of each month and allows time for LTOC to process outage requests received prior to the 9th of the month to be included in the system topology for the monthly commitment period. For example, if the monthly commitment period is June, the ISO Review Period will run from April 9th through April 15th and the Reconfiguration Auction and Bilateral Period will begin on April 15th and shall end on or before April 30th. Therefore, the moratorium in this example begins on April 9th and will end on or before April 30th.

NOTE

The NPCC Area Facilities for Notification list is found by selecting Power System from the Wire, an ISO-NE intranet website, selecting Satellite Information, and selecting NPCC Area Facilities for Notification.

When an outage request contains equipment found on the NPCC Area Facilities for Notification list, the NPCC Alert flag will be red on the Request Summary tab in the ISO Outage Scheduling software.

B. LTOC shall notify neighboring System Operators (NBP-SO, NYISO, HQTÉ) if a transmission outage includes equipment that resides in the NPCC Area Facilities for Notification list.

(1) When an outage that contains NPCC Area Facilities for Notification equipment changes state to Interim Approved, Approved or Cancelled, the LTOC Outage Coordinator shall determine to either "bypass" or "send" a notification:

a. If "bypass" is determined, verify the following:

i. **No** notification is sent

ii. The Outage Request Summary tab remains having the text "Alert NPCC not sent"

iii. The text color remains orange

b. If "send" is determined, go to the "Request Details/Approval" tab and take the following actions to complete the notification process:

i. Verify the Notifications section is pre-populated with entries for all entities registered to receive NPCC Alert Notifications

ii. Select a check box next to each Notification Line for those entities that are to receive this NPCC Alert Notification and refer to the NPCC Area Facilities for Notification list to determine which neighboring System Operator to notify

iii. Click "Send Notification" to initiate the email, (which includes an attachment with the Word export of the outage request) and verify all entities **not** selected are removed from the Notification section

(2) Verify the "By/When" field of the Notifications section updates once the e-mail has been successfully sent and the text on the Outage Request Summary tab changes to "Alert NPCC sent".

a) All NPCC Alert Notifications shall be logged (and can be viewed under the Notification History button)

C. When evaluating an outage request that impacts an interface limit with a neighboring RC tie-line, the LTOC Outage Coordinator shall determine the Total Transfer Capability (TTC) limit for the interface, apply the applicable buffers (if required) and provide that information to both STOC and LTOC via an "ATTN REX2" email, for posting. The LTOC Outage Coordinator will input these TTC values within the REX2 software.

D. If an outage request results in TTC limitations, the LTOC Outage Coordinator shall verify the "Interface Limitation" flag in the "Long Term ISO Study" tab as well as the "Short Term ISO" tab are both selected; In addition, the Outage Coordinator will enter a note annotating the TTC limitation and the buffer value used (if applicable) in the "Comment" field.

E. For TTC impacts between ISO and NYISO, on-peak times are considered Hour Ending 08-23, and off-peak times are Hour Ending 24-07. These times should be annotated in the Interface Limitation Comment field for applicable outage applications.

5.2 Perform the Daily Checkout

NOTE

The purpose of the daily checkout is to review newly submitted Long-Term outage requests to verify pertinent information (start date, end date, equipment to be taken out-of-service, brief description of work, and LCC study notes, if appropriate) is included in the outage request.

In addition, the newly submitted Long-Term outage requests are reviewed and the appropriate Market Sensitive status is determined. A Long-Term outage request is deemed Market Sensitive if the outage takes a line or piece of equipment out-of-service which would remove a Resource from service. When a Long-Term outage request is created in the ISO Outage Scheduling software, the Market Sensitive flag is set to "Not Specified". A Market Sensitive flag marked "Not Specified" or "Yes" will **not** be included in the Long Term Outage Report (LTOR) which is posted on the ISO New England external website daily. A Market Sensitive flag marked "No" will be included in the LTOR.

1. The LTOC Outage Coordinator shall review new Long-Term outage requests received since the previous review was conducted and perform the following actions in accordance with Attachment E Daily Checkout Checklist:

   A. Open the Energy Management System (EMS) software

   B. Open the ISO Outage Scheduling software application CROW and perform the following:

      (1) Click "View" on the menu bar, click "Transmission Outages" and verify the Transmission Outages are shown

      (2) Select the "Overall" button under "View Type" and if **not** visible, select <default> from the drop-down menu

      (3) Enter a start date 21 days into the future and an end date two years into the future in the Dates fields (for example: If today is January 1, 2023, the date range would be entered with a "from" date of 01/22/2023 and with the "to" date of 01/01/2025)

      (4) Select the "Status" box with three dots and verify the "Request Status" menu box appears

      (5) Select a check mark in front of "Preliminary" and "Submitted" and verify all other statuses do **not** have a check mark

      (6) Click "Select"

      (7) Click the "Outage Request ID" header to order the outage requests in descending order

NOTE

An example of one way to identify a Long-Term outage request which has **not** been reviewed is to click the "Outage Request ID" column of the spreadsheet to show the outage requests in descending order and review the entries in the "Market Sensitive" column. Typically the Long-Term outage requests which have not been reviewed are those with the highest outage request ID and are listed in the Market Sensitive column as "Null".

(8) Select additional filters as needed to identify the Long-Term outage requests which have **not** been reviewed

(9) Double click the Preliminary or Submitted outage request that needs to be reviewed and verify the Outage Request window appears

(10) Review the Planned Start and Planned End date and time

(11) Review the Equipment Requested box for the lines and equipment requested to be out-of-service

NOTE

The "Reason/Priority" field describes the work to be done and the outage details.

(12) Review the Reason/Priority field

(13) Verify the Major Transmission Element (MTE) flag is appropriate based on the Reason/Priority field and the Equipment Requested box

a. If the MTE flag is appropriate, **no** further action is needed

b. If the MTE flag is **not** appropriate:

i. If the requested equipment or line is **not** taken out-of-service, check the "MTE Override" box. (An example would be a single breaker outage in a breaker and a half scheme that would **not** be considered an MTE)

ii. If the "MTE Override" box is checked, click the Red MTE letters to change the color from red to gray

(14) Verify the Circuit/Equipment to be taken out-of-service in the ISO Outage Scheduling software is found in the EMS model and if a discrepancy exists, contact the appropriate LCC to resolve it

(15) If the outage request Removes a Resource from service, select the Market Sensitive "Yes" button

a. With the "Outage Request" window open in the ISO Outage Scheduling software, select the "Studies" tab

b. Select the "Short Term ISO" tab

c. Check the "Generation Limitation" box in the Limitations section

d. Select the "Add" box and verify the "Select Circuits/Equipment" box appears

e. From the "Market Assets" tab, highlight the Asset from the drop-down menu

f. Select "Find" and verify the Asset short name appears in the "Unit Name" box

g. Repeat until all Assets affected by the outage request appear in the "Unit Name" box

h. Select the "Save Change" box

i. When manually sending an email to external entities also Cc: the OPandA Maintenance Outage Requests address (i.e., opamoreq@iso-ne.com) and include the ISO Outage Scheduling software outage request ID, the start and end dates of the outage requests and any Resource that will be taken offline due to the outage request

(16) If the outage request does **not** remove a Resource from service, select the Market Sensitive "No" button

NOTE

If the Market Sensitive Flag has **not** been populated and the user tries to close the outage request window, a pop up notice will appear and require the user to populate the Market Sensitive Flag data field.

(17) Verify the LCC study notes are found under the Study and LCC tabs; if study notes are missing or are incomplete, contact the appropriate LCC

a. For "RLY" applications, verify the LCC has identified overlapping outages in the "Other Services that Affect this Outage" well

NOTE

LCC study notes are required for all out-of-service outage requests in the Submitted state. LCC study notes are optional for the outage requests in the Preliminary state.

(18) Verify the LCC load level used in the LCC study analysis is equivalent to the 50/50 forecasted study load

- If these values are **not** equal, contact the appropriate LCC to correct the issue

(19) Verify an OP-24 Appendix D is attached and filled out correctly for RLY application submittals with facilities listed in OP-24 Appendix C

(20) If there is any question or missing information for a particular outage request, contact the LCC Outage Coordinator requesting the outage and resolve the issue

2. The LTOC Outage Coordinator shall review applicable Transmission Operating Guides (TOGs) and other relevant guides to determine if there are any established stability or voltage-related Resource reductions for all outages being evaluated. Additionally, LTOC shall also review any TOGs, guides or NX9 updates that could have implications on an application that was previously Interim Approved.

3. If documented switching actions are available via a TOG to alleviate or eliminate Resource restrictions, or to improve transfer capability, the LTOC should pursue utilizing those actions in coordinationa with the associated LCC(s); proper documentation of these switching actions must be included in the outage application if utilized.

A. If **no** Resource reductions are specified, then **no** other action is needed

B. If the TOGs specify a Resource reduction due to a line or equipment which is out-of-service, perform the following steps:

(1) Click "View" on the menu bar, click on "Transmission Outages" and verify "Transmission Outages" are shown.

(2) Select the "Overall" button under "View Type" and if **not** visible, select <default> from the drop-down menu

(3) Enter a start date 21 days into the future and an end date (either two years into the future or the end date as specified in the TOG, whichever is shorter) into the "Dates" fields

(4) Select the "Status" box with three dots and verify the "Request Status" menu box appears

(5) Select a check mark in front of "Interim Approved" and verify that **no** other statuses have a check mark

(6) Click "Select"

NOTE

This review is in place to verify that MPs are notified as soon as possible that their Resource may be restricted.

(7) Review the list of outage requests and identify any outage request that includes the same line or equipment to be taken out-of-service that is specified in the TOG or NX9 update

a. If there are **no** outage requests which match this criteria, then **no** further action is needed

b. If there are outage requests which match this criteria, notify the person who conducted the study so they can restudy the outage request with the new information

c. In addition, notify the Resource Analyst so they may enter the Resource reduction in the ISO Outage Scheduling software

5.3 Perform Reliability Studies

NOTE

The purpose of the reliability study is to verify that the submitted outage requests do **not** violate any thermal and voltage limits as defined by the criteria found in OP-19 and Master/Local Control Center Procedure No.15 - System Operating Limits Methodology (M/LCC 15).

ISO reliability studies are conducted using Powerflow, which is a portion of the Energy Management System (EMS) used for modeling the power grid based on a set of initial conditions. The model is maintained by the Power System Modeling & Support business unit and reflects the most up-to-date version of the power system model.

Performing a reliability study of an outage request is a complex task. The steps below should establish a guide in completing the task, however, the steps may **not** be all inclusive. The LTOC Outage Coordinator may need to use other tools within EMS to complete the analysis of the outage request.

1. The LTOC Outage Coordinator shall select an outage request to study which is in the Submitted state in the ISO Outage Scheduling software by performing the following:

   A. Log into the ISO Outage Scheduling software

   B. Select a submitted outage request to be studied

   C. Select the "Study Request" button located at the bottom of the Request Summary tab

NOTE

By placing the outage request in the Study state, the LTOC Outage Coordinator has claimed responsibility to conduct the study, record notes in the ISO Outage Scheduling Software and ultimately place the outage request in the "Interim Approved," "Cancelled" or "Denied" state.

NOTE

The transmission outage request may require supporting information required per OP-3 (temporary configurations, post-contingent action plans and additional study information). If supporting information is missing from the study, it is an expectation that the LTOC Outage Coordinator contacts the appropriate LCC Outage Coordinator to resolve the problem.

2. The LTOC Outage Coordinator shall develop a secure all lines in EMS study case by performing the following actions:

   A. Identify the study period being reviewed

B. Select the appropriate 50/50 load level for study period

NOTE

Some outages will need to be evaluated with a low load scenario, or "pump case". A few examples of this may include an outage that occurs overnight, is subject to high-voltage conditions, or is an outage that impacts TTCs between ISO and NYISO. In these instances, an EMS pump base case should be used to complete the low load assessment.

C. Open the EMS software and perform the applicable following actions for either a base case selection or a TARA case selection:

(1) Base case selection

a. Stop the Power Flow process.

b. Under "Options Set Control", select "Retrieve GENREF option set" and select "Yes" on the pop-up

c. Click the "CASE DIR" icon in the menu bar

i. Proceed to the "PWRFLOW" application and locate the ILC section, retrieve "EMS_(applicable version)" by right-clicking and selecting "Retrieve"

ii. Proceed to the "NETMOM" application and locate the EMS base case "BASECASE_(latest version)_(applicable load level)_(latest release)" with the load level appropriate for the study period; right-click and select "Retrieve"

d. Click the PWR button in the toolbar

e. Select "Start Process"

OR

(2) TARA case selection

a. Start the Power Flow process

b. Under the "Analyst Displays" drop-down select "Outage TARA Case Study"

c. Click "Update Savecase" button on the top right of the screen

d. Right-click the appropriate case date under the Outage Case ID column and select "Retrieve Outage Case"

e. Verify the checkmark appears in the Selected column next to the date selected

f. Click the PWR button in the toolbar

g. Under "Option Set Control" select "Retrieve GENREF option set" and select "Yes" on the pop-up

D. In the Powerflow Study page

(1) Select "Input Setup"

(2) Select "Reset Component Status & Rebuild Buses".

(3) Select "OK"

(4) Verify "Topper Ran" message appears at top of the Powerflow page

NOTE

The steps in D. above will be referred to as "Run Topper" throughout the rest of the document. All of the steps covered in this section are expected to be followed when "Run Topper" is used.

(5) Run "Powerflow" by clicking on either of the following:

a. The multicolored circle icon button

b. The "Run Powerflow Solutions" button

NOTE

When Run Powerflow is used in the rest of the document, the user can use either step 2.C.(1) or 2.C.(2). Verifying a Valid Solution is always a requirement when Run Powerflow is executed.

(6) Check the upper right-hand corner of Powerflow page to verify a "Valid Solution" is displayed.

a) If a valid solution is **not** displayed, refer to Attachment B - EMS Troubleshooting Guide.

E. Review the Basecase Violations Tab

(1) Select the BC VIOL tab on the Powerflow toolbar

NOTE

The Summary tab is displayed on Network Basecase Violations page.

(2) Select the Branch and voltage tabs on the Network Basecase Violations page

(3) If any thermal or voltage overloads appear, alleviate them by manipulating Resources in the case

NOTE

There should be **no** unexplainable violations under the Network Basecase Violation Branch tab (e.g., an explainable violation could be if an RAS/ACS would prevent the violation from actually occurring).

NOTE

Verify Basecase Violations Tab will be referred to as "Verify Basecase Violations" throughout the rest of the document. All the steps covered in this section are expected to be followed when "Verify Basecase Violations" is used.

F. Balance the Basecase for the load level desired for study (i.e., the NYPP interchange error is close to zero)

(1) Select the "Area" tab on the Powerflow toolbar

(2) Check the NYPP interchange error and if it is close to zero (under 10 MW), the basecase is considered balanced

(3) If the NYPP interchange error is **not** close to zero, adjust the NYPP interchange error by increasing or decreasing the unit MW Output of Resources found on the Unit tab

a. Select the "Unit" tab on the Powerflow toolbar and verify the MW "Data" tab on the "Network Unit Summary" page is displayed

b. Find the desired Unit to be adjusted by

i. scrolling through the "Units" list by clicking the up/down arrows displayed below the Powerflow toolbar or

ii. type the Unit station name in the data entry box above the Powerflow toolbar, right-click the filter icon and select "Station=" from the drop-down menu.

c. For the desired Unit, select the MW Output box and adjust the "MW Output" value

d. Repeat steps b and c as needed

e. Run Powerflow

NOTE

Balance the case will be referred to as "Balance the case" throughout the rest of the document. All the steps covered in this section are expected to be followed when "Rebalance the case" is used.

NOTE

The user has the discretion to Run Powerflow after each Unit adjustment is made or to Run Powerflow after several Unit adjustments are made.

G. Run ILC

(1) Click on the down arrow by the "SEC" tab

(2) Select "ILCT PFLOW"

(3) Click "Calculate"

(4) Determine if any TOGs are active and verify there are **no** transfer violations

a. If a TOG is identified, click on the interface to determine which TOG is active and verify its associated limits are applicable

b. If an ILC violation is identified, correct the overload if possible and coordinate with the applicable LCC to identify any outage that is causing the overload; work with the applicable LCC to alleviate and address all reliability concerns

(5) If a TOG or transfer violation appears, evaluate and correct the violation; contact the applicable LCC if the violation is not resolvable

NOTE

If violations appear, refer to Attachment B - EMS Troubleshooting Guide.

NOTE

Run ILC will be referred to as "Run ILC" throughout the rest of the document. All the steps covered in this section are expected to be followed when "Run ILC" is used.

H. Adjust the NEPEX and NYPP load level

(1) Click on the "Area" tab on the Powerflow toolbar

(2) Record the MW Losses in the NEPEX row under "MW Losses" (this is the NEPEX MW Losses)

(3) Calculate New NEPEX Load Level by subtracting the NEPEX MW Losses from the 50/50 load level for the study period

NOTE

New NEPEX Load Level = 50/50 load level for study period – NEPEX MW Losses

(4) Click on "LD Area" tab on the Powerflow toolbar

(5) Identify the NEPEX Modeled MW Basecase value and the NYPP Modeled MW Basecase value for later use to scale the NYPP Modeled MW

(6) Enter the New NEPEX Load Level in the NEPEX Modeled MW box and press "Enter"

(7) Determine the NYPP load by multiplying NEPEX Load Level by 1.25%; enter this value in the NYPP Modeled MW box

NOTE

Once the adjustments are made to the NEPEX and NYPP Load Levels, they will not need to be adjusted further.

a. Run Powerflow

b. Select the "Area" tab on the Powerflow toolbar

c. Check the NYPP interchange error and if it is close to zero (under 10 MW), the case is considered balanced

i. If the case is **not** balanced, repeat Step F until the case is balanced

I. Verify winter and summer limits are correct as follows:

(1) Select the "LIM" tab on the Powerflow toolbar

(2) Select "Copy Branch Limits"

(3) Verify the limits are appropriate based on the timeframes below:

a. NE – Summer, NY – Winter (**April 1 – April 30**)

i. WINTER – Priority 3

ii. SUMMER – Priority 2

iii. NYSUMMER – Priority 4

iv. BSTN-HE – Priority 5

v. APRIL – Priority 1

b. Summer Limits with Boston Heat Exchangers Out-of-Service (**May 1 – June 30 and Oct 1 – Oct 31**)

i. WINTER – Priority 5

ii. SUMMER – Priority 1

iii. NYSUMMER – Priority 2

iv. BSTN-HE – Priority 3

v. APRIL – Priority4

c. Summer Limits with Boston Heat Exchangers In-Service (**July 1 – Sept 30**)

i. WINTER – Priority 5

ii. SUMMER – Priority 2

iii. NYSUMMER – Priority 3

iv. BSTN-HE – Priority 1

v. APRIL – Priority 4

d. Winter Limits (**November 1 – March 31**)

i. WINTER – Priority 1

ii. SUMMER – Priority 2

iii. NYSUMMER – Priority 3

iv. BSTN-HE – Priority 4

v. APRIL – Priority 5

(4) Enter any required changes and hit the “Enter” key

(5) Click the “Copy Branch Limits” box in the upper left-hand-portion of the screen

(6) Click OK in the “WebFG Main” pop-up box

(7) Click the Copy Branch Limits "OK" box in the upper center portion of the screen

(8) Verify changes were made by observing that the season selected limits are displayed on top of the editable fields

NOTE

The New England summer limits for transmission studies runs April 1st through October 31st. The New England winter limits for transmission studies runs November 1st through March 31st.

J. Remove Resources in EMS by performing the following:

(1) Return to the main page by selecting "PWR" from the toolbar selection

(2) Stop the process

(3) Select "Data Retrieval"

(4) Select "Get Outage Scheduler Data"

(5) Choose the "Generation Data" tab

(6) Stop the process on the Outage Scheduler page on the Pwrflow Study Status row

(7) Stop the process on the Outage Scheduler page on the OS Import row

(8) Start the process on the Outage Scheduler page on the OS Import row

(9) Verify the "Outage Effective Date" field now shows the current date and the outage list is blank

(10) Enter the study date in mm/dd/yyyy hh:mm:ss format, then click on the "Get Gen Data" button

(11) Click "OK", the page will display all of the Resource outages for the timeframe selected

(12) Open the ISO Outage Scheduling software application

(13) Check if the Generation view is being used

a. If so, continue

b. If **not**:

i. Select "View" from the menu bar

ii. Select "Generation Outage Requests"

(14) Click on the "Overall" button for the View Type and verify <default> is shown as the View Definition

(15) Select the date range that equals the study period in the "Dates" well

(16) Filter the Outage Status column to show Interim Approved, Approved and Implemented outage requests

(17) Filter the Eco Max column to show values that equal zero (0) MW. These are the Resource outages for the study period

(18) Go back to the EMS software

NOTE

All Resource outages appearing in the EMS OS Import list should be checked against the ISO Outage Scheduling software display showing all Resources with an Eco Max equaling 0 MW. If discrepancies exist, the ISO Outage Scheduling software display should be used over the EMS OS Import list.

NOTE

Multi-unit Resources may appear as one outage in the ISO Outage Scheduling software individual unit in EMS. More than one entry in EMS for the same outage in the ISO Outage Scheduling software may exist.

(19) Uncheck the box in the left-hand-column for any Resource outages that should be excluded from the case

(20) Click the "Approve Selected Outage" button to incorporate the Resource outages into the study case

(21) Click "OK"

(22) Return to the main page by selecting "PWR" from toolbar selection

(23) Start the process

(24) Run Topper

(25) Run Powerflow

(26) Balance the case with other available Resources

(27) Identify and correct any Basecase Violations

K. Reduce Resources in EMS by performing the following:

NOTE

Any partial Resource reductions in the ISO Outage Scheduling software will have to be entered manually in EMS (e.g., one GT of a 2x1 combined cycle unit).

(1) Access the ISO Outage Scheduling software application

(2) Filter the Eco Max column to show values greater than 0 MW, (these are the Resource reductions for the study period)

(3) Access the EMS software

(4) Select the "Unit" tab from the Powerflow toolbar and verify the "MW Data" tab on the "Network Unit Summary" page is displayed

(5) Find the desired Unit to be adjusted from the ISO Outage Scheduling software by performing one of the following actions:

- Scrolling through the "Units" list by clicking the up/down arrows displayed below the Powerflow toolbar
- Type the "Unit" station name in the data entry box above the Powerflow toolbar; right-click the filter icon and select "Station=" from the drop-down menu

(6) For the desired "Unit", select the MW Output box and adjust the MW Output value

(7) Repeat Steps 5.3.K.(5) until all of the Units have been properly reduced as documented in the ISO Outage Scheduling software

(8) Run Powerflow

(9) Balance the case with other available Resources

(10) Identify and correct any Basecase Violations

L. Run ILC

M. Run a contingency analysis

(1) Select "STCA" on the Powerflow toolbar

(2) Start the process

(3) Select "CTG SUM" on the tool bar

(4) Verify there are **no** contingencies marked "Not Active"

(5) If any contingency is marked "Not Active" proceed as follows:

a. Select "CTG ACT" from the toolbar

b. Locate the contingency in the "Id" column

c. In the "Activation" column, right click "INELGBL"

d. Select "Set to DEFAULT"

e. Once complete, verify there are **no** contingencies marked "Not Active"

(6) Select "STCA" on the Powerflow toolbar

(7) Select "Data Retrieval"

(8) Select "Copy"

(9) Select "OK"

(10) Click the "Run Contingency Analysis" box

(11) Verify the contingency analysis "Complete" message is displayed at the top of the page

NOTE

If messages other than Complete appear, contact the Power System Modeling Management business unit.

(12) Select "CTG VIOL" (Contingency Violations) from the STCA toolbar

(13) Select the "Branch" tab

a) Continue to the Step N to "Rename and Save case"if there are acceptable violations, (violations which are understood by the user) or **no** violations

b) Refer to the "STCA Contingency Branch Violations" screen if there are unacceptable violations or unsolved contingencies and attempt to solve them

i. Return to the main page by selecting PWR from the toolbar selection

ii. Evaluate unsolved contingencies and attempt to correct

iii. Run Powerflow

iv. Select STCA from the Powerflow toolbar

v. Run STCA until there are **no** violations or the violations which appear are understood and acceptable

NOTE

Run a contingency analysis will be referred to as "Run STCA" throughout the rest of the document. All the steps covered in this section are expected to be followed when "Run STCA" is used.

N. Rename and save the case to Case Directory under NETMOM

(1) Return to the main page by selecting PWR from toolbar selection

(2) In the Network Data Description box, click on a blank line

(3) Type in the new name of the study case

(4) Right-click and select "Copy"

(5) Select the blank field at the top right-hand-side of the page

(6) Right-click and select "Paste"

(7) Select the Network Data Description box and press Enter

NOTE

There can be **no** spaces between characters. Use the underscore character to replace spaces.

NOTE

The user should select a file name that will enable them to identify it easily in the case directory. It is useful to enter your initials and the study date into the file name.

(8) Select "CASE DIR" from the Powerflow toolbar

(9) Click the drop-down arrow of the blank field at the top right-hand-side of the page and select the study case name

(10) Scroll down the directory list until you arrive at NETMOM on the left-hand-side of the list

(11) Click the "Save" button next to NETMOM

(12) Right click in the "Case Title:" well and select "Paste"

(13) Click "OK"

(14) Verify study case name appears in the NETMOM list of cases

(15) Return to the main page by selecting "PWR" from the toolbar selection

3. The LTOC Outage Coordinator shall study transmission outage requests submitted in the ISO Outage Scheduling software or perform Resource outage evaluations by completing the following actions:

   A. In "Case Directory" select appropriate EMS study case in NETMOM section and retrieve the study case

      (1) Return to the main page by selecting "PWR" from the toolbar selection

      (2) Select "Stop Process"

      (3) Select "CASE DIR" from the Powerflow toolbar

      (4) From the case directory list, scroll down to the NETMOM section and find the desired study case

      (5) Select the file name and right-click

      (6) Select "Retrieve"

      (7) Click "OK"

      (8) Return to main page by selecting "PWR" from the toolbar selection

      (9) Select "Start Process"

   B. Run Topper

   C. Run Powerflow

   D. Balance the study case, if needed

   E. Run ILC

   F. Run STCA

   G. Load Transmission Outages into study case

      (1) Return to main page by selecting "PWR" from the toolbar selection

      (2) Select "Stop Process"

      (3) Select "Data Retrieval"

      (4) Select "Get Outage Scheduler Data"

      (5) Choose the "Transmission Data" tab

(6) Stop the process on the Outage Scheduler page on the Pwrflow Study Status row

(7) Stop the process on the Outage Scheduler page on the OS Import row

(8) Start the process on the Outage Scheduler page on the OS Import row

(9) Verify the "Outage Effective Date" field now shows the current date and the outage list is blank

(10) Enter the study date in mm/dd/yyyy 12:00:00 format

NOTE

Most transmission outages are loaded in at noon for the study day, therefore the time format needs to be filled in as 12:00:00. If there is a need to review an outage at a time other than 12:00:00, modify the time appropriately.

(11) Select the "Get Trans. Data" button

(12) Click "OK" and verify all the transmission outages for the timeframe selected are shown on the page

(13) Open the ISO Outage Scheduling software

(14) Check if the Transmission view is being used

a. If so, continue.

b. If **not**:

i. Select View from the menu bar

ii. Select "Transmission Outage Requests"

(15) Click the "Overall" button for the View Type and verify <default> is shown as the View Definition

(16) Select the date range that equals the study period

(17) Filter the "Outage Status" column to show "Submitted", "Negotiate", "Study", "Interim Approve", "Approved" and "Implemented" outage requests

(18) Click the "Outage Request ID" column to order the transmission outages by the ISO Outage Scheduling software ID number, (these are the transmission outages for the study period)

(19) Access the EMS software

NOTE

All transmission outages appearing in the EMS OS Import list should be checked against the ISO Outage Scheduling software display. If discrepancies exist, the ISO Outage Scheduling software display should be used over the EMS OS Import list. Missing outages will need to be manually entered into the EMS study case using the ISO Outage Scheduling software outage request equipment group.

(20) Uncheck the box in the left-hand-column for any transmission outages that should be excluded for the case

(21) Click the "Approve Selected Outage" button to incorporate the transmission outages into the study case

(22) Click "OK"

(23) Return to the main page by selecting "PWR" from toolbar selection

(24) Select "Start Process"

(25) Run Topper

(26) Run Powerflow three times to allow Load Loss Control to function

H. Verify loads and restore load loss as a result of the Load Loss Control function

(1) Return to the main page by selecting "PWR" from the toolbar selection

(2) Select "Related Displays" from the menu bar

(3) Select "Powerflow Case Comparison"

(4) Select "Master"

(5) Click on "Copy Reference Data from the PF Case Comparison" page

(6) Click "OK"

(7) Verify that the Reference Data Was Copied in the current date and time in the Main Messages box

(8) Select "Compare PF Cases"

(9) Click "OK"

(10) Verify Case Comparison Completed for the current date and time in the Main Messages box

(11) Select the "Load Summary" radio button

NOTE

The load that needs to be restored is found in the Load (MW) Dif column.

Restore lost loads to station transformers or to surrounding station transformers.

(12) Select "LD AREA" from the powerflow toolbar

(13) Select the "Loads" tab

(14) Type in the first three characters of the station where load needs to be restored in the data entry box above the Powerflow toolbar

(15) Right-click the filter icon and select "Station=" from the drop-down menu.

(16) Select the "Manual" box by the station transformer where load needs to be restored in the Network Load Summary page under the "MW" column

(17) Add lost load to the existing MW value at the selected station transformer and enter this calculated value in the "Calculated MW" column in the newly-opened well

(18) Press Enter

(19) Repeat steps until all loads have been restored, and all line entries on the PF Case Comparison-Load Summary page have been addressed

(20) Click the "Unit Summary" radio button on the "PF Case Comparison" page

(21) Review the "Generation (MW) Dif" column for any nonzero values in the "PF Case Comparison - Unit Summary" page

NOTE

A non-zero in the "Generation (MW) Dif" column means a Resource was lost due to the transmission outages that were loaded into the study case. If there are any non-zero values, adjust Resources according to the amount lost due to transmission outages.

I. Run Powerflow

J. Balance the Study Case

K. Identify and resolve any Basecase Violations

L. Run ILC

M. Run STCA

(1) If there are acceptable or **no** violations, then continue to Step N "Perform Powerflow study"

(2) If there are unacceptable violations or unsolved contingencies:

a. Return to Powerflow

b. Evaluate and correct any violations by increasing or decreasing the MW output of area Resources to relieve line and equipment loading

c. Evaluate and solve any unsolved contingencies: (e.g., one possible solution for an unsolved contingency is to remove a Resource from service that has been islanded due to the contingency)

d. Rerun STCA until there are **no** violations or the violations which appear are understood and acceptable

N. Perform Powerflow study as follows:

(1) In the ISO Outage Scheduling software, review the equipment to be taken out-of-service in the outage request to be studied

(2) In EMS, evaluate the outage against system topology; run Powerflow and STCA as needed

a. Verify applicable equipment is removed per the outage request

b. Identify high parallel line flows

c. Note the effect and adjustment factor of Resources in the area of the study

d. Identify the impact on interface limits through the use of TOGs and by running ILC

e. Review other outage requests which have TOGs associated with them that may affect the outage request being studied

NOTES

TOGs are typically written for a single piece of equipment being taken out-of-service. Multiple line or equipment outages with TOGs associated with them might **not** have been evaluated by the Real-Time Studies (RTS) business unit. These conditions should be forwarded to RTS per SOP OUTSCH.0050.0020 - Perform Complex Studies.

f. Remove breakers or lines from service to evaluate system reliability

g. If an overload is discovered, record the following to be entered into the ISO Outage Scheduling software "Long Term ISO" study tab

i. Distribution Factor (DF)

Distribution Factor (DF) = (Limiting Element ΔMW flow) / (Contingent Element preflow)

ii. Unit adjustment factor

Adjustment Factor = (ΔResource Adjustment) / (Limiting Element ΔMW Flow)

h. Other post contingent actions

i. If the system can be reliably re-dispatched within OP-19 criteria, move the request to "Interim Approved" or "Negotiate" (for economic review) in the ISO Outage Scheduling software

ii. If the system **cannot** be reliably re-dispatched, move the request to "Negotiate" (reliability) or "Denied" in the ISO Outage Scheduling software

O. If the application contains reactive testing as part of the scope of work, the Outage Coordinator will notify RTS, and obtain their approval prior to Interim Approving the application

P. After completing the study in EMS, go to the ISO Outage Scheduling software "Long Term ISO" study tab of the outage request and complete the following:

NOTE

The data to be entered in the ISO Outage Scheduling software can also be entered as the LTOC Outage Coordinator conducts the study in EMS.

(1) Select the study boxes which represent the study tools that were used in the evaluation, e.g. Power Flow Approval, Contingency Analysis (STCA), EMS Intf. Limits Calc. (ILC) in the "Operations Planning" section

(2) Enter the 50/50 study load in the "Load Level" box as obtained from the most recent CELT report

(3) Select the "Study Completed By" box

(4) Click the "Add" button in the Contingency box

(5) If **no** overloads were found, list all contingent elements studied in the Contingent Element field

a. Select "None" from the pull-down menu

b. Type "No Overloads" in the Limiting Element Type field

c. Select "OK"

(6) If overloads are found, list the contingent element studied in the Contingent Element field

NOTE

When overloads are found, the contingent elements should be added individually.

a. Select the "Limiting Element Type" from the drop-down menu, the two selections are Generator or Transmission Element

b. Enter the equipment or line number of the element which is overloaded in the "Limiting Element" field

c. Enter the Distribution Factor in the "Distrib. Factor" field

d. Enter the overloaded line or equipment Normal, LTE, and STE limits in the appropriate fields

e. Enter the Unit Adjustment Factor in the "Unit Adjustment Factor/Unit Sensitivity" field

f. Enter any other post contingent actions in the Other Post Contingent Actions field

g. Select "OK"

h. Add additional overloads following the steps above as required

(7) Select the "Generation Pattern" box and enter the Resources which are on/or off for the study

(8) Select the "Other Services that Affect this Outage" box and enter any outages which occur at the time of the study

(9) Select the "Actions Required Before the Outage" box and enter any information required before the outage starts

(10) Select the "Interface Limitation" box and enter any information or limits impacting Inter-area TTC paths or other defined interface limits

a. Highlight the text and right-click

b. Select Copy

c. Select the "Short Term ISO study" tab

d. Select the "External Interface Restriction" or "Internal Interface Restriction" box as necessary

e. Paste the copied information or limits into the Interface Comments open well; verify the applicable buffers are used when calculating the final TTC and document that they were used in the Interface Limitation box

f. Select the appropriate impacted interface(s) via the "Add Interface"

g. Enter the applicable Interface limits into the "Valu" column

NOTE

LTOC and STOC will use emailed TTC limit information for posting applicable TTC limits within REX2.

h. Email the TTC limit information to all of Outage Coordination with a subject line "ATTN REX2"; verify the email clarifies that buffers were used in the TTC calculation (if applicable);

(11) Select the "Generation Limitation" box

(12) Enter any Resource limitations during the outage on the "Long Term ISO" study tab

a. Highlight the text and right-click

b. Select Copy

c. Select the "Short Term ISO study" tab

d. Select the "Generation Limitation" box

e. Select the "Add" button

f. Select "Market Assets" from the "Select Circuits/Equipment" box

g. Highlight the Resources with the limitations from the Market Asset drop-down menu.

NOTE

After the Find button is selected, the Resources appear in the Unit Name filed on the Short-Term ISO study tab.

h. Select "Find"

NOTE

The above steps are to be repeated to add additional Resources to be limited.

i. Select the text box to the right of the Unit Name box, right-click and select "Paste" to copy the Resource limitation noted from the "Long Term ISO" study tab to this field

j. If a Resource will be isolated due to transmission work, or if there is a hard limit imposed on a Resource as prescribed by a TOG, a manual notification via email shall be sent to the LTO Contact to describe the affected Resource(s), dates, times, and applicable hard limits or isolations that will be in place.

(13) Select the "Generation Must Run" box and enter any Resource must run information during the outage on the "Long Term ISO" study tab

a. Highlight the text and right-click

b. Select Copy

c. Select the Short-Term ISO study tab

d. Select the "Generation Must Run" box

e. Select "Add"

f. Select "Market Assets" from the Select Circuits/Equipment box

g. Highlight the Resources that will be must-run from the Market Asset drop-down menu

h. Select "Find"

NOTE

After the Find button is selected, the Resources appear in the Unit Name field on the Short-Term ISO study tab.

i. To add additional must-run Resources, repeat the steps above

j. Select the text box to the right of the Unit Name box, right-click and select Paste. The must-run Resources noted from the "Long Term ISO" study tab are copied to this field

(14) If automatic Resource notifications are not functioning, manually make Resource notifications for applications that have generator Must Runs or Generation Limitations, that will **not** be denied

a. Open the Customer and Asset Management System (CAMS) page via the SMD Applications Home Page

b. For each Resource that is flagged as Must Run or Generation Limitation, locate the applicable Resource in CAMS

c. Notify each entity individually of the condition using the "LTO Coordinator" email found in CAMS; send this to the OPandA Maintenance Outage Requests email address (opamoreq@iso-ne.com) as well

i. For a Must Run notification, provide the date or date range and times when the Resource may be required to run; do **not** provide any other specific outage detail

ii. For a Generation Limitation, provide the date or date range and times when the Resource may be restricted; if there is a hard stability limit provided by a guide, or if the Resource will be completely isolated, this information should be conveyed to the Resource; do **not** provide any other specific outage detail

d. Select the "Request Details/Approval" tab for the specific application in the ISO Outage Scheduling software

e. Under the "Notifications" section, click the "Add" button

i. Select the proper "Notification Type" from the drop-down menu

ii. Enter the Resource name in the "Notify" well

iii. Copy the email address for the LTO Coordinator into the "Contact Information" well

iv. Select the proper "Accepted" status from the drop-down menu

v. Enter the date, time and your name in the "By/When" well

vi. Enter what the Resource was notified of in the "Comments" well

f. Repeat step (13) e. for each Resource notification that is made

(15) If there are any Nuclear Power Generating Facility post-contingent backdowns identified either for stability or thermal reasons, or NPIR equipment, notify the appropriate entities and document the notification using step 13e

(16) Enter any additional information into the "Study Summary" box in the "Long Term ISO" study tab such as load cap values or guidance received from RTS

(17) Under the "Attachments" tab, include any pertinent documentation that is **not** found in ODMS

a. Click "Add"

b. Find the appropriate document, highlight and click open

c. Repeat this process for each document that needs to be included

(18) Depending on the situation, click the "Interim Approve", "Negotiate", or "Deny" box at the bottom of the page

(19) On the Request Summary page, if the "Alert NPCC" outage flag is highlighted red, a pop-up will occur after the status of the application is changed

(20) Click "Send"

(21) Select the appropriate NPCC entities from the generated list

(22) Click "Send NPCC Notification Alert"

(23) Verify the proper notifications have populated under the "Notifications" section of the Request Details/Approval tab

NOTE

Upon cancellation of an outage request, it is expected that all affected External Areas, LCCs, and TOs will be notified of the cancellation by LTOC.

(24) If automatic Resource notifications are not functioning and Resource Limitations or Must Run requirements have been eliminated due to an outage cancellation, send an email to the OPandA Maintenance Outage Requests email address (opamoreq@iso-ne.com), and to the affected external LTO coordinator(s) to communicate the applicable changes

NOTE

Switching applications will need to be evaluated by RTS to determine if there are additional restrictions during the switching timeframe.

(25) If a transmission outage is being studied that has a Line Out TOG, a Circuit Breaker TOG and it has IROL impact, verify there are associated switching applications submitted for the work

5.4 Perform Reliability Reviews in support of the Forward Capacity Market

NOTE

LTOC is responsible to review and study the results of the monthly bilateral and reconfiguration auction (RA) transactions for each hour within the commitment month and make a determination to accept or reject the results. An Offer bid for a Resource that has an outage in the FCM study month for greater than 3 days will typically be denied, but may be approved based upon reliability review results. Demand bids for a Resource flagged as "Generation Must Run" in the FCM month may be denied if the entire obligation is shed depending on what other Resources are available. If a Demand bid is received resulting in a partial reduction to a Resource flagged as "Generation Must Run" in the FCM month, the Demand bid may or may not be allowed as dictated by the FCM reliability review.

1. On the first business day of every month, the Resource Analyst will send Moratorium email to LCCs and ISO-NE LT Outage Coordination Group
   a. Moratorium email must be sent to both: TransmissionOutageCoordinationWorkingGroup@iso-ne.com OPERLongTermOutages@iso-ne.com
   b. Moratorium email must include the dates for when the Moratorium Period begins, when the FCM Reliability Analysis starts and when the Moratorium period ends for both the current FCM month and the next FCM month
2. Once the email is received from the Auctions group indicating the CSO Bilateral period is ready for reliability review perform the steps below

A. <u>Bilateral Transactions</u>

3. Determine Load to be studied using transmission 50/50 load for study month
   a. In the Quick References section of the WIRE, select Power System
   b. Select "Satellite Information"
   c. Select "50/50 Study Loads"
   d. Open the "LT STUDY LOADS 5050" Excel spreadsheet and determine the highest 50/50 load for the study month
4. Create EMS Basecase with all lines in-service
   a. Refer to Section 5.3 in this SOP for instructions to create an EMS Basecase and perform the following actions
5. Save Basecase as a Powerworld.aux file within EMS
6. Create a new monthly FCM folder
   a. Open "Remote Desktop Connection" in the Start Menu
   b. Enter "taraenfp1a" terminal server
   c. Select "Data(D:)" drive

d. Select "FCM_Monthly" folder
e. Select folder for study year
f. Create new folder for study month

7. On "taraenfp1a" remote terminal server run CaseBuilder to create monthly input files
   a. While on "taraenfp1a" terminal server, search for and open "Shortcut of CaseBuilder"
   b. Select "Export Files" button on the top left of the screen
   c. Study Mode: select "TARA – FCM Bilateral Auction Review"
   d. Case Name: ensure case name includes study year, study month and initials of person completing study (Example: FCM_OCT_2023_BILATERALS_CMC)
   e. Destination Folder: select your new folder located on the "Data(D:)" drive
   f. Direct Dispatch Start/End Dates: The start date should be the first Sunday of the study month, but on the previous year. The end date should be the following Saturday of the previous year
   (Example: Study Month = OCT 2023 Start Date: 10/2/2022 End Date: 10/8/2022)
   g. N-1 and N-2 Contingency File: Import file named "ctgs_rtca_autorun_rtca_ems_N-1_and_N-2.aux". There may be multiple files with this name; choose the file that has been most recently modified
   h. Network Model File Name: Import EMS aux file created in Step 6 above
   i. Select "Run(Export)" – wait for CaseBuilder to run and then close out CaseBuilder
8. Check new FCM folder to verify CaseBuilder properly exported files
   a. Open bilateral transaction file and gen capability file
   b. In SMD Applications, select "Forward Capacity Market CSO Bilateral Management"
   c. Verify that the transactions in the exported file match what is in the bilateral management screen
9. Review transmission outages for applicable Transmission Operating Guides and Operating Guidance; review Resource limitations and Must Runs for the entire study month
10. Review Resource outages for the entire study month
11. Send email with "bilateral transactions" and "gen capability" files to "FCM Review"
12. Complete Bilateral Analysis: This analysis consists of reviewing all of the OFFERS & DEMANDS, to ensure that all transactions do not cause any

potential reliability issues throughout the system (thermal, voltage, stability, short circuit) in accordance with OP-19 and M/LCC15

13. Log into SMD Applications, go to "Forward Capacity Markets CSO Bilateral Management"
14. Approve/Deny bilateral transactions
15. Send email to Auctions group indicating Bilateral review is complete
    a. If there are any denials, indicate which transactions were denied and the reason
16. Retain case export files, outage schedules, and checklists in accordance with the ISO New England Information Policy

B. <u>Reconfiguration Bids</u>

1. Once the email is received from Auctions Group indicating that the Reconfiguration Auction has cleared and is ready for reliability review perform the steps below
2. On "taraenfp1a" remote terminal server run CaseBuilder to create monthly input files
    a. Select "Export Files" button on the top left of the screen
    b. Study Mode: select "TARA – FCM Reconfiguration Auction Review"
    c. Case Name: ensure case name includes study year, study month and initials of person completing study. (Example: FCM_OCT_2023_RECONFIG_CMC)
    d. Destination Folder: select your new folder located on the "Data(D:)" drive
    e. Direct Dispatch Start/End Dates: The start date should be the first Sunday of the study month, but on the previous year. The end date should be the following Saturday of the previous year
    (Example: Study Month = OCT 2023 Start Date: 10/2/2022 End Date: 10/8/2022)
    f. N-1 and N-2 Contingency File: Import file named "ctgs_rtca_autorun_rtca_ems_N-1_and_N-2.aux". There may be multiple files with this name; choose the file that has been most recently modified
    g. Network Model File Name: Import the same EMS aux file created in Bilateral process
    h. Select "Run(Export)" – wait for CaseBuilder to run and then close out CaseBuilder
3. Check FCM folder to verify if CaseBuilder properly exported files
    a. Open reconfiguration bid file and gen capability file
    b. In SMD Applications, select "Reconfiguration Auction Management"

c. Verify that the transactions in the exported file match what is in the bilateral management screen

4. Send email with "Gen Capability" file and "reconfiguration bids" to "FCM Review"
5. Complete Reconfiguration Analysis: This analysis consists of reviewing all of the OFFERS & DEMANDS to ensure that the bids do not cause any potential reliability issues throughout the system (thermal, voltage, stability, short circuit) in accordance with OP-19 and M/LCC 15
6. **If all bids will be approved**: Log into SMD Applications, go to "Reconfiguration Auction Management" and approve all bids
7. Send email to Auctions group stating the bids were approved for reliability
8. **If one or more bids are denied**: Log into SMD Applications, go to "Reconfiguration Auction Management" and individually deny unacceptable bids. Once this is complete deny the entire case
9. Send email to Auctions Group indicating that one or more bids were denied and ask them to re-run auction. Go back to step B.1. to complete process with new re-run bids
10. Once Monthly Markets Group is notified that all bids were approved for reliability, send email out to ISO-NE Long Term Group stating that the moratorium period has ended
11. Retain case export files, outage schedules, and checklists in accordance with the ISO New England Information Policy

6. Performance Measures

This procedure is considered to be properly followed as evidenced by the following:

A. Goal for Corporate Customer Satisfaction Rating met

B. Corporate Goal for NPCC Reliability Compliance and Enforcement Program (RCEP) non-compliance letters received by ISO in regards to Area Transmission Review is met

C. Corporate Goal for NPCC RCEP non-compliance letters received by ISO in regards to Operating Reserve is met

D. The following are being tracked as leading indicators and responded to:

(1) Topology / device errors which are incorrectly entered into the ISO Outage Scheduling software

(2) If changes were required resulting from ISO and LCC network model differences

(3) If deadlines were missed as depicted in Attachment A - Long Term Outage Coordination Process, and reasons why

7. References

ISO New England Inc. Transmission, Markets, and Services Tariff Section III, Market Rule 1 - Standard Market Design (Market Rule 1)

ISO New England Inc. Transmission, Markets, and Services Tariff Attachment D - ISO New England Information Policy

ISO New England Operating Procedure No. 1 - Central Dispatch Operating Responsibilities and Authority (OP-1), Appendix A Assignment of Responsibilities (OP-1A)

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

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

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

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

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

Master Local Control Center No. 15 - System Operating Limits Methodology (M/LCC 15)

SOP-OUTSCH.0030.0010 - Evaluate Resource Outage Requests

SOP-OUTSCH.0030.0040 - Perform Long Term Resource Outage Coordination

SOP-OUTSCH.0030.0070 - Long Term Outage Economic Analysis

SOP-OUTSCH.0050.0010 - Determine Study Requirements

SOP-OUTSCH.0050.0020 - Perform Complex Studies

8. Revision History

Rev. No.	Date	Reason	Contact
0	06/01/10	Initial SOP for Long Term Outage Coordination	Peter Bernard
1	06/30/11	Removed "Engineer" from the Outage Coordinator title; Replaced Blackout Period with moratorium; Global removed reference to SAM and replaced with ISO Outage Scheduling software Delete the Publish the Weekly interim Approved Report Section; Delete Section 5.4 Perform Congestion Studies; Rewrote Section 5.8; Added new Attachment B; Added new Attachment C; Added NPCC Notification under Instructions. Identified steps to notify neighbors when NPCC critical systems are out of service.; Added TTC notification under Instructions. Identified steps to notify when outage affects an external interface for an entire calendar month.; Global, Updated copyright date, changed pagination format; Global, Deleted "CROW" replace with "ISO Outage Scheduling Software" Section 5.D NOTE deleted "…starts on the 15th…" inserted "…starts on or about the 12th to the 15th…"; Section 5.E, Deleted "NPCC Critical Facilities list" inserted " NPCC Area Facilities for Notification list"; Section 5.1 NOTE inserted "…or Dispatchable Asset Related Demand (DARD)…"	Peter Bernard

Rev. No.	Date	Reason	Contact
2 Continued on next page	03/26/12	Biennial review by procedure owner; Header changed the procedure owner, updated copyright date; 1st page Footer, deleted 2nd paragraph of disclaimer; Global Added "Confidential – Do Not Distribute" to all Footers; Section 1 Replaced "…greater than 21 days…" with "…21 days or greater…"; Section 2 2nd paragraph Replaced "…bulk power system…" with "…Bulk Electric System…" Section 2 last paragraph Corrected typo (deleted the s from "wells" and replaced "…violated." with "…exceeded." Section 3, Converted former step 3.7 to the NOTE at the beginning of the section. Section 5. Added a new sub-section 5.1 and titled it as General Instructions. and re-numbered remaining sub-sections Section 5.1, step 5.1.3.A Added OP-1 Appendix A full title and acronym Section 5.1, step 5.1.3.A Deleted the 1st bullet Section 5.1, NOTE after last bullet of step 5.1.3.A, defined the acronym RA (Reconfiguration Auction) Section 5.1, NOTE prior to step 5.1.3.B, deleted the definition for the acronym RA, deleted the 2nd sentence from NOTE, added "…by the…" Section 5.1, step 5.1.3.B 1st paragraph, replaced "…TE…" with "…HQTE…", step 5.1.3.B., 2nd bullet, replaced "…send the notification…" with "…notify…", , step 5.1.3.C, replaced "…Outage Specialist/Engineer…" with "…Outage Coordinator designated D2 …"; step 5.1.3.D and following NOTE, added new step 5.1.3.D and converted the following NOTE to be examples for step 5.1.3B. Section 5.2, Step 5.2.1.B.3) Replaced "…one year…" with "…two years…", NOTE prior to step 5.2.1.B.4) replaced both instances of "…2011…" with "…2012…" & "…2011…" with "…2014…", NOTE prior to step 5.2.1.B.18) Added "…state.", step 5.2.1.3) Added "…state.", step 5.2.3.B.3) & step 5.1.3.B.5) replaced "…one year..." with "…two years…" and "…veify…" with "…verify…", NOTE prior to step 5.2.4, 2nd sentence replaced "…of..." with "…if…", deleted "…piece…" and added "…is…", step 5.2.4.B.2)e. last bullet, replaced "…Approve..." with "…Approved…" & "…Deny…" with "…Denied…", step 5.2.5. 2nd bullet, replaced "…have..." with "…has… Section 5.3, 2nd NOTE Replaced "…is..." with "…are…" and "…its…" with "…their…"; step 5.3.1.B.2) and 5.3.1.B.18), corrected the report title by switching "…Outage…" with "…Impact… Section 5.4 step 5.4.1 added NOTE and reworded 2nd NOTE following step 5.3.1.C Replaced "…Approve…" with "…Approved…" and "…Cancel…" with "…Cancelled…"; step 5.4.2.N.5) a. & b reworded step 5.4.2.1.N.5) and converted the two sub-steps a. & b. to bullets reworded to improve grammar, Continued on next page	Mike Courchesne

Rev. No.	Date	Reason	Contact
2 Continued from previous page	03/26/12	Step 5.3.2.M.12) b. Replaced "…Transmission…" with "…Generation…", NOTE following step 5.3.2.Q.10), reworded to improve grammar; step 5.4.3.O.10) i.,modified Grammar changes to the NOTE prior to step 5.3.3.O,10) h and sub-steps 5.3.3.O.10)h & I; Section 5.5 2nd NOTE 1st bullet Replaced "…deemed…" with "…designated…" Section 5.6 1st NOTE added the full title to OP-5 acronym section 5.6 step 5.6.1.A.3) i added "…of…" Section 5.7 Added new last sentence to 1st NOTE; converted information formerly contained in step 5.7.1.A to be a NOTE prior to that step; added "…and verify the seasonal limits are proper." To sub-step 5.7.1.A.2); deleted sub-step 5.7.1.A.4) and renumbered remaining sub-steps; added new sub-steps 5.7.1.A.4) & 6) and renumbered remaining sub-steps; converted information formerly contained in sub-step 5.7.1.A.6) into a prior NOTE and modified the grammar in sub-step 5.7.1.A.8); grammar changes to sub-steps 5.7.2., 5.7.2.A, 5.7.2.B.,5.7.2.C, 5.7.2.C.2) d; converted part of former step 5.7.2.D into a NOTE place prior to new step 5.7.2.D; added new step 5.7.2.D & sub-steps 1), 2) & 3) and renumbered remaining steps; grammar change to step 5.7.2.E; reformatted step 5.7.2.E.4) into a step and new sub-steps a. - e; grammar change to sub-step 5.7.2.E.5), step 5.7.3, step 5.7.3.A, sub-step 5.7.3.A.2) & 5.7.3.A.3), step 5.7.3.B, 5.7.3.C, sub-step 5.7.3.C.5). steps 5.7.4, 5.6.4.A, 5.7.4.B, 5.7.4.C, sub-steps 5.7.4.C.1) & 7), step 5.7.4.D, " ; in sub-step 5.7.4.D.1): replaced "…EMS Powerworld…" with "…network model…" and "…network_model.aux…" with "…the file; grammar changes in step 5.7.4.D.7) & 8), 5.7..4.E, 5.7.4.E.2); converted information formerly contained in sub-step 5.7.4.D.8) into an NOTE located prior; grammar change to step 5.7.5, step 5.7.5.A; added new sub-step 5.7.5.A.7); added new NOTE prior to step 5.7..6.C and sub-steps 5.7.C.10 – 3); grammar change to step 5.7.6.D; converted information formerly contained in sub-step 5.7.6.D.3) into a new NOTE prior to sub-step 5.7.6.D3); grammar change to step 5.676.E; grammar change to step 5.7.B, 5.7.B.1), step 5.7.C, 5.7.D; added new sub-steps 5.7.D.1), 2), 3) & 4), modified sub-step 5.7.D.7), added new sub-steps 5.7.D.8) & 9); gammar change to step 5.7.6.E, 5.7.6.A, and 5.7.6; grammar changes to step 5.7.7, 5.7.7.A, 5.7.7.B, 5.7.7.C, and 5.7.7.D; grammar change to step 5.7.8, 5.6.8.A. 5.7.8.B. 5.7.8.C; modified sub-step 5.7.8.D.1), 5.7.8.D.1) a. & B, added new sub- steps 5.7.8.D.1) e. & f; modified sub-step 5.7.8.D.2), 5.7.8.D.2) a. & B, added new sub- steps 5.7.8.D.2) e. & f; added new NOTE prior to new sub-steps 5.7.8.D.3), 5.7.8.D.3) a & b; grammar change to step 5.7.8.E, added new sub-step 5.7.8.E.7) Section 8 added new attachment D to listing; Attachment D added new attachment.	
3	01/10/14	Biennial review completed by procedure owner; Updated Section 5.7, Attachments C & D to reflect updates to the TARA software and the FCM monthly analysis process itself.	Mike Courchesne

Rev. No.	Date	Reason	Contact
4	06/03/15	Corrected titles for OP-5 and OP-14 in first use and in Section 7; Globally made editiorial changes consistent with current practices and management expectations to eliminate the use of the terms "insure" and "ensure". to be consistent in using present tense for directed actions and consistent use of grammar; Updated Section 3 and Section 6 language to highlight the established NERC and NPCC seasonal assessment process conducted by Operations Support Services; provided direction to perform evening studies for transmission equipment outages adjacent to pump storage facilities.	Mike Courchesne
4.1	12/08/15	Periodic review performed requiring no changes; Made administrative changes required to publish a minor Revison.	Mike Courchesne
5	04/13/16	Deleted middle NOTE prior to step 5.1.3.A; Modified first NOTE prior to step 5.1.3.B (replaced "within 10 business days" with "shortly"; Section 6, step 6.G deleted step and all sub-steps (removed "MTO Flag" process flow;	Mike Courchesne
5.1	03/20/17	Periodic review performed requiring no changes; Made administrative changes (added corporate document identity to all page footers) required to publish a minor Revison;	Mike Courchesne
6	12/11/18	Biennial review by the procedure owner; Updated procedure owner in all headers; Globally made editorial changes consistent with current conditions, practices and management expectations;	Norm Sproehnle
7	09/09/19	Globally made editsorial changes to be consistent with current conditions, practices and management expectations; Changed Procedure Owner in headers and Contact in Rev History); Removed responsibility for conducting seasonal assessment; Removed all references to the 90-Day meeting; Added references to the 14-Day meeting; Annotated biweekly responsibilities for outage coordinators; Addressed relay application expectations; Added section to clarify which seasonal limits should be used; Added requirement to annotate applicable TTC buffers in outage applications; Documented procedure to notify external entities of outage implications; Added instructions for adding attachments to outage applications; Added NOTE identifying when switching applications are necessary; Retired Attachment C; Added Attachment E - Daily Checkout Checklist.	Andrew Kopacka
8	12/08/20	Biennial review by procedure owner; globally changed DNR to NRA; removed FERC metric criteria; added requirement to notify Real-Time Studies group of reactive testing applications; minor editorial changes; added OP-24 to references	Andrew Kopacka

Rev. No.	Date	Reason	Contact
9	09/06/22	Biennial review by procedure owner; Process clarification throughout document; Defined on-peak and off-peak hours for TTC postings; Removed D2 email process and incorporated REX2; Minor administrative changes; Clarified "manual" process for Resource notification of limitation or must run; Clarified FCM denial stipulations in section 5.4; Universally changed Monthly Market Operations group to Auctions group; Renamed Attachment D to FCM Monthly Checklist and updated all steps to align with current practices; Updated FCM reliability review process in section 5.4 to align with current practices;	Andrew Kopacka
10	02/07/24	Biennial review by procedure owner requiring minor administrative changes; Removed note regarding daily checkout process being completed by biweekly groups; Globally changed "LTOC Generation Coordinator" to "Resource Analyst"; Included a step in Section 5.2 to pursue documented switching actions that are relevant to applicable outage studies; In Section 5.2 removed steps for processing outage requests from adjacent RCs. This function will now be performed by the Transmission Coordinators; Adjusted the NYPP modeled MW calculation in Section 5.3 for ease of calculation and for consistency with real-time values; Updated the requirements for documenting external and internal interface restrictions due to recent CROW changes; Added a step to Section 5.3 that directs specific communication and notification to a Resource when an isolation or hard limit is imposed on that Resource caused by transmission work; Removed the external RC CROW application process from Attachment E as this function will be performed by the Transmission Coordinator; Added step to verify all STCA contingencies are active, and steps on how to activate contingencies if they are inactive.	Andrew Kopacka

9. Attachments

Attachment A - Long Term Outage Coordination Process

Attachment B - EMS Troubleshooting Guide (Confidential)

Attachment C - Retired (09/09/2019)

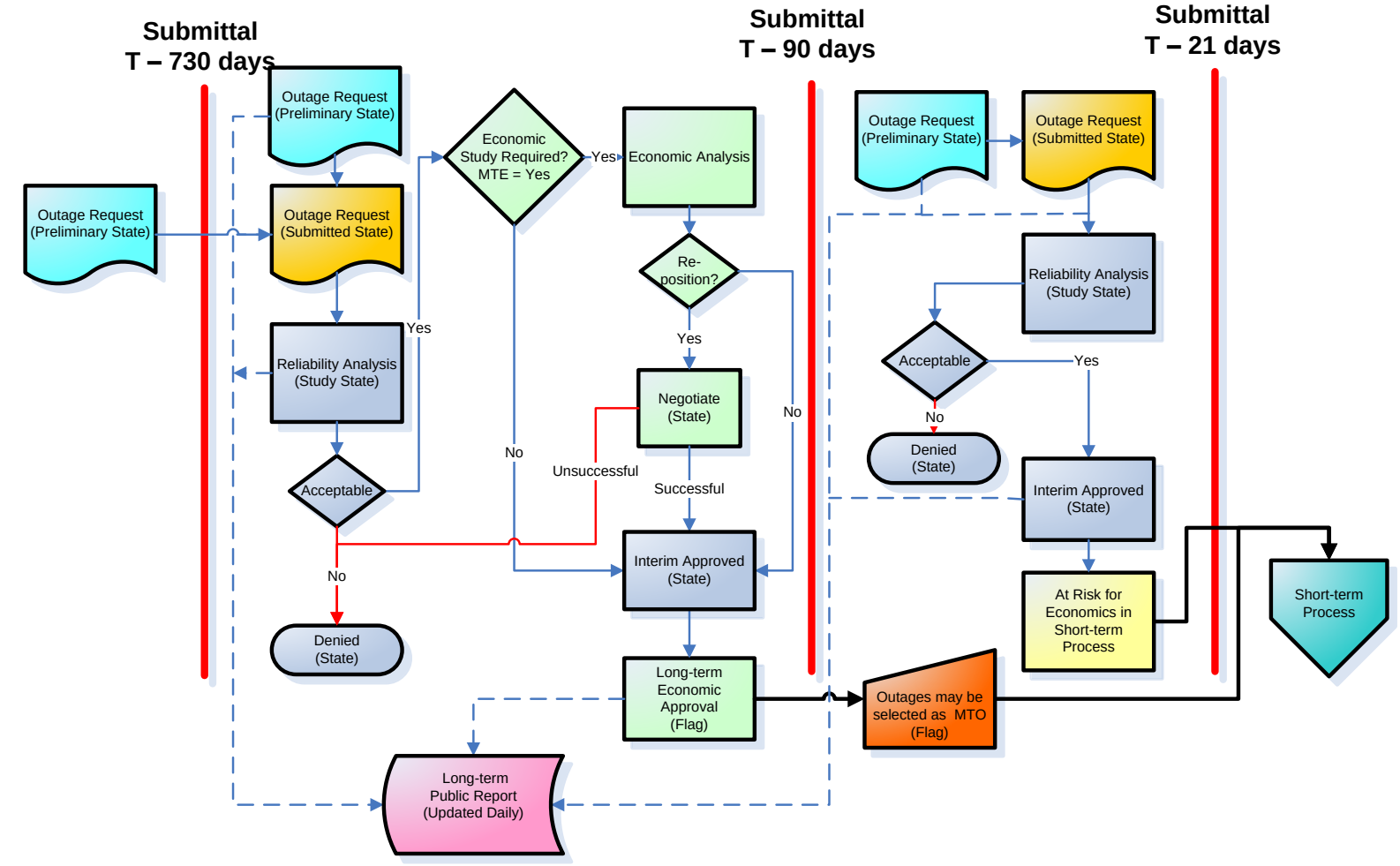
Attachment D - FCM Monthly Checklist

Attachment E - Daily Checkout Checklist

Attachment A - Long Term Outage Coordination Process

Operating Procedure #3 – Long Term Outage Coordination Process

Long-term Process



Attachment B - EMS Troubleshooting Guide (Confidential)

Attachment C - Retired (09/09/2019)

Attachment D - FCM Monthly Checklist

Step	Complete	Outage Coordinator: FCM Month/Year:
1.	_____	On the first business day of every month send Moratorium email to LCCs and Long Term Outage Coordination
2.	_____	Receive email from Auctions group that bilateral transactions are ready for reliability review
3.	_____	Determine 50/50 Load to be studied:_____
4.	_____	Create EMS Basecase with all lines in-service
5.	_____	Save Basecase as a Powerworld.aux file within EMS
6.	_____	Create a new FCM folder for study month
7.	_____	On “taraenfp1a” terminal server run CaseBuilder to create monthly input files
8.	_____	Check new FCM folder to verify CaseBuilder properly exported bilateral files
9.	_____	Review transmission outages for applicable Transmission Operating Guides and Operating Guidance; review Resource llmitations and must-runs for entire study month
10.	_____	Send email with bilateral transactions and gen capability files to “FCM Review”
11.	_____	Complete Bilateral Analysis: This analysis consists of reviewing all of the OFFERs & DEMANDSs to ensure that all transactions do not cause any potential reliability issues throughout the system (thermal, voltage, stability, short circuit) in accordance with OP-19 and M/LCC 15.
12.	_____	Approve/deny bilateral transactions in FCM CSO Bilateral Management
13.	_____	Send email to Auctions group indicating that bilateral review is complete. If there are any denials, indicate which transactions were denied and the reason
14.	_____	Receive email from Auctions group indicating the Reconfiguration Auction has been cleared and is ready for the reliability review
15.	_____	On “taraenfp1a” terminal server run CaseBuilder to create monthly input files
16.	_____	Check FCM folder to verify CaseBuilder properly exported reconfiguration files
17.	_____	Send email with reconfiguration bids and gen capability files to “FCM Review”

18.	_____	Complete Reconfiguration Analysis: This analysis consists of reviewing all of the OFFERS & DEMANDS to ensure that the bids do not cause any potential reliability issues throughout the system (thermal, voltage, stability, short circuit) in accordance with OP-19 and M/LCC 15
19.	_____	Approve/Deny reconfiguration bids in Reconfiguration Auction Management
20.	_____	If all bids were approved: send email to Auctions group stating that the bids were Approved for reliability
21.	_____	If one or more bids are denied: send email to Auctions group stating that one or more bids were denied and ask them to re-run the auction. Go back to Step 14 and repeat reconfiguration process
22.	_____	Once Auctions group is notified that all bids were Approved for reliability, send email out to ISO-NE Long Term Outage Coordination stating that the Moratorium period has ended
23.	_____	Retain case export files, outage schedules, and checklists in accordance with the ISO New England Information Policy

Notes:_____
_____
_____
_____
_____
_____

Attachment E - Daily Checkout Checklist

____	Review new outage requests received since last checkout
____	• Call up the outage scheduling software
____	• Set Date range from twenty-one (21) days to “Infinity”
____	• Set "Status" filter to "Preliminary, Submitted”
____	• Set “Priority” filter to “Long Term” and “Informational”
____	• Set “Market Sensitive” filter to “Null”
____	• Review all new Outage Requests that are populated
____	○ Start/End times (Preliminary and Submitted)
____	○ Check equipment against the EMS model for accuracy
____	○ Select "Market Sensitive Flag" (Yes/No)
____	▪ Set the flag to “Yes” if the outage removes a Resource from service
____	▪ If the outage does **not** remove a Resource from service select “No”
____	▪ For “Submitted” outages only, if the outage is market sensitive, on the Studies/Short Term ISO tab, select the “Generation Limitation” box, select the Asset name(s) and add the reason for the limitation. Create a TCD application with all pertinent information if the recall time is greater than four (4) hours.
____	○ For “Submitted” outages only, if the outage has a stability guide associated with it that specifically restricts a Resource, or it requires a Must Run, then on the Studies/Short Term tab, select the associated Resource(s) in the “Generation Limitation” or “Generation Must Run” box as applicable and add the reason in the associated open well. If a specific MW restriction will be applied per a TOG, or if the Resource will be isolated by the transmission outage, manually send an email to the LTO Coordinator found in CAMS, indicating the requirement for the Resource.
____	• For RLY and NRA applications that are flagged MTE, check the “Override MTE” box and click on MTE to reverse the indication. Verify NRA Applications are submitted as “Informational”
____	• Verify an OP-24 Appendix D is attached and filled out correctly for applicable RLY application submissions
____	• Verify transmission outages listed on the External LTOR Site are **not** Market Sensitive. This is the responsibility of the entire LTOC group and should be performed on a continual basis
____	• Open CROW Transmission Outage Request Browser

____	• Create a custom filter on "Priority Date" for the previous week begin date (10/14/23-10/20/23 for example)
____	• Priority Date Custom filter should be set to *"Is greater than or equal to"* 10/14/2023 0000 and the second filter should be *"Less than or Equal to"* 10/20/2023 2359
____	• Priority Custom filter should be "Long-Term or Informational"
____	• Setup an appropriate Date Range
____	• Go through the outages and confirm there are **no** Market Sensitive outages marked "No"
____	• If there are outages identified as being incorrect, notify the person who completed the study to change the market sensitive flag to "Yes" and email the OP&A mailbox (i.e., opamoreq@iso-ne.com) of the generation constraint
____	• Review NX9 updates, TOGs, and other guides revised/issued during the week and check if any Resource reductions are involved. If a Resource is affected by new/revised TOGs check all Interim Approved outages going forward and make the necessary notifications.
____	• NY-38 or NY-F83 or NY-F84 Line (stability guides)
____	• New Scotland-Alps NY-2-AN Line
____	• N. Troy - Hoosick NY-5 Line: Hoosick radial to K6 Line at Bennington. This line outage could introduce voltage concerns in VT
____	• Ramapo - Branchburg NY-RAM-5018 Line (Make sure 398 Line does **not** overlap. Annotate that this affects PJM Eastern Interface margin sensitivity in the application)
____	• Massena - Marcy NY-MSU1 line can cause POWERFLOW case to go invalid so the Outage Coordinator needs to reduce the "CHAT" unit to < 600 MW in POWERFLOW in order to solve the case (this is just a note for this outage, **no** study is required before Interim Approving)
____	• Any NY line outages that can be found on the printed map should be analyzed. These lines are typically one (1) to two (2) stations outside of the New England footprint and could be impactful with other overlapping outages