Table of Contents

References

1. INT-009 - Implementation of Interchange
2. INT-006 – Evaluation of Interchange Transactions
3. IRO-014 – Coordination Among Reliability Coordinators
4. TOP-001 – Transmission Operations
5. Dedicated Path Logic (DPL) RAS Document
6. 396 Line RAS Document
7. OP 9 - Scheduling and Dispatch of External Transactions
8. MLCC 13 - ISO and LCC Communication Practices
9. CROP.10002 Implement Capacity Remedial Actions
10. CROP.36004 Single Source Contingency Limit

Procedure Background

Confirmation of interchange schedules shall be performed in accordance with the requirements found in NERC INT-009 – Implementation of Interchange. These requirements include securing the agreement of the future interchange magnitude, direction, and applicable time intervals. This agreement should be performed through periodic interval checkouts with adjacent Balancing Authorities using proper 3-Part Communications, as outlined within MLCC 13 – ISO and LCC Communication Practices.

The scheduling interval for hourly interfaces is the top of the hour, minute 00. For the New York North (NYN) interface during 15-minute scheduling, three additional scheduling intervals occur at minute 15, 30 and 45.

Standard interchange ramps take place over a ten-minute period, beginning five minutes prior to the start of the scheduling interval and ending five minutes after the start of the scheduling interval. Deviations from standard interchange ramps for the purpose of reliability, facility operating characteristics, etc.; are allowed and will be discussed with the adjacent RC/BAs prior to schedule implementation.

The Generation Scheduling Sheet is utilized by the Generation Desk Operator as a form of internal control to ensure that periodic, routine administrative duties are performed consistently in accordance with Control Room management expectations and this CROP. The Generation Scheduling Sheet is maintained and modified, as needed, by the System Operators and resides in the Control Room SharePoint.

When a transmission outage reduces the normal NY-NE and NE-NY transfer limits, use a 100 to 150 MW margin below the SOL limit for the scheduling TTC. Example, if the SOL limit for NY-NE is 750 MW, use 600 MW for a schedule TTC and if the NY-NE SOL limit is 700 MW, use 600 MW for a schedule TTC. NY scheduling software can only use 100 MW increments.

Schedule change required notifications to LCCs:

CONVEX LCC Operator is notified for the following:

- NYN tie change greater than or equal to 500 MW; Or
- NNC tie change greater than or equal to 100 MW; Or
- CSC tie change greater than or equal to 200 MW.

Maine LCC Operator is notified for the following:

- NB tie change greater than or equal to 200 MW when the current Interface schedule is less than or equal to 700 MW; Or
- NB tie change greater than or equal to 100 MW when the current Interface schedule is greater than 700 MW

NH LCC Operator is notified for the following:

- Blocking of Phase II;
- De-Blocking of Phase II.

Acronyms:

- (NBLL) New Brunswick Load Loss
- (CTS) Coordinated Transaction Scheduling
- (DBC) Day Before Checkout

Process acronym with a brief description in the order that they occur for each interval:

- (RTUC) Real Time Unit Commitment - Approved RTUC provides next CTSPE with generation commitment
- (CTSPE) Coordinated transaction scheduling pricing engine - Approved CTSPE provides NYISO RTC with prices at various net interchange (NI) levels and reliability limits
- (RTC) Real Time Commitment software - RTC data includes forecasted NY and NE prices for next 2.5 hours
- (FTC) Facilitated Transaction Checkout - FTC data includes binding and advisory NYN schedules for next 2.5 hours

Normal Reliability Limits are as follows:

- Import: -1600
- Export (10Min Total): 1200
- Export (30Min Total): 1200
- Any deviation from the above indicates that the calculated backdown to Eco Min, System 10 Minute Total Surplus or System 30 Minute Total Surplus from the last approved CTSPE case is causing a change in a reliability limit that may be used in the NY RTC Solution.

New Brunswick has multiple Load Loss Contingencies that can impose a limit on the amount of energy that can be transferred into New England. NB has agreed to limit the magnitude of their Load Loss Contingencies when coordinating their hourly interchange schedules, in order to maximize transfers to New England. Should an ILC Interface exceedance occur in-hour, due to the size of this contingency, NB has agreed to reduce the size of their Load Loss to resolve the problem.

Net Commitment Period Compensation (NCPC) is the payment to a market participant for its generator, dispatchable-asset-related demand (DARD), demand-response resource (DRR) or external transaction that did not recover its effective offer costs from the energy market during an operating day. The NCPC payment is intended to make a resource that follows the ISO's operating instructions "no worse off" financially than the best alternative generation schedule. Typically, a resource receiving NCPC was operated out of merit to protect the overall resource adequacy and transmission security of specific locations or of the entire balancing authority area.

On Peak hours: 0700 – 2300, Monday through Saturday, Non-NERC Holidays. All other time will be designated Off Peak. NERC Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day. If any of these holidays fall on a Sunday, the following Monday will be considered an Off-Peak day. Otherwise, the Off-Peak day will be the holiday itself.

Transaction text color highlighting on the CTS Interface Detail display

- **Red**: CA-CA Emer, CA-CA Security
- Wheeling Transaction

Transaction text color highlighting on the Non-CTS Interface Detail display

- **Red**: CA-CA Emer, CA-CA Security, SET-Security, and EET Emergency
- **Grey**: Non-CSO Export
- **Purple**: Import Resource
- Green: ISO-NE ID link indicating transaction DA Priority information
- Wheeling Transaction

Interchange scheduling data and RTUC:

- RTUC Interchange Inputs:
  - NX_NRT
    - 1st Interval – Interchange Scheduling display schedule
    - Remaining Intervals – NYISO Advisory data from CTS
  - Non-CTS Interfaces
    - 1st Hour – Interchange Scheduling display schedules
    - Future Hours – Future Hour Interchange Predictor (FHIP) solution
- Future Hour Interchange Predictor (FHIP) provides RTUC with a forecast of interchange schedules by running a scheduling algorithm behind the scenes to create a forecasted net interchange.
- FHIP performs a comparison of its forecasted net interchange with available FTC data on the NNC, CSC, and NB interfaces.
- FHIP runs automatically every 15 minutes, normally at :04, :19, :34 and :49 for a configurable look ahead time period which is normally set to 2 hours.

To satisfy NERC Standard IRO-006-EAST – Transmission Loading Relief Procedure for the Eastern Interconnection, the Interchange Distribution Calculator (IDC) software is monitored by the Forecaster and external transactions impacted by TLRs are communicated to the Generation Operator and Senior System Operator. The forecaster is alerted by the IDC when there is a new TLR which and then auto-acknowledged by the IDC software. The Forecaster will then communicate to the Generation Operator and Senior System Operator any transaction associated with the TLR, amount of MW to curtail and curtailment Hour Ending. If the auto-acknowledge feature is disabled in the IDC software, the TLRs will be monitored manually by the Forecaster.

Common Procedure Information

A. Any ISO-NE qualified Control Room Operator has the authority to take actions required to comply with NERC Reliability Standards. A qualified ISO-NE Control Room Operator has met the following requirements:
   1. Have and maintain a NERC certification at the RC level (per R.1 of PER-003-2)
   2. Applicable Requirements of PER-005-2
   3. Approved to cover a Control Room Operator shift position by the Manager, Control Room Operations
   4. Is proficient at the current qualified level.

B. Real time operation is defined as the current hour and the current hour plus one.

C. Future hours are those beyond real time operation.

D. All verbal communications with Local Control Centers (LCC), neighboring Reliability Coordinators/Balancing Authorities (RC/BA), Designated Entities (DE), Demand Designated Entities (DDE) and/or SCADA centers shall be made on recorded phone lines unless otherwise noted.

E. For all communications:
   1. Use the Basic Protocol for All Operational Communications as prescribed in M/LCC 13.
   2. Use 'ISO New England' or 'New England'. Refrain from using 'ISO'.
   3. Use Asset ID's when communicating with DE/DDEs.
   4. Use three-part communication in all situations where its use will enhance communication.

F. Primary responsibilities are stated for each step within the procedure, but any ISO Control Room Operator qualified at that position or higher can perform the step. The Primary Responsibility may be delegated to an Operator in a lower qualified position, but the responsibility for its completion remains with the identified individual.

G. The use of “ensure” within this document means that a verification has been performed and if the item is not correct, corrective actions will be performed.

Procedure

Condition(s) to perform this section:

- **The next interval to be scheduled indicates "Binding" on the NYN Scheduling display.**

Section 1 : Perform Interchange Scheduling for the CTS Interface

Notes

- Interval times displayed on the NYN Scheduling Display are **Interval Beginning**.
- The "Hourly Scheduling:" indication "Y" / "N" is set by NYISO software, ISONE does not have the ability to modify it.
- The NY RTC software is programmed to allow a default ramp of up to 300 MW per 15-Minute scheduling interval. On occasion, based on multiple similarly priced CTS transactions, the NY RTC software may allow a ramp in excess of 300MW (e.g. 301, 302, etc.).
- Ramps up to 325 MW will be permitted on the CTS Interface during normal 15-Min Scheduling prior to Operator curtailment for excess ramp.
- Ramp limitations when performing hourly scheduling of up to 700 MW will be allowed on the CTS Interface during hourly scheduling and while transitioning into and out of hourly scheduling.
- If the total hourly ISONE interchange ramp is greater than 900 MW, the Operations Shift Supervisor will evaluate reliability and the available resources for the ramp. If curtailments are required, then the NYN ramp may be curtailed but **NOT** lower than 400 MW, the remaining curtailments will be applied to the Non-CTS ramp. The Operations Shift Supervisor shall only restrict an hourly ramp exceeding 900 MW if it will result in a reliability problem or exceed the capacity of available resources for the scheduling interval.

Step 1.1 Primary Responsibility: Generation Operator

Review the data and information for the upcoming scheduling intervals.

Instructions

- ❑ On the NYN Scheduling or Manage CTS Data displays review the following items for indicators of a potentially abnormal condition:
  - ❑ NY RTC Data Received
  - ❑ ISO-NE Data Sent
- ❑ On the Manage CTS Data display, review the following items for indicators of a potentially abnormal condition
  - ❑ Latest NY RTC Data rows (NY Price, NE Price, and CTS NYN NI)
  - ❑ Import (Min Gen Emergency)
  - ❑ Export (10 Min Total)
  - ❑ Export (30 Min Total)

  Note: NYISO uses the maximum of the 10 and 30 Min Reserve Export Reliability Limits in the determination of NYN NI.
- ❑ If the NY Price, NE Price, and CTS NYN NI are highlighted orange, proceed to Step 18.1 of this CROP
- ❑ If the NY Price, NE Price, and CTS NYN NI are highlighted red, proceed to Step 18.2 of this CROP
- ❑ If the ISO-NE Data Sent is orange or red, proceed to Step 19.1 of this CROP
- ❑ If the NY Data Received is orange or red, proceed to Step 19.2 of this CROP
- ❑ If the software is **NOT** responding, proceed to Section 22 of this CROP.
- ❑ If there is a data issue without an orange or red highlight, proceed to Step 19.2 of this CROP to determine the potential issue.
- ❑ If the Export Reliability Limits are red (indication of a negative export limit), that is an indication the ISONE may need to be importing in order maintain reserves. If necessary, request capacity MWs from NYISO on the CTS Interface using Section 17 of this CROP.
- ❑ Populated TTC Values.

Step 1.1.1 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Operator has determined the Reliability Limits are invalid and may create constraints on the solution.**

Contact the NYISO Operator to override reliability limits.

Notes

Reliability Limits in the current and next two intervals **CANNOT** be overridden. For identified issues with Reliability Limits beyond that, the NYISO Operator has the capability to override incorrect limits upon request.

Step 1.1.2 Primary Responsibility: Generation Operator

Log requested reliability limit overrides.

Instructions

Use log entry: > INTERCHANGE SCHEDULING > CTS Reliability Limit Override

Step 1.1.3 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **The determined TTC value is different than the value initially populated.**

Adjust the NYN TTC.

Instructions

- ❑ Right click on the applicable TTC direction;
- ❑ Select "Edit";
- ❑ Ensure the pop up header states the applicable TTC direction “Adjust TTC_IN” or “Adjust TTC_OUT” for curtailment;
- ❑ Enter a new TTC value;
- ❑ Select the “To HE” value;
- ❑ Select a reason from the drop down;
- ❑ Enter an additional reason, if desired;
- ❑ Click "Apply".

Step 1.2 Primary Responsibility: Generation Operator

Set up for scheduling the next interval.

Instructions

- ❑ Perform the following:
  - ❑ Advance to the applicable scheduling interval on the NYN Scheduling display if necessary.
  - ❑ “NYN Data Status” of “Binding” for an interval indicates NYISO is ready to checkout for an interval.
  - ❑ If “NYN Data Status” does **NOT** indicate “Binding” as expected for the next scheduling interval, proceed to Section 19.

Step 1.3 Primary Responsibility: Generation Operator

Determine if the binding NYN schedule needs to be modified.

Instructions

- ❑ Perform the following:
  - ❑ Schedule may be adjusted if ramping to the new schedule creates or worsens a reliability issue, modify next interval interchange value using Section 15.
  - ❑ If any of the following ramp constraints exist proceed to Section 15
    - ❑ If scheduling on a 15-Min basis and a ramp of greater than 325 MW exists; Or
    - ❑ If scheduling on an hourly basis and a ramp of greater than 700 MW exists; Or
    - ❑ If scheduling on an hourly basis and the total ISO-NE system ramp exceeds 900 MW and the Operations Shift Supervisor determines cuts will be made for reliability.
  - ❑ If the interval being checked out is already binding AND there are MW mismatches between NE and NY, press the "Match NY" button.
    - ❑ If there are mismatches after clicking the "Match NY" button then the interchange should be verbally agreed upon.
      - ❑ Use log entry: > INTERCHANGE SCHEDULING > Verbally Agreed Upon Interchange Schedule

Step 1.4 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Pre-OP4 actions are required as directed by CROP.10002 Implement Capacity Remedial Actions; Or**
- **OP-4 Action 5 has been declared.**

Adjust CTS Interface schedule using Section 9.

Step 1.5 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Minimum Generation Warning or Emergency has been declared.**

Adjust CTS Interface schedule using Section 10.

Step 1.6 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **The "NY Data Status" for the interval is "Binding".**

Checkout with the NYISO Interchange Operator for the CTS Interface schedule.

Standard(s) for completion:

- 3-part communication is used.
- Checkout complies with requirements of INT-009

Instructions

- ❑ Confirm the following with NYISO:
- ❑ If this is the first checkout of the shift:
  - ❑ Establish and agree on the standard interchange ramp start time and duration;
- ❑ NYN schedule including ramp i.e. “standard ramp”;
- ❑ CA-to-CA Emergency, if applicable
- ❑ If deviating from the standard interchange ramps agree on:
  - ❑ Ramp start time
  - ❑ Ramp duration

Notes

- The requirement is that the standard interchange ramp start time and duration will be established during the first checkout of the shift i.e. :00, :15, :30 and :45 and only deviations to the standard ramp will be discussed thereafter.
  - Example: “For all 15 minute intervals, the standard ramp will start at 5 before and end at 5 after the respective interval”.
- Standards for completion were added based on the 2021 audit recommendations, and in response to a non-compliance response.

Step 1.7 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **NYN tie change greater than or equal to 500 MW.**

Notify CONVEX Operators of the schedule change.

Step 1.8 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Previously scheduled ramps have begun; Or**
- **Previously entered ramp schedule is being modified.**

Update the interval schedule in the EMS Interchange Scheduling display.

Instructions

- ❑ If no Emergency Transactions are being scheduled, use the "Send to IFS" button to transfer the latest schedule to EMS.
- ❑ If CA to CA Emergency Transactions are being scheduled, manually enter the schedules in the EMS Interchange Scheduling display NYPP NX_NRT section as follows:
  - ❑ Enter the MW amount of the **Capacity-Backed** Emergency Sale or Purchase in the "**EMERG**" line.
  - ❑ Enter the MW amount of the **Energy-Only** Sale or Purchase in the "**SWOCAP**" or "**PWOCAP**" line.
  - ❑ Enter the **NON-Emergency** portion of the interval schedule in the "**W_CAP**" line.
  - ❑ Enter the Ramp Start Time;
  - ❑ Enter the Ramp Duration;
  - ❑ Click the "Implement" button.

Notes

- If a previously agreed upon ramp has not begun and a new ramp schedule is sent or manually entered into the EMS Interchange Scheduling display, the old schedule will be overwritten.
- A validation check is performed within the software; if a positive value is entered into the PWOCAP, it will be rejected.

Step 1.9 Primary Responsibility: Generation Operator

Notify the Senior System Operator and Loader Operator of the schedule transfer.

Step 1.9.1 Primary Responsibility: Senior System Operator

Verify the schedule in the EMS Interchange Scheduling display matches the schedule on the NYN Scheduling display.

Step 1.9.2 Primary Responsibility: Loader Operator

Update the PCEC for the schedule change.

Step 1.10 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **External Transaction schedule change ramp is complete.**

Verify that "Actual" interchange MW coincides with "Present" interchange MW on the EMS Interchange Scheduling display.

Notes

- "Present" interchange MW value is chosen vice the "Schedule" MW value since the next interval schedule may be sent to the EMS Interchange Scheduling display before the current ramp is complete.
- Take into account NE and NB ACE values when performing verification.

Step 1.11 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Pre-OP4 schedule adjustments were performed in a previous interval, and are no longer required.**

Log the end of Pre-OP4 schedule adjustments on the CTS interface.

Instructions

Use log entry: > INTERCHANGE SCHEDULING > PRE OP4 CURTAILMENTS > End

Condition(s) to perform this section:

- **Non-CTS schedules need to be run for the next interval.**

Section 2 : Perform Interchange Scheduling on the Non-CTS Interfaces

Notes

- When scheduling next interval transactions the Generation Operator should consider waiting until 15 minutes past the top of the hour at a minimum to ensure all participant transactions are properly considered.
- If it is desired to run schedules PRIOR to HH:15, the Operator will have to set the flag "Run before HH:15" when running schedules.
- Running schedules for a single interface is available if changes to an interface parameters are needed to be made AFTER schedules have been settled or agreed to on other interfaces.

Step 2.1 Primary Responsibility: Generation Operator

Schedule Next Interval interchange on the Non-CTS Interfaces.

Instructions

- ❑ Advance to the next scheduling interval
- ❑ If the scheduling software is not responding proceed to Section 21.

Step 2.2 Primary Responsibility: Generation Operator

Establish Forecast LMPs for the next interval.

Step 2.2.1 Primary Responsibility: Generation Operator

Use the View Priced Trx display to identify priced external transactions.

Instructions

For transactions where Submit MW > DA Priority MW, compare offer price to forecast LMP for that interface

Notes

- Transactions will be scheduled for at least the DA Priority MW amount regardless of LMP
- Transactions with a green highlighted background price will be scheduled based on the current forecast LMP values
- Unless needed for reliability or capacity, priced transactions that could potentially result in a transmission constraint, or could fall out of rate during the scheduling period should **NOT** be scheduled. These conditions contribute to unnecessary NCPC payments.
- The Forecast LMP, the RTUC LMP and UDS LMP will be presented in the display along with the Case ID of the last approved RTUC and UDS case to assist the operator in determing the anticpated LMP for the next scheduling interval.
- NCPC is the payment to a market participant for its generator or external transaction that did not recover its effective offer costs from the energy market during an operating day. The NCPC payment is intended to make a resource that follows the ISO's operating instructions "no worse off" financially than the best alternative generation schedule. Typically, a resource receiving NCPC was operated out of merit to protect the overall resource adequacy and transmission security of specific locations or of the entire balancing authority area.

Step 2.2.2 Primary Responsibility: Generation Operator

Use the View Emergency Trx display to identify priced emergency transactions.

Step 2.2.2 Primary Responsibility: Generation Operator

Condition(s) to perform this step;

- **Priced transactions exist with offer prices within the expected LMPs; Or**
- **Current Forecast LMPs on interfaces with priced transactions are at or exceed floor or ceiling prices.**

Determine the Forecast LMPs for each interface where modification is required.

Instructions

- ❑ The following items can be utilized in determining the next interval interface LMP:
  - ❑ Current Operating Plan (COP)
  - ❑ Real-Time LMP/LMP Map
  - ❑ RTUC
  - ❑ Operator Information System (OIS) Energy Supply Time Curve
  - ❑ Operator Information System (OIS) Destacker To EcoMin
  - ❑ If scheduling SETs may be required
  - ❑ If scheduling EETs may be required

Notes

If the LMP Map is used, verify the date and time is correct and ensure the information is updating.

Step 2.2.3 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Current LMP values are not correct for next interval conditions.**

Update the Forecast LMP values.

Instructions

- ❑ Click on the Forecast LMP well for the desired interface and enter a value;
- ❑ Update only the interface(s) with Priced Transactions;
- ❑ If Minimum Generation Emergency is declared or will be declared for the interval being scheduled, enter the energy offer floor price as the LMP (- $150) for all interfaces.

Step 2.3 Primary Responsibility: Generation Operator

Determine the TTC to be used for each interface in the Transfer Limits field on the RT Overview display.

Notes

- An Interface TTC can be changed based on:
  - Reliability concern of another RC/BA
  - Real-Time conditions on the New England System
  - Available import external transactions on Phase II currently exceeds the Single Source Contingency Limit (SSCL), determine if the SSCL can be increased using CROP.36004 Single Source Contingency Section 1
- When a facility is physically out-of-service and has a TTC of zero (0) in both the import and export directions, counter flow External Transactions are **NOT** allowed to flow. INT-006
- **DO NOT** schedule Phase II in excess of the "Lowest Limit" as displayed on the Single Source Contingency (SSCM) page in the Energy Management System (EMS).
- When restoring a single pole or both poles of Phase II to service after an outage condition unblock the pole (s) to confirm operability prior to scheduling market transactions on Phase II. This is done to prevent a burden on IESO in the case there are wheel transactions that are sourced in IESO and the facility does not return on time.
- The NBLL magnitude should **NOT** impact the NB to NE transfer capability. If the current or expected NBLL magnitude may impact the NB to NE transfers, contact NB and determine if they need to adjust NBLL.

Step 2.3.1 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **The determined TTC value is different than the value initially populated.**

Adjust an Interface TTC.

Instructions

- ❑ Right click on the applicable interface(s) Transfer Limit direction:
- ❑ Select "Edit";
- ❑ Enter the new TTC in the "New TTC" field;
- ❑ Select the "To HE" the new TTC will apply through;
- ❑ Select a reason;
- ❑ Enter information in the Additional Reason field if reason selected was "Other";
- ❑ Click "Apply" to accept the new value.

Step 2.4 Primary Responsibility: Generation Operator

Click the "Run Scheduling" button.

Step 2.5 Primary Responsibility: Generation Operator

Ensure the desired "eTag Mode" is selected.

Notes

- There are three "eTag Mode" options
  - ONT Only (default)
    - When the scheduling algorithm runs it uses current eTag data for Ontario Tags only
  - All eTags
    - When the scheduling algorithm runs it uses current eTag data for all areas. Currently no benefit to running with this option because the risk mainly resides with the Ontario Market Tags.
  - No eTag Data
    - Schedules are ran without evaluating ANY eTag data.

Step 2.6 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **OP-4 Action 5 has been declared and EETs are to be evaluated in the scheduling algorithm.**

Click the "Include EETs" check box.

Notes

- The check box has to be checked to include market based EETs in the scheduling algorithm.
- OP-4 Action 5 is required to be declared prior to scheduling EETs.

Step 2.7 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **A NB-NE minimum flow requirement exists; And**
- **SET transactions have been requested and are to be evaluated in the scheduling algorithm.**

Click the "Include SETs" check box.

Notes

The check box has to be checked to include market based SETs in the scheduling algorithm.

Step 2.8 Primary Responsibility: Generation Operator

Click the "Run" button to initiate the scheduling algorithm.

Notes

- If the schedules are ran prior to HH:15 a pop-up message will be generated alerting the operator schedules cannot be ran.
- If it is desired to run schedules PRIOR to HH:15, the Operator will have to set the flag "Run before HH:15" when running schedules.
- If possible, the scheduling algorithm should be run prior to HH:40 so that the next interval's interchange data will be available for use in the HH:48 RTUC case.

Step 2.9 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Priced Transactions were scheduled; And**
- **Only a portion of one or more Priced Transactions are in-rate.**

Perform Price Tie curtailment of external transactions using Section 5.

Step 2.10 Primary Responsibility: Generation Operator

Determine if inadvertent energy should be scheduled.

Instructions

- ❑ Verify inadvertent energy **DOES NOT**:
  - ❑ Exceed 50 MW for NYN, NB, Phase II, CSC, NNC and 10 MW for Highgate;
  - ❑ Prevent a Market Participant transaction from being scheduled, unless approved by Operations Management;
  - ❑ Create or worsen congestion with economic dispatch or reserve pricing;
  - ❑ Create or worsen minimum generation or capacity conditions;
  - ❑ Violate minimum flow requirements;
  - ❑ Aggravate excess ramps;
- ❑ Enter the inadvertent MW value including the proper sign convention in the "Uni-inad" field on the RT Overview.

Notes

- NBP-SO maintains their inadvertent "energy" account. When scheduling unilateral inadvertent payback with NBP-SO, the inadvertent payback adjustment will be controlled by NBP-SO and should **NOT** be entered in the EMS Interchange Scheduling display.
- REX2 software does not allow inadvertent energy to be entered in the "Uni-inad" column for the NB interface.

Step 2.11 Primary Responsibility: Generation Operator

Checkout with the NYISO Interchange Operator.

Standard(s) for completion:

- 3-part communication is used.
- Checkout complies with requirements of INT-009.

Instructions

- ❑ Confirm the following for NNC and CSC ties with NYISO Interchange Operator:
  - ❑ If this is the first checkout of the shift:
    - ❑ Establish and agree on the standard interchange ramp start time and duration;
  - ❑ Interchange schedule including ramp i.e. “standard ramp”;
  - ❑ Inadvertent, if applicable;
  - ❑ CA-to-CA Emergency, if applicable;
  - ❑ If deviating from the standard interchange ramps agree on:
    - ❑ Ramp Start time
    - ❑ Ramp deviation
- ❑ Inform the NYISO Interchange Operator of the following:
  - ❑ Phase II schedule;
  - ❑ Schedule wheel-through transactions with HQTE, NB and NYISO;
  - ❑ If this is the first checkout of the shift:
    - ❑ New England’s ability to provide SAR;
    - ❑ New Brunswick’s ability to provide SAR.
  - ❑ If there are changes to New England’s or New Brunswick’s ability to provide SAR.
- ❑ If the facilitated checkout display is not updating, says “Advisory”, or the NYISO Operator states their scheduling software is unavailable, proceed to Section 20.
- ❑ If the ISONE scheduling software is unavailable, proceed to Section 21.

Notes

- The expectation is that SAR is discussed during the first checkout of the shift and after that only changes are discussed.
- When SAR is **NOT** available due to a technical reason (e.g. NYISO SAR computer is down) and upon loss of a facility that was flowing wheel-though transactions, the associated wheel-through transactions are curtailed using a start time and ramp duration as mutually agreed upon with the applicable RC/BA.
- The requirement is that the standard interchange ramp start time and duration will be established during the first checkout of the shift and only deviations will be discussed thereafter.
  - Example: “For the NNC schedule the standard ramp will start at minute :55 over ten minutes”
- Standards for completion were added based on the 2021 audit recommendations, and in response to a non-compliance response.

Step 2.12 Primary Responsibility: Generation Operator

Checkout with the HQTE Operator.

Standard(s) for completion:

- 3-part communication is used.
- Checkout complies with requirements of INT-009.

Instructions

- ❑ Confirm the following for Phase II and Highgate with the HQTE Operator:
  - ❑ If this is the first checkout of the shift:
    - ❑ Establish and agree on the standard interchange ramp start time and duration;
  - ❑ Scheduled MW amount;
  - ❑ Inadvertent, if applicable;
  - ❑ Delivered MW amount including ramp i.e. “standard ramp”;
  - ❑ CA-to-CA Emergency, if applicable;
  - ❑ If deviating from the standard interchange ramp:
    - ❑ Ramp start time
    - ❑ Ramp duration
- ❑ If the facilitated checkout display is not updating, says “Advisory”, or the HQTE Operator states their scheduling software is unavailable, proceed to Section 20.
- ❑ If the ISONE scheduling software is unavailable, proceed to Section 21.

Notes

- For Phase II changes that are > 20 MW, Phase II Converter movement is required.
- For Phase II changes that are ≤ 20 MW, Phase II Converter movement is **NOT** required.
- The requirement is that the standard interchange ramp start time and duration will be established during the first checkout of the shift and only deviations will be discussed thereafter.
  - Example: “For the Phase II schedule the standard ramp will start at minute :55 over ten minutes”.
- Standards for completion were added based on the 2021 audit recommendations, and in response to a non-compliance response.

Step 2.12.1 Primary Responsibility: Generation Operator

Verify that HVdc minimum flow requirements are met.

Notes

- Phase II minimum flow = 105 MW Mono-polar, 210 MW Bi-polar
- Highgate minimum flow = 20 MW
- When there are both import and export external transactions scheduled with an adjacent RC/BA and the total is below the minimum flow limit and greater than 0, the minimum amount of external transactions should be curtailed to either get to 0 or the interface minimum flow limit.
- If an interface schedule is violating a minimum flow requirement, a warning pop up message stating “Warning: Interface Min Flow is Violated” will appear on the RT Overview display and on the Non-CTS Interface Detail display for the affected interface.

Step 2.12.1.1 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Minimum flow requirements are NOT being met for a facility.**

Perform minimum flow curtailments using Section 4.

Step 2.13 Primary Responsibility: Generation Operator

Checkout with the NBP-SO.

Standard(s) for completion:

- 3-part communication is used.
- Checkout complies with requirements of INT-009.

Instructions

- ❑ Confirm the following with the NBP-SO:
  - ❑ If this is the first checkout of the shift:
    - ❑ Establish and agree on the standard interchange ramp start time and duration;
  - ❑ Interchange schedule including ramp i.e. "standard ramp";
    - ❑ If NB to NE is scheduled above 100 MW, ensure the 396 Line RAS is armed in accordance with the 396 Line RAS document.
    - ❑ If NE to NB is scheduled above 100MW, ensure the 396 Line RAS is disarmed in accordance with the 396 Line RAS document.
    - ❑ If NB to NE is scheduled above 650 MW, ensure that NBP-SO has sufficient generation and/or HVdc rejection to arm in an amount greater than the NB to NE schedule above 650 MW in accordance with the DPL RAS document.
  - ❑ Inadvertent, if applicable;
  - ❑ CA-to-CA Emergency or Security, if applicable;
  - ❑ When NBLL ramp will be completed, if NBLL needed to be modified by NB;
  - ❑ NB's ability to provide and receive assistance (combination of SAR and MRA).
  - ❑ If deviating from the standard interchange ramps agree on:
    - ❑ Ramp start time
    - ❑ Ramp duration
- ❑ If the facilitated checkout display is not updating, says "Advisory" or the NBP-SO states their scheduling software is unavailable proceed to Section 20.
- ❑ If the ISONE scheduling software is unavailable, proceed to Section 21.

Notes

- When SAR is NOT available due to a technical reason (e.g. NYISO SAR computer is down) and upon loss of a facility that was flowing wheel-though transactions, the associated wheel-through transactions are curtailed using a start time and ramp duration as mutually agreed upon with the applicable RC/BA.
- The requirement is that the standard interchange ramp start time and duration will be established during the first checkout of the shift and only deviations will be discussed thereafter.
  - Example: "For the New Brunswick schedule the standard ramp will start at minute :55 over ten minutes".
- Standards for completion were added based on the 2021 audit recommendations, and in response to a non-compliance response.

Step 2.14 Primary Responsibility: Generation Operator

Evaluate the NB-NE Minimum Flow requirement to determine if a min flow condition may be exceeded for the upcoming scheduling interval.

Instructions

Indications presented on the NE-NB Voltage Calculator display in Double C.

- ❑ V/R Limit Status of "OK" with a positive "RT Limit:"
  - ❑ This is the NE-NB Voltage Transfer Limit (North).
- ❑ V/R Limit Status of "OK" WITH a corresponding "Minimum NB-NE Requirement" message and limit value;
  - ❑ This is the NB-NE MINIMUM FLOW Voltage Transfer Limit that must be satisfied.
- ❑ V/R Limit Status of "ERROR"
  - ❑ This indicates an "ERROR" with the voltage calculator and RTS needs to be contacted for guidance.
- ❑ V/R Limit Status of "OK" with a "RT Limit:" of either "99999 or -99999" WITHOUT a corresponding "Minimum NB-NE Requirement" message and limit value;
  - ❑ This indicates a problem with the Voltage Calculator and needs to be reported to IT;
  - ❑ Contact RTS for guidance.

Step 2.14.1 Primary Responsibility: Generation Operator

Condition(s) to perform this section:

- **A minimum flow requirement exists from NB to NE and scheduled flow is less than the minimum flow value.**

Perform scheduling for NB-NE min flow requirements using Section 6.

Step 2.15 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Determined that Pre-OP4 or OP-4 actions are required.**

Perform next interval Non-CTS Interface Pre OP-4 or OP-4 actions using Section 9.

Step 2.16 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Control Area to Control Area emergency sales are being requested by a neighboring RC/BA for next interval.**

Perform next interval CA to CA Sales using Section 12.

Step 2.17 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Determined that minimum generation actions are required.**

Perform next interval minimum generation condition curtailments using Section 10.

Step 2.18 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Determined that an interface schedule needs to be increased in a specific direction NOT for NB-NE or HVDC converter minimum flow concerns.**

Use the Directional algorithm to perform adjustments to the schedule.

Instructions

- ❑ Access the applicable interface Non-CTS Interface Detail display;
- ❑ Click the "Directional" button;
- ❑ Select "Next Interval";
- ❑ Select the Cut Direction from the dropdown menu;
- ❑ Enter the MW amount to cut into the "Desired Cut MW" well;
- ❑ Click the "Run" button to initiate the directional algorithm;
- ❑ Click "Save" to accept the directional curtailments;
- ❑ Verify the curtailment changes are automatically implemented on the Non-CTS Interface Detail display.

Notes

- If the MW value entered is greater than the total MW amount available a pop-up warning of the overage will appear and no transactions will be listed.
- It is not required to print the curtailments but the option is available if the Operator chooses. The curtailments will be available after saving them by clicking on Directional dropdown on the Non-CTS Interface Detail display and selecting "Retrieve Last – Current" or "Retrieve Last – Selected"

Step 2.19 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Curtailments to wheel transactions sourcing in IESO and wheeling into ISO-NE have been made; And**
- **The curtailment has occurred more than 25 minutes past the hour.**

Notify IESO of the wheel transaction curtailment.

Instructions

- ❑ Include the following:
  - ❑ Specific transaction(s) being curtailed;
  - ❑ The curtailments are for the next interval;
  - ❑ How long these cuts are expected to last.

Step 2.20 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Determined that Out of Merit (OOM) external transactions are required for 1st or 2nd contingency reliability.**

Perform scheduling of Out of Merit (OOM) External Transactions using Section 7.

Step 2.21 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Determined that reliability loop flow is required to be scheduled.**

Perform scheduling reliability loop flow using Section 8.

Step 2.22 Primary Responsibility: Generation Operator

Evaluate the Pool Ramp schedule to determine if an excess hourly ramp exists.

Instructions

- ❑ Click the "Pool Ramp" button to access the Ramp display.
- ❑ Identify if an excess hourly ramp of >500 MW exists between two continuous hours.

Notes

- An excess hourly ramp exists when the difference in pool-wide interchange between two continuous hours exceeds 500 MW. The net interchange value will be highlighted in red for any hour having a MW change of 500 MW or greater.
- Wheel-through external transactions will be excluded from the ramp constraint evaluation.

Step 2.22.1 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **If the next interval or future interval ramp exceeds 500 MW on the Non-CTS interfaces.**

Inform the Senior System Operator and Operations Shift Supervisor an excess hourly ramp condition exists.

Step 2.22.1.1 Primary Responsibility: Operations Shift Supervisor

Determine if a ramp greater than 500 MW can be allowed and the amount to allow if applicable.

Notes

The Operations Shift Supervisor shall only restrict an hourly ramp exceeding 500 MW if it will result in a reliability problem or exceed the capacity of available resources for the scheduling interval.

Step 2.22.1.2 Primary Responsibility: Operations Shift Supervisor

Notify the Generation Operator of the results of the determination.

Instructions

Use Section 3 to curtail external transactions for the excess hourly ramp condition.

Step 2.23 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Phase II schedule has changed >20MW; Or**
- **Highgate schedule has changed; Or**
- **CSC schedule has changed.**

Notify the Converter Operator of the schedule change.

Standard(s) for completion:

- 3-part communication is used.
- Checkout complies with the requirements of INT-009.

Instructions

- ❑ Include the following:
  - ❑ If this is the first checkout of the shift:
    - ❑ Establish and agree on the standard interchange ramp start time and duration;
  - ❑ New schedule including ramp i.e. “standard ramp”;
  - ❑ If deviating from the standard interchange ramp:
    - ❑ Ramp start time
    - ❑ Ramp duration

Notes

- For Phase II changes >20 MW: notify Sandy Pond;
- For Highgate changes: notify VELCO;
- For CSC changes: notify CSC Operator.
- The expectation is that the standard interchange ramp start time and duration will be established during the first checkout of the shift and only deviations will be discussed thereafter.
  - Example: “For the Phase II schedule the standard interchange ramp will start at minute :55 over ten minutes”.
- In some cases the first schedule change may not require a standard ramp therefore it may be necessary to establish the standard ramp time and then discuss the actual ramp start time and duration for the applicable change.
- Standard for completion was added based on the 2021 audit recommendations.

Step 2.24 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Schedule change requires notification to an LCC.**

Notify applicable LCC Operators of the schedule change.

Instructions

- ❑ CONVEX LCC Operator is notified for the following:
  - ❑ NNC tie change greater than or equal to 100 MW; or
  - ❑ CSC tie change greater than or equal to 200 MW.
- ❑ Maine LCC Operator is notified for the following:
  - ❑ NB tie change ≥200 MW when the current Interface schedule is ≤700 MW; Or
  - ❑ NB tie change ≥100 MW when the current Interface schedule is >700 MW
- ❑ NH LCC Operator is notified for the following:
  - ❑ Blocking of Phase II;
  - ❑ De-Blocking of Phase II.

Step 2.25 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **An adjustment to an interface schedule needs to be made after schedules have been agreed to on the remaining interfaces; And**
- **It is desired to only run schedules on a single interface.**

Run schedules for a single interface.

Instructions

- ❑ Navigate to the applicable interface Non-CTS Interface Detail display;
- ❑ Make the desired adjustment, for example: TTC, LMP or individual transaction;
  - ❑ If adjustments to an individual transaction are made, that transaction should be locked so that it is not subsequently re-scheduled when re-running the interface schedule.
- ❑ Click the "Run Scheduling < applicable interface > Only" button.

Step 2.26 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **No ramp schedule exists; Or**
- **Previously scheduled ramps have begun; Or**
- **Previously entered ramp schedule is being modified.**

Send agreed upon schedules to the EMS Interchange Scheduling display.

Instructions

- ❑ Perform the following:
  - ❑ Uncheck "Send" on the RT Overview display for any interface(s) that include CA-to-CA Security or Emergency Transactions.
  - ❑ Check "Send" on the RT Overview display for any interface(s) where mismatches on external transactions exist in facilitated checkout but the net interchange has been verbally agreed to with the neighboring area.
  - ❑ Click the "Send to IFS" button to send selected schedules to EMS.

Notes

- If a previously agreed upon ramp has not begun and a new ramp schedule is sent or manually entered into the EMS Interchange Scheduling display, the old schedule will be overwritten.
- Ramp Begin and Duration can be modified by the Operator based on the agreed upon ramp time. These values will automatically revert back to their original XX:55 and "10" after schedules are sent to IFS.
- If the Ramp Duration is modified it will NOT automatically adjust the Ramp Begin time to equally divide the ramp across the scheduling interval. The Ramp Begin time must be manually adjusted to the desired ramp start time.
- For a reduction on Phase II; the new reserve requirement will not be accounted for in APF-MOI until Phase II is at its new schedule. This should be considered prior to approving a UDS case with an inaccurate reserve requirement and/or reserve pricing.

Step 2.26.1 Primary Responsibility: Generation Operator

Manually update those interface schedules in the EMS Interchange Scheduling display that were unchecked in the previous step.

Instructions

- ❑ Enter the schedule(s) manually as follows:
  - ❑ For **Capacity-Backed** Sales or Purchases, or SETs enter the MW amount in the "**EMERG**" row for the applicable interface(s).
  - ❑ For **Energy-Only** Sales or Purchases enter the MW amount in the "**SWOCAP**" or "**PWOCAP**" line for the applicable interface(s).
  - ❑ Enter the **NON-Emergency** portion of the Interval Schedule manually in the "**W_CAP"** line for the applicable interface(s).
  - ❑ Enter the Ramp Start time;
  - ❑ Enter the Ramp duration;
  - ❑ Click the "Implement" button.

Notes

A validation check is performed within the software; if a positive value is entered into the PWOCAP, it will be rejected.

Step 2.26.2 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Unilateral inadvertent energy is scheduled on the CTS Interface.**

Enter NYN unilateral inadvertent energy in the Payback Schedule display.

Instructions

- ❑ Enter NYN inadvertent in the RTGEN Payback Schedule display in EMS with a value that has been agreed to by both the ISO Senior System Operator and NYISO by performing the following:
  - ❑ Clicking "RTG";
  - ❑ Clicking "Payback Schedule";
  - ❑ Verifying the Automatic Payback Schedule is set to "Disable"
  - ❑ Verifying the Manual Payback Schedule is set to "Enable"
  - ❑ Entering a positive value for paying back (S) or negative value for receiving (P) in the "Scheduled" field;
  - ❑ Entering the "Start Time";
  - ❑ Entering the "Stop Time".

Notes

- If inadvertent energy is being scheduled: the "Stop Time" can be set based on the "on-peak" or "off-peak" end times depending on which period the inadvertent is being paid back on and will be updated if terminated any time sooner.
- If inadvertent energy is being terminated: Only the "Stop Time" needs to be updated.
- Inadvertent payback is allowed to occur above the TTC when the NYN tie lines are scheduled at the TTC only if the TTC is based on an administrative or thermal limit. When scheduled at a TTC that is due to a stability or a voltage limit, **NO** inadvertent above the TTC will be paid back.

Step 2.26.3 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Unilateral inadvertent energy is starting; Or**
- **Unilateral inadvertent energy is being cancelled.**

Log the start/end of unilateral inadvertent energy.

Instructions

- ❑ Use the appropriate log entry:
  - ❑ > INTERCHANGE SCHEDULING > UNILATERAL INADVERTENT > Begin Unilateral Inadvertent
  - ❑ > INTERCHANGE SCHEDULING > UNILATERAL INADVERTENT > End Unilateral Inadvertent
- ❑ Enter the following:
  - ❑ Interface
  - ❑ HE
  - ❑ MW

Notes

When ending inadvertent the "MW" amount automatically populates 0.

Step 2.27 Primary Responsibility: Generation Operator

Notify the Senior System Operator and Loader Operator of the schedule transfer.

Step 2.27.1 Primary Responsibility: Senior System Operator

Verify the schedules in the EMS Interchange Scheduling display match the schedules on the RT Overview display taking into account any unilateral inadvertent that is scheduled.

Step 2.27.2 Primary Responsibility: Loader Operator

Update the PCEC for the schedule change.

Step 2.28 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **External Transaction schedule change ramp is complete.**

Verify that "Actual" interchange MW coincides with "Schedule" Interchange MW on the EMS Interchange Scheduling display.

Step 2.29 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Pre-OP4 curtailments were performed in prior scheduling intervals, but are no longer required.**

Log the end of Pre-OP4 Non-CTS interface curtailments.

Instructions

Use log entry: > INTERCHANGE SCHEDULING > PRE OP4 CURTAILMENTS > End

Condition(s) to perform this section:

- **External transactions need to be curtailed for an excess hourly ramp condition.**

Section 3: Excess hourly ramp cuts on Non-CTS Interfaces

Notes

Excess ramp cuts for the CTS Interface are performed using Section 15.

Step 3.1

Primary Responsibility: Generation Operator

Click on the "Pool Ramp" button.

Step 3.2

Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **An interface needs to be excluded due to reliability concerns.**

De-select the appropriate interfaces for reliability concerns.

Notes

By default all interfaces are selected within the "Cut Interfaces" section.

Step 3.2.1

Primary Responsibility: Generation Operator

Log the skipped interface.

Instructions

Use log entry: > INTERCHANGE SCHEDULING > Interface Skipped

Step 3.3

Primary Responsibility: Generation Operator

Perform Excess Ramp curtailments.

Instructions

- ❑ Enter the MW amount to cut into the "Desired Cut MW" well;
- ❑ Select the applicable Ramp Problem reason;
- ❑ Click the "Run" button to initiate the excess ramp curtailment algorithm.

Step 3.4

Primary Responsibility: Generation Operator

Review the list of curtailments to determine the curtailment amount on the NB interface.

Step 3.4.1

Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **The curtailment on the NB interface is greater than or equal to 50 MW.**

Contact the NBP-SO to determine if the curtailment will result in any NB reliability problems.

Step 3.5 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **The curtailment on the NB interface is less than 50 MW; Or**
- **The curtailment on the NB interface is greater than or equal to 50 MW and it does NOT create a reliability problem for NB.**

Accept the excess ramp curtailments.

Instructions

- ❑ Click the "Save" button;
- ❑ Ensure the curtailment changes are automatically implemented on the Non-CTS Interface Detail display or FTC Checkout display.

Notes

If schedules were ran with "ONT Only" selected and it is desired to restore schedules to their original values, the Operator will have to run schedules for the affected interface using the "No eTag Data" option in Section 2 in order to restore tag values.

Step 3.6 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **The curtailment on the NB interface is greater than or equal to 50 MW and it DOES create a reliability problem for NB.**

Cancel the excess hourly ramp curtailment by clicking the "Cancel" button

Step 3.6.1 Primary Responsibility: Generation Operator

Inform the Senior System Operator and the Operations Shift Supervisor.

Step 3.6.2 Primary Responsibility: Generation Operator

Perform Excess Ramp curtailments excluding the NB interface.

Instructions

- ❑ Click the "Pool Ramp" button from the RT Overview display;
- ❑ De-select the NB interface;
- ❑ Enter the MW amount to cut into the "Desired Cut MW" well;
- ❑ Select the applicable Ramp Problem reason;
- ❑ Click the "Run" button to initiate the excess ramp curtailment algorithm;
- ❑ Click "Save" to accept the excess ramp curtailments ;
- ❑ Verify the curtailment changes are automatically implemented on the Non-CTS Interface Detail display or FTC Checkout display.

Notes

If schedules were ran with "ONT Only" selected and it is desired to restore schedules to their original values, the Operator will have to run schedules for the affected interface using the "No eTag Data" option in Section 2 in order to restore tag values.

Step 3.6.3 Primary Responsibility: Generation Operator

Log the skipped interface.

Instructions

Use log entry: > INTERCHANGE SCHEDULING > Interface Skipped

Step 3.7 Primary Responsibility: Generation Operator

Return to Section 2 to continue the scheduling process.

Condition(s) to perform this section:

- **Phase II or Highgate flow is less than the minimum flow requirement; Or**
- **The minimum flow warning message is received when Phase II or Highgate is selected.**

Section 4: HVdc converter minimum flow curtailments

Notes

- Phase II has two operating modes: Mono-Polar and B-Polar, the minimum flow is 105 MW for Mono-polar operation and 210 MW for Bi-polar operation
- Highgate minimum flow is 20 MW.
- Highgate does not have an Operating Mode and therefore says “none”.
- When there are both import and export External Transactions scheduled with an adjacent RC/BA and the total is below the minimum flow limit and greater than 0, the minimum amount of External Transactions should be curtailed to get either the minimum flow limit or zero MW.
- If an interface schedule is violating a minimum flow requirement, a warning pop up message stating “Warning: Interface Min Flow is Violated” will appear on the RT Overview display and on the Non-CTS Interface Detail display for the affected interface.

Step 4.1 Primary Responsibility: Generation Operator

Use the Min Flow algorithm to perform curtailments.

Instructions

- ❑ Access the applicable interface Non-CTS Interface Detail display;
- ❑ Click the “Min Flow” button;
- ❑ Select the applicable Operation Mode;
- ❑ Verify the “Min Flow MW” value is appropriate for the selected Operation Mode and adjust as necessary;
- ❑ Click the “Run” button to initiate the minimum flow algorithm;
- ❑ Click “Save” to accept the minimum flow curtailments;
- ❑ Verify the curtailment changes are automatically implemented on the Non-CTS Interface Detail display.

Notes

If schedules were ran with “ONT Only” selected and it is desired to restore schedules to their original values, the Operator will have to run schedules for the affected interface using the “No eTag Data” option in Section 2 in order to restore tag values.

Step 4.2 Primary Responsibility: Generation Operator

Return to Section 2 to continue the scheduling process.

Condition(s) to perform this section:

- **Only a portion of a Priced Transaction needs to be scheduled.**

Section 5: Price Tie

Step 5.1

Primary Responsibility: Generation Operator

Use the Price Tie algorithm to perform adjustments to Priced Transactions.

Instructions

- ❑ Click the "Price Tie" button from the RT Overview display;
- ❑ Select the interface(s) associated with the priced external transactions to be price tie curtailed;
- ❑ Select the Cut Direction from the dropdown menu;
- ❑ Enter the MW amount to cut into the "Desired Cut MW" well;
- ❑ Click the "Run" button to initiate the price tie algorithm;
- ❑ Click "Save" to accept the price tie curtailments;
- ❑ Verify the curtailment changes are automatically implemented on the Non-CTS Interface Detail display.

Notes

- The Price Tie display shows the Tag/Tags with the highest price group first. It will not show any other lower priced transactions until the entire Cut MW of the highest price group is complete.
- **DO NOT** enter a value greater than the Total MW in the Highest Price Group.
- If the MW value entered is greater than the total MW amount available a pop-up warning of the overage will appear and no transactions will be listed.
- If schedules were ran with "ONT Only" selected and it is desired to restore schedules to their original values, the Operator will have to run schedules for the affected interface using the "No eTag Data" option in Section 2 in order to restore tag values.

Step 5.2

Primary Responsibility: Generation Operator

Return to Section 2 to continue the scheduling process.

Condition(s) to perform this section:

- **A minimum flow requirement exists from NB to NE and scheduled flow is less than the minimum flow value.**

Section 6: NB to NE minimum flow requirements

Notes

- This section only addresses the NB to NE minimum flow requirements. As defined in the Tariff, SETs can only be used for NB to NE.
- After exhausting no-cost methods the following actions are taken in order to prevent or correct a potential IROL or satisfy a minimum flow requirement.
- NBSO operates with a 50MW adder above any IROL limit to provide for operating margin, schedules should be set to include this buffer.

Step 6.1

Primary Responsibility: Generation Operator

Set the NB TTC OUT to 0 for the applicable scheduling interval.

Notes

This TTC value would have been set in Section 2 when running Non-CTS Interface schedules for next interval.

Step 6.2

Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **The NB Interface has both Purchase and Sale external transactions.**

Use the Directional algorithm to cut exports.

Instructions

- ❑ Click “NB” from the RT Overview display;
- ❑ Click the “Directional” button;
- ❑ From the Cut Direction dropdown select “Cut Export Transactions”;
- ❑ Enter the MW amount to cut into the “Desired Cut MW” well;
- ❑ Click the “Run” button to initiate the directional algorithm;
- ❑ Click “Save” to accept the directional curtailments;
- ❑ Verify the curtailment changes are automatically implemented on the Non-CTS Interface Detail display.

Notes

If schedules were ran with “ONT Only” selected and it is desired to restore schedules to their original values, the Operator will have to run schedules for the affected interface using the “No eTag Data” option in Section 2 in order to restore tag values.

Step 6.3

Primary Responsibility: Generation Operator

- ❑ **If the NB to NE minimum flow requirement has been met: Return to Section 2 to continue the scheduling process.**
- ❑ **If the NB to NE minimum flow requirement has NOT been met continue with this procedure.**

Step 6.4 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **The NB Interface does NOT have both purchase and sale external transactions; Or**
- **Further actions are required to satisfy the NB to NE minimum flow requirement.**

❑ **Perform the following:**

- ❑ **Request SETs (Step 6.5)**
- ❑ **Schedule available SET and Out of Merit (OOM) as needed (Step 6.6)**
- ❑ **Schedule CA to CA Security with NB (Step 6.7)**

Notes

SETs are Market Participant submitted external transactions and will **NOT** be immediately available. When SETs are **NOT** available Control-Area-to-Control-Area Security Energy (CA to CA SET) is used with NB to meet minimum flow requirements when submitted external transactions are **NOT** sufficient to meet the minimum flow requirement into ISO-NE.

Step 6.5 Primary Responsibility: Senior System Operator

Condition(s) to perform this step:

- **SETs need to be requested.**

Requesting SETs.

Step 6.5.1 Primary Responsibility: Senior System Operator

Log the SET request.

Instructions

- ❑ Use log entry: > INTERCHANGE SCHEDULING > NB SETs > SET Request [WEB] [E]
- ❑ Enter the following:
  - ❑ Start date and time;
  - ❑ Expected End date and time;
  - ❑ MW Amount;
  - ❑ Reason.

Notes

- This log entry will create a posting of the SET Request to the ISO-NE website calendar; the posting may take up to five minutes.
- When determining the MW amount to request, use the most limiting minimum flow value (with buffer) expected for that operating day.
- Do not request SETs beyond the current operating day.

Step 6.5.2 Primary Responsibility: Operations Shift Supervisor

Ensure the notice has been posted to the "Calendar" section of the external website.

Instructions

- ❑ If the notification to the external website has **NOT** been posted, notify Customer Support to post a message "Special Request for Security Energy Transactions" to the "Calendar" section of the external Website.
- ❑ Website Link: Website Calendar

Step 6.6 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **SETs and/or OOM priced transactions are available.**

Scheduling available SETs and/or OOM transactions.

Step 6.6.1 Primary Responsibility: Generation Operator

Adjust the NB interface LMP as needed to schedule the required amount of priced external transactions.

Notes

- SETs are submitted to ISO via the External Transaction scheduling software as imports with the designation, "Security Energy Transactions" and may be submitted as either Self Schedule or "Priced". SETs may be submitted up to sixty minutes prior to the top of the hour in which the transaction is requested to begin.
- Energy (including SETs) is scheduled for the next interval to the required MW level, based on economics, from all available offers in sufficient quantity to correct the potential or actual violation.

Step 6.6.2 Primary Responsibility: Generation Operator

Run schedules for only the NB interface.

Instructions

- ❑ Click "NB" from the RT Overview display;
- ❑ If adjustments to an individual transaction are made when performing directional cuts, that transaction should be locked so that it is not subsequently re-scheduled when re-running the interface schedule
- ❑ Click the "Run Scheduling NB Only" button.

Step 6.6.3 Primary Responsibility: Generation Operator

Check the "Include SETs" box.

Step 6.6.4 Primary Responsibility: Generation Operator

Click the "Run" button to initiate the scheduling algorithm.

Step 6.6.5 Primary Responsibility: Senior System Operator

Condition(s) to perform this step:

- **SET's were scheduled.**

Log the SET scheduling.

Instructions

- ❑ Use log entry: > INTERCHANGE SCHEDULING > NB SETs > SET Scheduled [E]
- ❑ Enter the following:
  - ❑ SET Type: > Market Based;
  - ❑ Start Time;
  - ❑ Scheduled MW amount.

Step 6.6.6 Primary Responsibility: Generation Operator

- ❑ **If the NB to NE minimum flow requirement has been met: Return to Section 2 to continue the scheduling process.**
- ❑ **If the NB to NE minimum flow requirement has NOT been met continue with this procedure.**

Step 6.7 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Curtailment of export external transactions to NB has been exhausted, submitted SETs have been scheduled and the NB to NE minimum flow requirement has NOT been satisfied; Or**
- **Curtailment of export external transactions to NB has been exhausted, SETs have NOT been submitted yet for scheduling and the NB to NE minimum flow requirement has NOT been satisfied.**

Scheduling CA to CA Security with NB.

Step 6.7.1 Primary Responsibility: Generation Operator

Coordinate with NB Operator to agree upon a MW value of CA to CA Security.

Step 6.7.2 Primary Responsibility: Generation Operator

Enter the agreed upon MW value into the "Sched" well for the "CA-CA SET" generic tag for the applicable scheduling interval.

Instructions

- ❑ Right click the "Sched" MW well on the Non-CTS Interface Detail display;
- ❑ Select "Edit";
- ❑ Enter the agreed upon MW value in the "New MW" well;
- ❑ Select a reason from the "Reason" dropdown menu;
- ❑ Enter any clarifying information in the "Additional Reason" field if needed;
- ❑ Click "Apply" to accept the new MW value.

Step 6.7.3 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **CA to CA security is scheduled.**

Log the scheduling of CA to CA Security.

Instructions

- ❑ Use log entry: > INTERCHANGE SCHEDULING > NB SETs > SET Scheduled [E]
- ❑ Enter the following:
  - ❑ SET Type: > CA to CA;
  - ❑ Start Time;
  - ❑ Scheduled MW amount.

Step 6.7.4 Primary Responsibility: Operations Shift Supervisor

Condition to perform this step:

- **NBP-SO is unable to provide CA to CA Security energy, and transfer capability remains available on the applicable interface lines.**

Discuss with the NBP-SO the ability to procure additional energy to supply the CA to CA Security energy.

Note

NBP-SO may have the ability to increase imports using their HVDC ties with HQ, or by procuring additional transfers from adjacent BAs. These possibilities should be pursued.

Step 6.7.5 Primary Responsibility: Generation Operator

Return to Section 2 to continue the scheduling process.

Condition(s) to perform this section:

- **Determined that out of merit external transactions are required for 1st contingency reliability; Or**
- **Determined that out of merit external transactions are required for 2nd contingency reliability; Or**
- **Determined that out of merit external transactions are required as a Pre OP-4 action.**

Section 7: Out of Merit (OOM) External Transactions

Notes

Only those Out of Merit External Transactions taken for a 2nd Contingency will be documented in order for Settlements to apply the appropriate charges to the impacted Reliability Region/Load zone.

Step 7.1 Primary Responsibility: Generation Operator

If schedules have already been run and re-running will NOT create any issues, perform the following:

Step 7.1.1 Primary Responsibility: Generation Operator

Modify the LMP for the applicable interface that will allow the priced external transaction to be scheduled.

Step 7.1.2 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **It is desired to Run Scheduling for ALL interfaces.**

Run the next interval scheduling algorithm by clicking the "Run Scheduling" button from the RT Overview display.

Step 7.1.2.1 Primary Responsibility: Generation Operator

Verify the OOM transactions were scheduled on the applicable interfaces.

Step 7.1.3 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **It is desired to Run Scheduling for a single interface.**

Run the scheduling algorithm for a single interface.

Instructions

- ❑ Navigate to the applicable interfaces Non-CTS Interface Detail display;
- ❑ Click the "Run Scheduling <Applicable RC/BA> Only" button;
- ❑ Click the "Run" button

Step 7.1.3.1 Primary Responsibility: Generation Operator

Verify the OOM transactions were scheduled on the applicable interfaces.

Step 7.1.5 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **An out of merit external transaction is scheduled for 2nd contingency reliability.**

Log the scheduling of an out of merit external transaction.

Instructions

Use log entry: > INTERCHANGE SCHEDULING > Transaction Taken OOM [E]

Step 7.1.6 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Directed to this section from Section 2 for 1st or 2nd contingency reliability.**

Return to Section 2 to continue the scheduling process.

Step 7.1.7 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Directed to this section from Section 9 due to Pre-OP4 conditions.**

Return to Section 9 to continue the scheduling process.

Step 7.2 Primary Responsibility: Generation Operator

If schedules have already been run and re-running will create an issue due to possible modifications the algorithm will make, manually schedule the transaction.

Instructions

- ❑ Locate the external transaction from the Non-CTS Interface Detail display;
- ❑ Right click on the "Sched" MW well for the applicable transaction;
- ❑ Select "Edit";
- ❑ Enter the MW value in the "New MW" well;
- ❑ Select reason code: "Taken out of merit in NE";
- ❑ If desired enter information in the "Additional Reason" well;
- ❑ Click "Apply" to accept the new value.

Notes

By default the "Lock" flag will be set on the Non-CTS Interface Detail display when manually scheduling the transaction.

Step 7.2.1 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **An out of merit external transaction is scheduled for 2nd contingency reliability.**

Log the scheduling of an out of merit external transaction.

Instructions

Use log entry: > INTERCHANGE SCHEDULING > Transaction Taken OOM [E]

Step 7.2.2 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Directed to this section from Section 2 for 1st or 2nd contingency reliability.**

Return to Section 2 to continue the scheduling process.

Step 7.2.3 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Directed to this section from Section 9 due to Pre-OP4 conditions.**

Return to Section 9 to continue the scheduling process.

Condition(s) to perform this section:

- **Pre-loading of the NNC is required due to transmission facility out conditions in New England and the contingency of concern is a source loss.**

Section 8: Reliability Loop Flow on the NNC

Notes

- There are times during transmission facility out conditions in New England (for example: 398, 312 and 393) that pre-contingency actions need to be taken to ensure reliable operation. During these certain conditions it may be necessary to pre-load the NNC in the opposite direction of the contingency (Reliability Loop Flow).
- Scheduling of Reliability Loop Flow is only used to provide for pre-loading on the NNC Interconnection to protect for New England source contingencies during certain transmission facility out conditions. Reliability Loop Flow is **NOT** to be used to address capacity deficiencies locally or system-wide. For capacity deficiencies refer to OP-4 and CROP.10002 - Implement Capacity Remedial Actions.
- Consideration of the margin between the NYN schedule and the TTC must be taken into account prior to scheduling Reliability Loop Flow on the NNC. If the amount of Reliability Loop Flow needed will put the NYN ties over the posted TTC, the NYN ties should be curtailed for the amount needed to fit Reliability Loop Flow, (and the Transmission constraint in New England reason code is used).

Step 8.1 Primary Responsibility: Generation Operator

Set the NY NNC TTC IN to zero.

Instructions

- ❑ Right click on the Transfer Limit IN for NY NNC from the RT Overview display; Or
- ❑ Right click on the TTC in from the Non-CTS Interface Detail display:
- ❑ Select “Edit”;
- ❑ Enter the new TTC in the “New TTC” field;
- ❑ Select the “To HE” the new TTC will apply through;
- ❑ Select a reason;
- ❑ Enter information in the Additional Reason field if reason selected was “Other”;
- ❑ Click “Apply” to accept the new value.

Step 8.2 Primary Responsibility: Generation Operator

Coordinate with NYISO to schedule the reliability loop flow.

Notes

- **DO NOT** enter Reliability Loop Flow into the EMS Interchange Scheduling display software.
- Implementation of Reliability Loop flow is done by NYISO by modifying the schedule for the NNC.
- The Reliability Loop Flow is counted as inadvertent energy on the NNC, with equal and opposite inadvertent energy flowing on the NYN ties.

Step 8.3 Primary Responsibility: Generation Operator

Log the reliability loop flow.

Instructions

Use log entry: > INTERCHANGE SCHEDULING > NNC Reliability Loop Flow

Step 8.4 Primary Responsibility: Generation Operator

Return to Section 2 to continue the scheduling process.

Condition(s) to perform this section:

- **Pre-OP4 or OP-4 actions are required.**

Section 9: Pre-OP4 or OP-4 Actions

Notes

- "Wheel Through External Transactions" are **NOT** included in the algorithm when curtailing external transactions during OP-4 conditions.
- External transactions identified as "Non-CSO" will be grey text. When these exports are properly backed in accordance with the ISO Tariff, Section III.1.10.7(i) (Market Rule 1), where the referenced Generator is online and SS to the MW value of the external transaction, will **NOT** be considered in the "Reserves" curtailment. Those **NOT** properly backed will appear in the "Reserves" curtailment:
  - Non-CSO exports backed by Generators that are **NOT** Self Scheduled (SS) to the MW value of the external transaction may be curtailed to the amount of the SS.
  - Non-CSO exports backed by Generators that are **NOT** online or online but **NOT** SS may be curtailed to zero.
- When there is a system wide capacity deficient condition, transaction sales that are properly backed will **NOT** be curtailed until load shed is being implemented.
- Pre OP-4 curtailments will affect Real-Time only external transactions.
- OP-4 curtailments will affect Day Ahead external transactions.
- For the CTS Interface:
  - For re-OP4:
    - If the net of the Day Before Checkout Process is an export, the NYN schedule may be reduced to 0.
    - If the net of the Day Before Checkout Process is an import, the NYN schedule may be adjusted UP TO the Day Before Checkout NYN NET import value, but not to exceed the "Sale" value for the applicable interval as shown on the NYN Scheduling display.
  - For OP-4 Action 5
    - Cut all Sales up to the TTC value

Step 9.1

Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **For CTS Interface Pre-OP4 schedule changes.**

Adjust the CTS Interface schedule using the "Reserve" algorithm.

Instructions

- ❑ Click the "Reserves" button from the NYN Scheduling display;
  - ❑ If adjusting the schedule to the DBC or Zero:
    - ❑ Click the "Cut to Pre-OP4" button
  - ❑ If cutting only a portion of Sales contracts is desired:
    - ❑ Enter the MW amount into the "Cut MW" well;
    - ❑ Click the "Run" button to initiate the curtailment algorithm.
  - ❑ Click "Save" to accept the curtailments;
  - ❑ Verify the curtailment changes are automatically implemented on the NYN Scheduling display.

Notes

- If the "Total Sales" value is **red**, this indicates the amount of Sale transactions available to cut exceeds the import TTC. However, only the amount **UPTO** the TTC value will be cut by the algorithm.
- If the "MW to Day Before (or 0) value is **red**, this indicates there are not enough Sale transactions available to cut to the DBC.
- Clicking "Save" will generate an automated e-mail notification to the TSO Administrator. Upon receipt of this e-mail, the TSO Administrator will post a Notice to the ISO external website will notify market participants that curtailment of export transactions has been initiated IAW OP-9. Outside of normal business hours the notification will be posted on the following day.

Step 9.1.1 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **This is the first Pre-OP4 schedule change that has been performed.**

Log the Pre-OP4 interchange schedule modification.

Instructions

Use log entry: > INTERCHANGE SCHEDULING > PRE OP4 CURTAILMENTS > Start

Step 9.1.2 Primary Responsibility: Generation Operator

- ❑ **If no further Pre-OP4 actions are required return to Section 1 to continue the scheduling process.**
- ❑ **If further actions are required to mitigate potential capacity deficiency condition continue with this procedure.**

Step 9.2 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **For Non-CTS Interface Pre-OP4 schedule changes.**

Adjust the Non-CTS Interface schedule using the "Reserve" algorithm.

Instructions

- ❑ Click the "Reserves" button from the RT Overview display;
- ❑ Ensure the appropriate interfaces are selected;
- ❑ Ensure the Timing: field is set to "Next Interval";
- ❑ Enter the MW amount to cut up to the TTC into the "Desired Cut MW" well;
- ❑ Click the "Run" button to initiate the curtailment algorithm;
- ❑ Click "Save" to accept the curtailments;
- ❑ Verify the curtailment changes are automatically implemented on the Non-CTS Interface Detail display.

Notes

- If curtailments are for Pre-OP4 conditions: **DO NOT** enter a MW value that exceeds the RT Only amount available.
- Clicking "Save" will generate an automated e-mail notification to the TSO Administrator. Upon receipt of this e-mail, the TSO Administrator will post a Notice to the ISO external website which will notify market participants that curtailment of export transactions has been initiated IAW OP-9. Outside of normal business hours this notification will be posted on the following day.
- If the Scheduling Algorithm is run after this point the Reserve curtailments will be removed unless the transactions are manually locked on the Non-CTS Interface Detail display.
- If the MW value of RT Only is red, that signifies that the TTC is restricting the amount RT Only contracts available to reduce.
- If schedules were ran with "ONT Only" selected and it is desired to restore schedules to their original values, the Operator will have to run schedules for the affected interface using the "No eTag Data" option in Section 2 in order to restore tag values.

Step 9.2.1 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **This is the first Pre-OP4 schedule change that has been performed.**

Log the Pre-OP4 interface schedule modification.

Instructions

Use log entry: > INTERCHANGE SCHEDULING > PRE OP4 CURTAILMENTS > Start

Step 9.2.2 Primary Responsibility: Generation Operator

- ❑ **If no further Pre-OP4 are required return to Section 2 to continue the scheduling process.**
- ❑ **If further actions are required to mitigate a potential capacity deficiency condition continue with this procedure.**

Step 9.3 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Phase II is scheduled greater than its Day Before Checkout value and reducing flow will improve the reserve condition.**

Reduce RT Only imports on Phase II.

Instructions

- ❑ Click the "Largest Contingency" button from the HQ Non-CTS Interface Details display;
- ❑ Ensure "Next Interval" is selected;
- ❑ Enter the MW amount to cut in the "Desired Cut MW" well, not to exceed the amount of RT Only available;
- ❑ Click "Run" to initiate the curtailment algorithm;
- ❑ Click "Save" to accept the curtailments;
- ❑ Ensure the curtailments are implemented on the Non-CTS Interface Detail display.

Notes

- The new reserve requirement will not be accounted for in APF-MOI until Phase II is at its new schedule. This should be considered prior to approving a UDS case with an inaccurate reserve requirement and/or reserve pricing.
- If schedules were ran with "ONT Only" selected and it is desired to restore schedules to their original values, the Operator will have to run schedules for the affected interface using the "No eTag Data" option in Section 2 in order to restore tag values.

Step 9.3.1 Primary Responsibility: Generation Operator

- ❑ **If no further Pre-OP4 are required return to Section 2 to continue the scheduling process.**
- ❑ **If further actions are required to mitigate a potential capacity deficiency condition continue with this procedure.**

Step 9.4 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **CTS Interface Pre-OP4 Actions have been taken; And**
- **RT-Only export transactions have been reduced on all applicable Non-CTS Interfaces; And**
- **Further Pre-OP4 actions are required AND additional priced import transactions are available.**

Perform scheduling of Out of Merit (OOM) external transactions using Section 7.

Step 9.4.1 Primary Responsibility: Generation Operator

- ❑ **If no further Pre-OP4 actions are required return to Section 2 to continue the scheduling process.**
- ❑ **If further actions are required to mitigate a potential capacity deficiency continue with this procedure.**

Step 9.5 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Pre-OP4 Actions have been taken on CTS and Non-CTS Interfaces; And**
- **Additional "Sales" transactions are available on the CTS Interface with available margin to the TTC; And**
- **OP-4 Action 5 has been declared.**

Adjust the CTS Interface schedule using the "Reserve" algorithm.

Instructions

- ❑ If not already performed, request the Security Operator evaluate Emergency Transfer Capability with NYISO
- ❑ Click the "Reserves" button from the NYN Scheduling display;
  - ❑ If cutting all available "Sales" contracts upto the TTC In value:
    - ❑ Click the "Cut ALL" button;
  - ❑ If cutting only a portion of "Sales" contracts:
    - ❑ Enter the MW amount into the "Cut MW" well;
    - ❑ Click the "Run" button to initiate the curtailment algorithm.
  - ❑ Click "Save" to accept the changes;
  - ❑ Verify the curtailment changes are automatically implemented on the NYN Scheduling display.

Notes

- If the "Total Sales" value is **red**, this indicates the amount of Sale transactions available to cut exceeds the import TTC. However, only the amount **UP TO** the TTC value will be cut by the algorithm.
- Clicking "Save" will generate an automated e-mail notification to the TSO Administrator. Upon receipt of this e-mail, the TSO Administrator will post a Notice to the ISO external website will notify market participants that curtailment of export transactions has been initiated IAW OP-9. Outside of normal business hours the notification will be posted on the following day.

Step 9.5.1 Primary Responsibility: Generation Operator

- ❑ **If no further OP-4 actions are required return to Section 1 to continue the scheduling process.**
- ❑ **If further actions are required to mitigate a potential capacity deficiency continue with this procedure.**

Step 9.6 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **CTS Interface OP-4 Actions have been completed and further actions are required to mitigate a capacity deficiency.**

Schedule EET transactions using Section 14.

Step 9.6.1 Primary Responsibility: Generation Operator

- ❑ **If no further OP-4 actions are required return to Section 2 to continue the scheduling process.**
- ❑ **If further actions are required to mitigate a potential capacity deficiency: go to Step 9.7**

Step 9.7 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **CTS Interface OP-4 Actions have been taken, all available EETs have been scheduled and additional actions are required to mitigate a capacity deficiency.**

Reduce exports that have cleared in the Day Ahead Market on the Non-CTS Interfaces.

Instructions

- ❑ Click the "Reserves" button from the RT Overview display;
- ❑ Ensure the appropriate interfaces are selected;
- ❑ Ensure the Timing: field is set to "Next Interval";
- ❑ Enter the MW amount to cut up to the TTC into the "Desired Cut MW" well;
- ❑ Click the "Run" button to initiate the curtailment algorithm;
- ❑ Click "Save" to accept the price tie curtailments;
- ❑ Verify the curtailment changes are automatically implemented on the Non-CTS Interface Detail display.

Notes

- If curtailments are for OP-4 conditions: **DO NOT** enter a MW value that exceeds the total amount of RT Only plus DA available.
- Clicking "Save" will generate an automated e-mail notification to the TSO Administrator. Upon receipt of this e-mail, the TSO Administrator will post a Notice to the ISO external website which will notify market participants that curtailment of export transactions has been initiated IAW OP-9. Outside of normal business hours this notification will be posted on the following day.
- If the Scheduling Algorithm is run after this point the Reserve curtailments will be removed unless the transactions are manually locked on the Non-CTS Interface Detail display.
- If the MW value of DA Priority is red, that signifies that the TTC is restricting the amount DA Priority contracts available to reduce.
- If schedules were ran with "ONT Only" selected and it is desired to restore schedules to their original values, the Operator will have to run schedules for the affected interface using the "No eTag Data" option in Section 2 in order to restore tag values.

Step 9.7.1 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Day Ahead exports have been curtailed for the first time for OP-4 Action 5.**

Log the Day Ahead curtailments.

Instructions

Use log entry: > INTERCHANGE SCHEDULING > DAY AHEAD CURTAILMENTS > Start

Step 9.7.2 Primary Responsibility: Generation Operator

- ❑ **If no further OP-4 actions are required return to Section 2 to continue the scheduling process.**
- ❑ **If further actions are required to mitigate a potential capacity deficiency continue with this procedure.**

Step 9.8 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **All available EETs have been scheduled, CTS and Non-CTS Interface OP-4 Actions have been taken, and additional import capability is available.**

Perform actions of Section 13 Control Area to Control Area Emergency Purchases.

Step 9.9 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Necessary or available export curtailments have been made or other transaction types have been scheduled.**

Return to Section 2 to continue the scheduling process.

Condition(s) to perform this section:

- **Minimum Generation Warning or Minimum Generation Emergency actions are required.**

Section 10: Minimum Generation Actions

Notes

- Minimum Generation Warning curtailments will affect Real-Time only external transactions.
- Minimum Generation Emergency curtailments will affect Day Ahead external transactions.

Step 10.1 Primary Responsibility: Generation Operator

Adjust the CTS Interface for Minimum Generation Warning .

Instructions

- ❑ Click the "Min Gen" button from the NYN Scheduling display;
- ❑ For **Min Gen Warning** schedule adjustments:
  - ❑ If adjusting the schedule to the DBC or Zero:
    - ❑ Click the "Cut to MinGen Warn" button
  - ❑ If cutting only a portion of Purchase contracts is desired:
    - ❑ Enter the MW amount into the "Cut MW" well;
    - ❑ Click the "Run" button to initiate the curtailment algorithm.
  - ❑ Click "Save" to accept the curtailments;
  - ❑ Verify the curtailment changes are automatically implemented on the NYN Scheduling display.

Notes

- If the "Total Purchases" value is **red**, this indicates the amount of Purchase transactions available to cut exceeds the import TTC. However, only the amount **UP TO** the TTC value will be cut by the algorithm.
- If the "MW to Day Before (or 0) value is **red**, this indicates there are not enough Purchase transactions available to cut to the DBC.

Step 10.1.2 Primary Responsibility: Generation Operator

- ❑ **If no further minimum generation actions are required return to Section 1 to continue the scheduling process.**
- ❑ **If further actions are required to mitigate a minimum generation condition continue with this procedure.**

Step 10.2 Primary Responsibility: Generation Operator

Reduce RT-Only Imports on the Non-CTS Interfaces

Instructions

- ❑ Click the "Min Gen" button from the RT Overview display;
- ❑ Ensure the appropriate interfaces are selected;
- ❑ Ensure the Timing: field is set to "Next Interval";
- ❑ Enter the MW amount to cut up to the TTC into the "Desired Cut MW" well;
- ❑ Click the "Run" button to initiate the curtailment algorithm;
- ❑ Click "Save" to accept the price tie curtailments;
- ❑ Verify the curtailment changes are automatically implemented on the Non-CTS Interface Detail display.

Notes

- For Min Gen Warning **DO NOT** enter a value that exceeds the amount of RT Only available.
- If the Scheduling Algorithm is run after this point the Minimum Generation Emergency Warning curtailments will be removed unless the transactions are manually locked on the Non-CTS Interface Detail display.
- If the MW value of RT Only is red, that signifies that the TTC is restricting the amount RT Only contracts available to reduce.
- If schedules were ran with "ONT Only" selected and it is desired to restore schedules to their original values, the Operator will have to run schedules for the affected interface using the "No eTag Data" option in Section 2 in order to restore tag values.

Step 10.2.2 Primary Responsibility: Generation Operator

- ❑ **If no further minimum generation actions are required return to Section 2 to continue the scheduling process.**
- ❑ **If further actions are required to mitigate a minimum generation condition continue with this procedure.**

Step 10.3 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **CTS Interface Minimum Generation Warning actions have been taken; And**
- **RT-Only import transactions have been reduced on all applicable Non-CTS Interfaces; And**
- **Additional purchase transactions need to be reduced AND Min Gen Emergency has been declared.**

Perform Minimum Generation Emergency Actions to further reduce CTS Interface interchange schedules.

Instructions

- ❑ Click the "Min Gen" button from the NYN Scheduling display;
- ❑ For **Min Gen Emergency** schedule adjustments:
  - ❑ If cutting all Purchase contracts up to the TTC Out value:
    - ❑ Click the "Cut ALL" button;
  - ❑ If cutting only a portion of Purchase contracts:
    - ❑ Enter the MW amount into the "Cut MW" well;
    - ❑ Click the "Run" button to initiate the curtailment algorithm.
  - ❑ Click "Save" to accept the changes;
  - ❑ Verify the curtailment changes are automatically implemented on the NYN Scheduling display.

Notes

- If the "Total Purchases" value is **red**, this indicates the amount of Purchase transactions available to cut exceeds the import TTC. However, only the amount **UP TO** the TTC value will be cut by the algorithm.
- If the "MW to Day Before (or 0) value is **red**, this indicates there are not enough Purchase transactions available to cut to the DBC.

Step 10.3.1 Primary Responsibility: Generation Operator

- ❑ **If no further minimum generation actions are required return to Section 1 to continue the scheduling process.**
- ❑ **If further actions are required to mitigate a minimum generation condition: go to Step 10.4.**

Step 10.4 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Minimum Generation Emergency Actions have been taken on the CTS Interface and additional purchase transactions need to be reduced.**

Reduce imports that have cleared in the Day Ahead Market on the Non-CTS interfaces.

Instructions

- ❑ Ensure a -$150 price has been entered for each external interface;
- ❑ Click the "Min Gen" button from the RT Overview display;
- ❑ Ensure the appropriate interfaces are selected;
- ❑ Ensure the Timing: field is set to "Next Interval";
- ❑ Enter the MW amount to cut into the "Desired Cut MW" well;
- ❑ Click the "Run" button to initiate the curtailment algorithm;
- ❑ Click "Save" to accept the price tie curtailments;
- ❑ Verify the curtailment changes are automatically implemented on the Non-CTS Interface Detail display.

Notes

- The price would have been set during running Non-CTS schedules in Section 2.
- For Min Gen Emergency **DO NOT** enter a MW value that exceeds the total amount of RT Only plus DA available.
- The MW quantity is usually determined as an amount equal to the quantity of generating resource MWs dispatched below Eco Min.
- If the Scheduling Algorithm is run after this point the Minimum Generation Emergency curtailments will be removed unless the transactions are manually locked on the Non-CTS Interface Detail display.
- the MW value of DA Priority is red, that signifies that the TTC is restricting the amount DA Priority contracts available to reduce.
- If schedules were ran with "ONT Only" selected and it is desired to restore schedules to their original values, the Operator will have to run schedules for the affected interface using the "No eTag Data" option in Section 2 in order to restore tag values.

Step 10.4.1 Primary Responsibility: Generation Operator

Return to Section 2 to continue the scheduling process.

Condition(s) to perform this section:

- **Identified that an individual transaction needs to be modified; Or**
- **Identified by the TSO or adjacent RC/BA that an individual transaction needs to be modified; Or**
- **Requested to modify an individual transaction by a neighboring RC/BA.**

Section 11: Adjust an individual transaction on a Non-CTS Interface

Step 11.1

Primary Responsibility: Generation Operator

Adjust an individual external transaction on a Non-CTS Interface.

Instructions

- ❑ Access the applicable Non-CTS Interface Detail display;;
- ❑ Locate the external transaction;
- ❑ Right click on the "Sched" value and select "Edit ;
- ❑ Enter the applicable MW value in the "New MW" field;
- ❑ Select the applicable Reason;
- ❑ Enter information in the "Additional Reason" field if the selected reason is "Other";
- ❑ Click "Apply" to accept the modification;
- ❑ Verify the curtailment changes are automatically implemented on the Non-CTS Interface Detail display.

Notes

DO NOT enter a value greater than the Original Value.

Step 11.2

Primary Responsibility: Generation Operator

Return to Section 2 to continue the scheduling process.

Condition(s) to perform this section:

- **Control Area to Control Area Emergency sales are requested by a neighboring RC/BA.**

Section 12: Control Area to Control Area Emergency Sales

Notes

- TOP-001 Transmission Operations R7: Each Transmission Operator shall assist other Transmission Operators within its Reliability Coordinator Area, if requested and able, provided that the requesting Transmission Operator has implemented its comparable Emergency procedures, unless such assistance cannot be physically implemented or would violate safety, equipment, regulatory, or statutory requirements.
- IRO-014 Coordination Among Reliability Coordinators R7: Each Reliability Coordinator shall assist Reliability Coordinators, if requested and able, provided that the requesting Reliability Coordinator has implemented its emergency procedures, unless such actions cannot be physically implemented or would violate safety, equipment, regulatory, or statutory requirements.
- Export schedules entered into the Sales Without Capacity (SWOCAP) fields on the EMS Interchange Scheduling display will be used by the EMS Reserve Monitor, RTUC, CTSPE, UDS, and CD-SPD to count those schedules toward meeting the reserve requirements.

Step 12.1 Primary Responsibility: Operations Shift Supervisor

Determine if the Control Area to Control Area Emergency Sale will be capacity backed or energy only.

Instructions

Emergency Sales shall normally be capacity backed unless the Emergency Sale will result in a Capacity Scarcity Condition. If already in a Capacity Scarcity Condition, then the Emergency Sale shall be energy only.

Step 12.2 Primary Responsibility: Generation Operator

Coordinate with neighboring RC/BAs to agree on a MW value.

Standard(s) for completion:

- 3-part communication is used.
- Checkout complies with requirements of INT-009.

Instructions

- ❑ If performing for the current interval, agree upon:
  - ❑ Effective minute
  - ❑ Ramp start time
  - ❑ Ramp duration

Notes

Standards for completion were added based on the 2021 audit recommendations, and in response to a non-compliance response.

Step 12.3 Primary Responsibility: Generation Operator

Enter the agreed upon MW value into the schedule well for the appropriate CA to CA generic E-Tag on the CTS or Non-CTS Interface as applicable

Instructions

- ❑ Utilize the applicable "CA-CA Emer" generic tag.

- ❑ For CTS and scheduling for the Next Interval:
  - ❑ Right Click the "NE Sched MW" well;
  - ❑ Select "Edit";
  - ❑ Enter the agreed upon value in the "New MW Value:" well;
  - ❑ Select the applicable reason from the "Reason:" dropdown menu;
  - ❑ Enter information in the "Additional Reason:" field if the reason selected was "Other";
  - ❑ Click "Save" to accept the value.

- ❑ For CTS and scheduling Within Interval:
  - ❑ Change the selected interval to the current interval;
  - ❑ Right Click the "NE Sched MW" well;
  - ❑ Enter the agreed upon value in the "New MW Value:" well;
  - ❑ Enter the agreed upon Effective Minute;
  - ❑ Select the applicable reason from the "Reason:" dropdown menu;
  - ❑ Enter information in the "Additional Reason:" field if the reason selected was "Other";
  - ❑ Click "Save" to accept the value.

- ❑ For Non-CTS Interfaces and scheduling for the Next Interval:
  - ❑ Right click on the "Sched" well;
  - ❑ Select "Edit";
  - ❑ Enter the agreed upon MW in the "New MW" well;
  - ❑ Select the applicable reason from the "Reason" dropdown menu;
  - ❑ Enter information in the "Additional Reason" field if the reason selected was "Other".
  - ❑ Click "Apply" to accept the value.

- ❑ For Non-CTS Interfaces and scheduling Within Interval:
  - ❑ Right click on the "Sched Instant" well;
  - ❑ Select "Curtail";
  - ❑ Enter the agreed upon MW in the "New MW" well;
  - ❑ Enter the agreed upon Effective Minute;
  - ❑ Select the applicable reason from the "Reason" dropdown menu;
  - ❑ Enter information in the "Additional Reason" field if the reason selected was "Other"
  - ❑ Click "Apply" to accept the value.

Notes

By default the "Lock" flag will be set on the Non-CTS Interface Detail display when CA-CA Emer is scheduled.

Step 12.4 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **CA to CA Emergency sale is Capacity-Backed and is for the current interval.**

Access the EMS Interchange Scheduling display.

Step 12.4.1 Primary Responsibility: Generation Operator

Enter the MW amount of the emergency sale in the "EMERG" row for the applicable interface on the EMS Interchange Scheduling display.

Instructions

- ❑ Perform the following on the EMS Interchange Scheduling display:
  - ❑ Enter the Interchange Schedule;
  - ❑ Enter the Ramp Start time;
  - ❑ Enter the Ramp duration;
  - ❑ Click the Implement button.

Step 12.4.2 Primary Responsibility: Generation Operator

Notify the Loader Operator of the schedule implementation.

Step 12.4.2.1 Primary Responsibility: Loader Operator

Condition(s) to perform this step:

- **An applicable interface schedule changed.**

Update the PCEC for the schedule change.

Step 12.5 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **CA to CA Emergency sale is Energy-Only and is for the current interval.**

Access the EMS Interchange Scheduling display.

Step 12.5.1 Primary Responsibility: Generation Operator

Enter the MW amount of the energy-only sale in the "SWOCAP" row for the applicable interface on the EMS Interchange Scheduling display.

Instructions

- ❑ Perform the following on the EMS Interchange Scheduling display:
  - ❑ Enter the Interchange Schedule;
  - ❑ Enter the Ramp Start time;
  - ❑ Enter the Ramp duration;
  - ❑ Click the Implement button.

Step 12.5.2 Primary Responsibility: Generation Operator

Notify the Loader Operator of the schedule implementation.

Step 12.5.2.1 Primary Responsibility: Loader Operator

Condition(s) to perform this step:

- **An applicable interface schedule changed.**

Update the PCEC for the schedule change.

Step 12.6 Primary Responsibility: Generation Operator

Log the CA to CA Emergency Sale.

Instructions

Use log entry: > INTERCHANGE SCHEDULING > CA to CA Sales [E]

Step 12.7 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Directed to perform from Section 2.**

Return to Section 2 to continue the scheduling process.

Condition(s) to perform this section:

- **System conditions require the scheduling of Control Area to Control Area Emergency purchases**

Section 13: Control Area to Control Area Emergency Purchases

Notes

- TOP-001-5 Transmission Operations R7: Each Transmission Operator shall assist other Transmission Operators within its Reliability Coordinator Area, if requested and able, provided that the requesting Transmission Operator has implemented its comparable Emergency procedures, unless such assistance cannot be physically implemented or would violate safety, equipment, regulatory, or statutory requirements.
- IRO-014-3 Coordination Among Reliability Coordinators R7: Each Reliability Coordinator shall assist Reliability Coordinators, if requested and able, provided that the requesting Reliability Coordinator has implemented its emergency procedures, unless such actions cannot be physically implemented or would violate safety, equipment, regulatory, or statutory requirements.
- Import schedules entered into the Purchases Without Capacity (PWOCAP) fields on the EMS Interchange Scheduling display will be used by the EMS Reserve Monitor, RTUC, CTSPE, UDS, and CD-SPD to deduct those schedules from meeting the reserve requirements.

Step 13.1 Primary Responsibility: Operations Shift Supervisor

Determine if the Control Area to Control Area Emergency purchase will be capacity backed or energy only.

Notes

If capacity backed purchases are unavailable then energy only purchases should be considered if necessary to maintain ACE

Step 13.2 Primary Responsibility: Generation Operator

Coordinate with neighboring RC/BAs to agree on a MW value.

Standard(s) for completion:

- 3-part communication is used.
- Checkout complies with requirements of INT-009.

Instructions

- ❑ If performing for the current interval, agree upon:
  - ❑ Effective minute
  - ❑ Ramp start time
  - ❑ Ramp duration

Notes

Standards for completion were added based on the 2021 audit recommendations, and in response to a non-compliance response.

Step 13.3 Primary Responsibility: Generation Operator

Enter the agreed upon MW value into the Schedule well for the appropriate CA to CA generic E-Tag on the CTS or Non-CTS Interface, as applicable.

Instructions

- ❑ Utilize the applicable "CA-CA Emer" generic tag;

- ❑ For CTS and scheduling for the Next Interval:
  - ❑ Right Click the "NE Sched" well;
  - ❑ Select "Edit";
  - ❑ Enter the agreed upon value in the "New MW Value:" well;
  - ❑ Select the applicable reason from the "Reason:" dropdown menu;
  - ❑ Enter information in the "Additional Reason:" field if the reason selected was "Other".
  - ❑ Click "Save" to accept the value.

- ❑ For CTS and scheduling Within Interval:
  - ❑ Change selected interval to be the current interval;
  - ❑ Right Click the "NE Sched" well;
  - ❑ Enter the agreed upon value in the "New MW Value:" well;
  - ❑ Enter the agreed upon Effective Minute;
  - ❑ Select the applicable reason from the "Reason:" dropdown menu;
  - ❑ Enter information in the "Additional Reason:" field if the reason selected was "Other".
  - ❑ Click "Save" to accept the value.

- ❑ For Non-CTS Interfaces and scheduling for the Next Interval:
  - ❑ Right click on the "Sched" well;
  - ❑ Select "Edit";
  - ❑ Enter the agreed upon MW in the "New MW" well;
  - ❑ Select the applicable reason from the "Reason" dropdown menu;
  - ❑ Enter information in the "Additional Reason" field if the reason selected was "Other".
  - ❑ Click "Apply" to accept the value.

- ❑ For Non-CTS Interfaces and scheduling Within Interval:
  - ❑ Right click on the "Sched Instant" well;
  - ❑ Select "Curtail";
  - ❑ Enter the agreed upon MW in the "New MW" well;
  - ❑ Enter the agreed upon Effective Minute;
  - ❑ Select the applicable reason from the "Reason" dropdown menu;
  - ❑ Enter information in the "Additional Reason" field if the reason selected was "Other"
  - ❑ Click "Apply" to accept the value.

Notes

By default the "Lock" flag will be set on the Non-CTS Interface Detail display when CA-CA Emer is scheduled.

Step 13.4 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **CA to CA Emergency purchase is Capacity-Backed and is for the current interval.**

Access the EMS Interchange Scheduling display.

Step 13.4.1 Primary Responsibility: Generation Operator

Enter the MW amount of the emergency in the "EMERG" row for the applicable interface on the EMS Interchange Scheduling display.

Instructions

- ❑ Perform the following on the EMS Interchange Scheduling display:
  - ❑ Enter the Interchange Schedule;
  - ❑ Enter the Ramp Start time;
  - ❑ Enter the Ramp duration;
  - ❑ Click the Implement button.

Step 13.4.2 Primary Responsibility: Generation Operator

Notify the Loader Operator of the schedule implementation.

Step 13.4.2.1 Primary Responsibility: Loader Operator

Condition(s) to perform this step:

- **An applicable interface schedule changed.**

Update the PCEC for the schedule change.

Step 13.5 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **CA to CA Emergency purchase is Energy-Only and is for the current interval.**

Access the EMS Interchange Scheduling display.

Step 13.5.1 Primary Responsibility: Generation Operator

Enter the MW amount of the energy only emergency purchase in the "PWOCAP" row for the applicable interface on the EMS Interchange Scheduling display.

Instructions

- ❑ Perform the following on the EMS Interchange Scheduling display:
  - ❑ Enter the Interchange Schedule;
  - ❑ Enter the Ramp Start time;
  - ❑ Enter the Ramp duration;
  - ❑ Click the "Implement" button.

Notes

A validation check is performed within the software; if a positive value is entered into the PWOCAP, it will be rejected.

Step 13.5.2 Primary Responsibility: Generation Operator

Notify the Loader Operator of the schedule implementation.

Step 13.5.2.1 Primary Responsibility: Loader Operator

Condition(s) to perform this step:

- **An applicable interface schedule changed.**

Update the PCEC for the schedule change.

Step 13.6 Primary Responsibility: Generation Operator

Log the CA to CA Emergency Purchase.

Instructions

Use log entry: > EMERGENCY PROCEDURE EVENTS > OP 4 > CA to CA Emergency Purchase [E]

Step 13.7 Primary Responsibility: Operations Shift Supervisor

Condition to perform this step:

- **Adjacent RC/BAs are unable to provide CA to CA emergency energy, and transfer capability remains available on the applicable interface lines**

Evaluate, and schedule if available, energy from non-adjacent RC/BAs

Instructions

- ❑ Perform the following:
  - ❑ Contact non-adjacent RC/BAs to determine energy availability.
  - ❑ Contact adjacent RC/BA and discuss the following:
    - ❑ Coordinate the purchase of emergency energy, under the conditions of any coordination agreements between the wheeling RC/BA and the selling RC/BA, as well as the sale of this CA to CA emergency energy to ISO-NE.
    - ❑ Transfer capability on the tie lines and transmission interfaces necessary to deliver wheeled energy
    - ❑ Coordinate ramp times, duration, and MW amount of the wheeled energy

Step 13.8 Primary Responsibility: Generation Operator

Return to Section 9 to continue the scheduling process.

Condition(s) to perform this section:

- **System conditions in ISO-NE warrant the purchase of Market Participant submitted Emergency Energy Transactions (EET).**

Section 14: EET Purchases on Non-CTS Interfaces

Notes

- Notification for EETs is performed in CROP.10002 Implement Capacity Remedial Actions.
- The CTS Interface does **NOT** have EETs.
- OP-4 Action 5 is required to be declared prior to scheduling EETs.
- Market Participant EETs are scheduled to maintain Ten-Minute Reserve requirements, unless reliability considerations preclude their scheduling.
- EETs are considered in economic order with the lowest priced transactions taken first.

Step 14.1 Primary Responsibility: Generation Operator

Agree upon the entire NERC Tag ID with the applicable RC/BA.

Step 14.2 Primary Responsibility: Generation Operator

Adjust the interface LMP as needed to schedule the required amount of priced external transactions.

Step 14.3 Primary Responsibility: Generation Operator

Run schedules for the interface(s) with EETs.

Instructions

- ❑ Click the applicable interface from the RT Overview display;
- ❑ If adjustments to an individual transaction are made when performing directional cuts, that transaction should be locked so that it is not subsequently re-scheduled when re-running the interface schedule
- ❑ Click the “Run Scheduling <Applicable RC/BA> Only” button.

Step 14.4 Primary Responsibility: Generation Operator

Click the "Run Scheduling (Interface Only)" button to initiate the scheduling algorithm.

Step 14.4.1 Primary Responsibility: Generation Operator

Check the "Include EETs" box.

Step 14.4.2 Primary Responsibility: Generation Operator

Click the "Run" button to initiate the scheduling algorithm.

Step 14.5 Primary Responsibility: Generation Operator

Log the scheduling of EETs.

Instructions

Use log entry: > EMERGENCY PROCEDURE EVENTS > OP 4 > EETs Scheduled

Step 14.6 Primary Responsibility: Generation Operator

Return to Section 9 to continue the scheduling process.

Condition(s) to perform this section:

- **Excessive ramp or transmission reliability requires the adjustment of the CTS Interface interchange schedule**

Section 15: Adjust the CTS Interface schedule

Notes

- For transmission reliability reasons, the CTS interchange schedule can be adjusted as necessary.
- The NY RTC software is programmed to allow a default ramp of up to 300 MW per 15-Minute scheduling interval. On occasion, based on multiple similarly priced CTS transactions, the NY RTC software may allow a ramp in excess of 300MW (e.g. 301, 302, etc.).
  - Ramps up to 325 MW will be permitted on the CTS Interface during normal 15-Min Scheduling prior to Operator curtailment for excess ramp.
- Ramp limitations when performing hourly scheduling of up to 700 MW will be allowed on the CTS Interface during hourly scheduling and while transitioning into and out of hourly scheduling.
- If the total hourly ISONE interchange ramp is greater than 900 MW, the Operations Shift Supervisor will evaluate reliability and the available resources for the ramp. If changes are required, then the CTS Interface ramp may be cut but **NOT** lower than 400 MW, the remaining curtailments will be applied to the Non-CTS ramp. The Operations Shift Supervisor shall only restrict an hourly ramp exceeding 900 MW if it will result in a reliability problem or exceed the capacity of available resources for the scheduling interval.

Step 15.1 Primary Responsibility: Generation Operator

Select the applicable scheduling interval.

Step 15.2 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **CTS Interface net interchange was adjusted due to a TTC change.**

Modify the applicable TTC.

Instructions

- ❑ Right click on the applicable TTC direction;
- ❑ Select "Edit";
- ❑ Ensure the pop up header states the applicable TTC direction “Adjust TTC_IN” or “Adjust TTC_OUT” for curtailment;
- ❑ Enter a new TTC value;
- ❑ Select the “To HE” value;
- ❑ Select a reason from the drop down;
- ❑ Enter an additional reason, if desired;
- ❑ Click "Apply".

Step 15.3 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **For Ramp Constraints or for Reliability.**

Adjust the CTS Interface schedule using the “Cut for TTC” algorithm.

Instructions

- ❑ Click the “Cut for TTC” button from the NYN Scheduling display;
- ❑ Select the Cut Direction from the dropdown menu “Import” or “Export”;
- ❑ Enter the MW amount into the “Cut MW well”;
- ❑ Click the “Run” button to initiate the curtailment algorithm;
- ❑ Click “Save” to accept the modifcation;
- ❑ Verify the curtailment changes are automatically implemented on the NYN Scheduling display.

Notes

- "Purchase" and "Sale" values will not be finalized until the interval shows as "Binding".
- If the current schedule exceeds the TTC, the "Cut MW" amount will pre-populate the amount that needs to be cut to satisfy the TTC IN or TTC OUT.
- If the cuts are due to a TTC change, the "Cut Direction" will be pre-populated

---

Step 15.4 Primary Responsibility: Generation Operator

Log the CTS Interface interchange schedule modification and reason.

Instructions

- ❑ For Pre-OP4 actions for the first time:
  - ❑ Use log entry: > INTERCHANGE SCHEDULING > PRE OP4 CURTAILMENTS > Start

- ❑ For all other schedule modifications:
  - ❑ Use log entry: > INTERCHANGE SCHEDULING > NYN Schedule Change

Notes

- There may be instances where the same curtailment may require more than one log entry. It is important for tracking and communication purposes to make all applicable log entries.
- If the "PRE_OP4 CURTAILMENTS > Start" log entry was already entered when performing step 9.6 of CROP.31002 – Curtailing External Transactions, it is not necessary to make the same log entry again.

Step 15.5 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Directed from Section 1 to perform adjustments due to total ISONE excess hourly ramp condition and CTS ramp has been curtailed to 400 MW but total ISONE interchange ramp is still above 900 MW.**

Go to Section 3 for excess hourly ramp cuts on Non-CTS Interfaces.

Step 15.6 Primary Responsibility: Generation Operator

Return to Section 1 to continue the scheduling process.

Condition(s) to perform this section:

- **Identified that an individual external transaction needs to be modified; Or**
- **Identified by the TSO or adjacent RC/BA that an individual external transaction needs to be modified.**

Section 16: Adjust an individual transaction on the CTS Interface

Step 16.1 Primary Responsibility: Generation Operator

Adjust an individual transaction on the CTS Interface

Instructions

- ❑ Select the applicable scheduling interval;
- ❑ Locate the applicable transaction to be modified;
- ❑ Right click on the "NE Sched" value and select "Edit";
- ❑ Enter the applicable MW value in the "New MW Value:" field;
- ❑ Select the applicable Reason;
- ❑ Enter information in the "Additional Reason:" field if the selected reason is "Other";
- ❑ Click "Save" to accept the modification.

Notes

DO NOT enter a value greater than the Original Value.

Step 16.2 Primary Responsibility: Generation Operator

Return to Section 1 to continue the scheduling process.

Condition(s) to perform this section:

- **System conditions require capacity external transactions.**

Section 17: Request capacity MWs from NYISO on the CTS interface

Notes

- Request has to be made 75 minutes prior to scheduling interval. Capacity requests can be made for up to the total CSO value indicated on the Manage CTS display. Available online MW from Capacity Resources is displayed on the Manage CTS Data display.
- A capacity request should be done for the top of the hour and in hour long intervals.

Step 17.1 Primary Responsibility: Generation Operator

Request capacity MWs from NYISO on the CTS interface.

Instructions

- ❑ Select "NYISO Capacity Data" from the Operator Functions dropdown menu;
- ❑ For intervals 4 – 13:
  - ❑ Right click on the interval for the desired capacity request and select "Update";
- ❑ Coordinate with NYISO to determine an agreed upon value for the capacity request;
- ❑ Enter the value agreed upon with NYISO in the "Capacity MW Request Agreed:" field;
- ❑ Click the "Save" button.

Notes

- Capacity requests can only be made for Intervals 4 – 13.
- Capacity requests are automatically applied to all remaining intervals for that scheduling hour. Example: a capacity request entered for the 1415 interval will be automatically applied to the 1430 and 1445 intervals.
- Only positive MW values are entered. **If the agreed upon value is 0 MW, enter nothing**.
- Capacity agreed value is sent to NYISO and incorporated into the scheduling process. There will be **no** transaction visible to the operator for the capacity request.
- The end time of any update is the end of the hour of the selected interval, even if the end of the hour is not visible on the display .

Step 17.2 Primary Responsibility: Generation Operator

Log the capacity request.

Instructions

Use log entry: > INTERCHANGE SCHEDULING > NYN Capacity Request

Condition(s) to perform this section:

- **NY Price, NE Price, and CTS NI are highlighted in orange for a binding interval; Or**
- **NY Price, NE Price, and CTS NI are highlighted in red for a binding interval.**

Section 18: Actions for Price and Net Interchange issues in Manage CTS Data display

Notes

- There are tolerances on the highlighting such that only extreme conditions are presented. The tolerance requires that the NY Price and NE Price is opposite the net flow and have both a 200% and $100 difference between them.
- Orange highlighting occurs when the tolerance on the NY Price and NE Price has been reached and there is a ramp or reliability constraint in the NYISO RTC solution
- Red highlighting occurs when the tolerance on the NY Price and NE Price has been reached and there is NO ramp or reliability constraint in the NYISO RTC solution

Step 18.1

Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **NY Price, NE Price, and CTS NI is highlighted orange for a binding interval.**

Actions for orange highlighting of the NY Price, NE Price, and CTS NI value.

Step 18.1.1

Primary Responsibility: Generation Operator

Check for ramp or reliability limit constraints in the upcoming intervals and verify the applicable constraint is appropriate for system conditions.

Instructions

- ❑ If ramp and reliability limits appear appropriate, continue the scheduling process for the CTS Interface using Section 1 of this CROP.
- ❑ If reliability limits do **NOT** appear appropriate, continue the scheduling process for the CTS Interface and:
  - ❑ Review RTUC and CTSPE and verify Operator Inputs and Overrides are **NOT** contributing to an inappropriate reliability limit. Update Operator Inputs and Overrides as needed.
  - ❑ Contact IT On-Call Technician
  - ❑ Notify NYISO of the issue
  - ❑ If reliability limits appear to be negatively impacting CTS Interface interchange schedules, request the NYISO Operator override of applicable reliability limit(s) if limit(s) appear incorrect in intervals for which binding CTS Interface interchange schedules have **NOT** yet been determined

Notes

Reliability Limits in the current and next two intervals **cannot** be overridden. For identified issues with Reliability Limits beyond that, the NYISO Operator has the capability to override incorrect limits upon request.

Step 18.2

Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **NY Price, NE Price, and CTS NI is highlighted in red for a binding interval.**

Actions for red highlighting of the NY Price, NE Price, and CTS NI value.

Instructions

- ❑ Continue the scheduling process for the CTS Interface and:
  - ❑ Reviewing the RTUC and CTSPE to ensure the Operator Inputs and Overrides are **NOT** contributing to an inappropriate solution.
  - ❑ Contacting the IT On-Call Technician
  - ❑ Notifying the NYISO Operator of indication of CTS interchange flow contrary to expected NY and NE Prices.
  - ❑ Return to Section 1 to continue the scheduling process.

Condition(s) to perform this section:

- **Indication of a data issue related to scheduling the CTS Interface.**

Section 19: Actions for a data issue on the CTS Interface

Notes

- Data issue is **NOT** related to a planned software outage
- Data related to the scheduling of the CTS Interface is sent to NE via 2 processes, RTC and FTC.
- RTC data is limited to the NY Price and NE Price on the Manage CTS display.
  - RTC Data transfer is indicated by the "NY Data Received" on the Manage CTS display. This field will turn orange if RTC data has **NOT** been received in more than 20 minutes and red if it has **NOT** been received in more than 31 minutes.
  - Failure of the RTC data transfer alone does **NOT** typically limit the ability to perform normal scheduling on the CTS Interface.
- FTC data includes the following:
  - On the Manage CTS display, the CTS NYN NI value
  - On the NYN Scheduling display;
    - Indication of NY Data Status as "Binding" or "Advisory"
    - NY NI value for each interval and associated external transaction data.
- NE Data to be used by NYISO for scheduling the CTS Interface is sent from NE to NYISO every 15 minutes.
  - This data includes NE prices and reliability limits associated with the last approved CTSPE case.
  - Transfer of this data is indicated by the "ISO-NE Data Sent" on the Manage CTS display. This field will turn orange if data has **NOT** been sent in more than 20 minutes and red if it has **NOT** been sent in more than 31 minutes.

Step 19.1
ISO-NE data issues.

Notes

- "ISO-NE Data Sent" updates approximately 2 minutes before each quarter hour as data is sent to NYISO for use in the next RTC run that occurs every quarter hour.

- Possible Indications:
  - "ISO-NE Data Sent" is either orange or red
  - NYISO Operator indicates that there is an issue with the receipt of ISONE data
  - Failure of, CTSPE

Step 19.1.1 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Indication of delay in updating of "ISO-NE Data Sent:".**

Ensure a recent CTSPE case has been approved.

Instructions

If a recent CTSPE case has **NOT** been approved, attempt manual execution and approval.

Notes

If a CTSPE case is manually executed and **NOT** approved, CTSPE will cease to continue running.

Step 19.1.2 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **A recent CTSPE case has been approved and there is still an indication of delay in updating of "ISO-NE Data Sent:"**

Notify the Senior System Operator, Operations Shift Supervisor, IT On-Call Technician, and NYISO Operator.

Instructions

- ❑ The NYISO RTC will continue to run using the last received ISONE data. As such, the failure of the data transfer from NE to NYISO alone does **NOT** typically limit the ability to perform normal 15 minute scheduling on the CTS Interface; therefore continue scheduling per Section 1 of this CROP.
- ❑ At some point, if it is determined that the last ISO-NE data sent is "stale" it may be necessary to make the determination to utilize the DA schedules on the CTS Interface, per Step 19.2.5 of this CROP.

Step 19.2

NYISO data issues.

Notes

- FTC and RTC data should be received from NYISO approximately at the same time, once every 15 minutes
- Possible indications of RTC issue include:
  - NY Data Received is either orange or red
  - NY Price and NE Price are **NOT** updating as expected
  - NYISO Operator indicates to NE that RTC is having problems
- Possible indications of FTC issue include:
  - NYN Scheduling display says "Advisory" for next interval being scheduled
  - CTS NYN NI value on Manage CTS Data display is **NOT** updating as expected
  - NYISO Operator indicates to NE that FTC is having problems

Step 19.2.1 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **NE is receiving FTC data, but is NOT receiving RTC data.**

Notify the IT On-Call Technician and NYISO Operator.

Instructions

Continue scheduling the CTS Interface per Section 1 of this CROP

Notes

Failure of the RTC data transfer alone does **NOT** typically limit the ability to perform normal scheduling on the CTS Interface.

Step 19.2.2 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **NE is NOT receiving FTC data and NYISO Operator has indication of "binding" NYN schedules.**

Click the "Get NY Schedule" button.

Instructions

- ❑ If indication now shows "Binding", then proceed with Scheduling per Section 1 of this CROP.
- ❑ If indication does **NOT** show "Binding", then proceed to next step of this section.

Step 19.2.3 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **NE is NOT receiving FTC data and NYISO Operator has indication of "binding" NYN schedules and "Get NY Schedule" button did not populate data**

Verbally agree with the NYISO Operator on the next interval schedule for NYN.

Instructions

The NE Operator will verbally agree with the NYISO Operator and implement the agreed upon net schedule as long as it does **NOT** cause a reliability issue, and there will be no "NE Sched MW".

Notes

- If there are wheels, they are likely to have "NE Sched MW" since they are hourly and become binding earlier
- Action will be taken to populate the "NE Sched MW" at a later time.

Step 19.2.3.1 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Previously scheduled ramps have begun; Or**
- **Previously entered ramp schedule is being modified.**

Enter the verbally agreed upon NYN schedule in the EMS Interchange Scheduling display.

Instructions

- ❑ Perform the following:
  - ❑ Enter the NON-Emergency portion of the Interval Schedule manually in the W_CAP line of the NYPP NX_NRT section.
  - ❑ Enter the Ramp Start time;
  - ❑ Enter the Ramp duration;
  - ❑ Click the "Implement" button.

Notes

If a previously agreed upon ramp has not begun and a new ramp schedule is entered into the EMS Interchange Scheduling display, the old schedule will be overwritten.

Step 19.2.3.2 Primary Responsibility: Generation Operator

Log the verbally agreed upon interchange schedule.

Instructions

Use log entry: > INTERCHANGE SCHEDULING > Verbally Agreed Upon Interchange Schedule

Step 19.2.3.3 Primary Responsibility: Generation Operator

Notify the Senior System Operator and Loader Operator that a schedule has been manually entered.

Step 19.2.3.3.1 Primary Responsibility: Loader Operator

Update the PCEC for the schedule change.

Step 19.2.3.3.2 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **External Transaction schedule change ramp is complete.**

Verify that "Actual" interchange MW coincides with "Present" interchange MW.

Notes

- "Present" " interchange MW value is chosen vice the "Schedule" MW value since the next interval schedule may be sent to the EMS Interchange Scheduling display before the current ramp is complete.
- Take into account NE and NB ACE values when performing verification.

Step 19.2.4 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **NE is NOT receiving FTC data, neither NE nor NYISO Operators have indication of binding NYN schedules, and Advisory NYN schedules are available.**

Use Advisory NYN data for the interval being scheduled.

Instructions

- ❑ On the NYN Scheduling display select "Use Advisory Data" button for applicable interval, which will:
  - ❑ Set "NE Sched" to be equal to the "NY Sched" values for the applicable intervals
  - ❑ ISONE ID will be created for the applicable transactions
  - ❑ Submitted and Price values will be used from last available FTC data
- ❑ Continue scheduling the CTS Interface per Section 1 of this CROP

Step 19.2.5 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **NE is NOT receiving FTC data, neither NE nor NYISO Operators have indication of binding NYN schedules, and Advisory NYN schedules are NOT available.**

Schedule the CTS Interface using the matched net interchange value shown on the "Day Before Checkout" spreadsheets supplied by the TSO Administrator.

Instructions

- ❑ Agree upon the Day Before checkout NYN schedule with NYISO Operator
- ❑ Adhere to 300 MW interval ramp limit while ramping to Day Before checkout schedule
- ❑ Utilize DA NYN schedule unless a reliability issue dictates the need for a different schedule

Notes

The value on the "Day Before Checkout" spreadsheet shows the lowest MW amount that was available in both areas during the day-before checkout.

Step 19.2.5.1 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Previously scheduled ramps have begun; Or**
- **Previously entered ramp schedule is being modified.**

Enter the verbally agreed upon NYN schedule in the EMS Interchange Scheduling display.

Instructions

- ❑ Perform the following:
  - ❑ Enter the NON-Emergency portion of the Interval Schedule manually in the W_CAP line of the NYPP NX_NRT section.
  - ❑ Enter the Ramp Start time;
  - ❑ Enter the Ramp duration;
  - ❑ Click the "Implement" button.

Notes

If a previously agreed upon ramp has not begun and a new ramp schedule is entered into the EMS Interchange Scheduling display, the old schedule will be overwritten.

Step 19.2.5.2 Primary Responsibility: Generation Operator

Log the verbally agreed upon interchange schedule.

Instructions

Use log entry: > INTERCHANGE SCHEDULING > Verbally Agreed Upon Interchange Schedule

Step 19.2.5.3 Primary Responsibility: Generation Operator

Notify the Senior System Operator and Loader Operator that a schedule has been manually entered.

Step 19.2.5.3.1 Primary Responsibility: Loader Operator

Update the PCEC for the schedule change.

Step 19.2.5.3.2 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **External Transaction schedule change ramp is complete.**

Verify that "Actual" interchange MW coincides with "Present" interchange MW.

Notes

- "Present" " interchange MW value is chosen vice the "Schedule" MW value since the next interval schedule may be sent to the EMS Interchange Scheduling display before the current ramp is complete.
- Take into account NE and NB ACE values when performing verification.

Condition(s) to perform this section:

- **Adjacent RC/BA Scheduling software is NOT available; Or**
- **The facilitated checkout display is not updating or responding.**

Section 20: Loss of Adjacent RC/BA Scheduling Software (NB, HQ, NNC, CSC)

Notes

- This section is applicable in the event of a loss of schedule software, or scheduling software maintenance with an adjacent RC/BA
- The intent of this section is to schedule the Day Ahead Transactions that are available in both RC/BA Markets.

Step 20.1 Primary Responsibility: Generation Operator

Notify the Senior System Operator, Operations Shift Supervisor and the adjacent RC/BA.

Step 20.2 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **ALL Non-CTS Interfaces show "Advisory" data on the FTC display.**

Notify IT On-call Technician.

Notes

If all Non-CTS Interfaces show "Advisory" data on the FTC display, this likely indicates an issue with ISO-NE software / communication. If it is "Advisory" for only one RC/BA then the software / communication issue is likely due to the neighboring RC/BA and should be investigated on their side.

Step 20.3 Primary Responsibility: Generation Operator

Click the "Run Scheduling" button.

Step 20.4 Primary Responsibility: Generation Operator

Set the "From DA" flag.

Step 20.5 Primary Responsibility: Generation Operator

Return to Section 2 to continue the scheduling process.

Condition(s) to perform this section:

- **Non-CTS Software has failed; Or**
- **There is a planned outage of the Non-CTS scheduling software.**

Section 21: Loss of ISO-NE Non-CTS scheduling software

Notes

- This section is applicable in the event of a loss of scheduling software, or scheduling software maintenance.
- In the event of an unplanned outage, ensure TTC values are not violated.
- Possible Indications:
  - Inability to access the RT Overview display
  - Non-CTS Interface displays are **NOT** updating

Step 21.1

Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **For UNPLANNED ISO-NE scheduling software outages.**

Notify the Senior System Operator, Operations Shift Supervisor, and IT On-Call Technician.

Step 21.1.1

Primary Responsibility: Generation Operator

Schedule NB and HQTE interfaces using the matched net interchange value shown on the "Day Before Checkout" spreadsheets supplied by the TSO Administrator or available from the Day Before Checkout display in REX2.

Instructions

- ❑ Access the Day Before Checkout display in REX2 as follows:
  - ❑ Click "Checkouts";
  - ❑ Click "Day Before Checkout";
  - ❑ Select the proper date from the "Date" field;
  - ❑ Click the date and time information in the "Saved Dataset" field to display the values;
  - ❑ Use the schedule provided in the "ISO-NE Total" row
- ❑ Confirm with the Senior System Operator or Operations Shift Supervisor of the schedule to be used.

Notes

- If operating to the Day Before Checkout will impose a capacity deficiency for the neighboring RC/BA, actions to address the issue will be taken to deviate from the Day Before schedule. This will require adjusting the schedule to the neighboring RC/BA schedule after the outage.
- The value on the "Day Before Checkout" spreadsheet shows the lowest MW amount that was available in both areas during the day-before checkout.
- Scheduling to the net interchange from the "Day Before Checkout" instead of agreeing to the neighbor's real-time value, minimizes the chance of scheduling real-time transactions that do not exist. The detailed transactions will be verified by the TSO in the Day Before Checkout.

Step 21.1.2

Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **For NYISO Non-CTS Interfaces.**

Agree to the schedule provided by the NYISO Operator.

Step 21.2 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **For planned ISO-NE scheduling software outages.**

Run Schedules for all interfaces in advance for the applicable intervals of the outage.

Notes

Once the checkout has been completed for the applicable intervals no changes will be made on the NB or HQTE interfaces unless there is a reliability issue.

Step 21.2.1 Primary Responsibility: Generation Operator

Print each facilitated checkout display for reference during future scheduling.

Notes

When there are outages of the scheduling software, the Operator may not be able to view any of the displays within the software. It is recommended to print each facilitated checkout display in order to have visibility of the contracts on the interfaces in situations where reliability curtailments may need to be performed by the neighboring RC/BA. While no actions will be able to be performed by the Generation Operator in the software, they can reference the tags being adjusted by the neighboring RC/BA.

Step 21.2.2 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **For NYISO Non-CTS Interfaces; And**
- **NYISO provides a schedule different than the advisory value.**

Agree to the schedule provided by the NYISO Operator.

Step 21.3 Primary Responsibility: Generation Operator

Checkout with the applicable RC/BA.

Standard(s) for completion:

- 3-part communication is used.
- Checkout complies with requirements of INT-009.

Instructions

NYISO

- ❑ Confirm the following for NNC and CSC ties with the NYISO Interchange Operator:
- ❑ If it is the first checkout of the shift:
- ❑ Establish and agree on the standard interchange ramp start time and duration
- ❑ Interchange schedule including ramp i.e. “standard ramp”;
- ❑ If deviating from the standard interchange ramps agree on:
- ❑ Ramp start time
- ❑ Ramp duration

- ❑ Inform the NYISO Interchange Operator of the following:
- ❑ Phase II schedule;
- ❑ Schedule wheel-through transactions with HQTE, NB and NYISO;
- ❑ If this is the first checkout of the shift:
- ❑ New England’s ability to provide SAR;
- ❑ New Brunswick’s ability to provide SAR and MW amount.
- ❑ If there are changes to New England or New Brunswick’s ability to provide SAR.

HQTE

- ❑ Confirm the following for Phase II and Highgate ties with the HQTE Operator:
- ❑ If it is the first checkout of the shift:
- ❑ Establish and agree on the standard interchange ramp start time and duration
- ❑ Scheduled MW amount;
- ❑ Delivered MW amount including ramp i.e. “standard ramp”;
- ❑ If deviating from the standard interchange ramps agree on;
- ❑ Ramp start time
- ❑ Ramp duration

Notes

- ❑ For Phase II changes that are > 20 MW, Phase II movement is required.
- ❑ For Phase II changes that are ≤ 20 MW, Phase II movement is **NOT** required.

NBP-SO

- ❑ Confirm the following with the NBP-SO:
- ❑ If it is the first checkout of the shift:
- ❑ Establish and agree on the standard interchange ramp start time and duration
- ❑ Interchange schedule including ramp i.e. “standard ramp”;
  - ❑ If NB to NE is scheduled above 100 MW, ensure the 396 Line RAS is armed in accordance with the 396 Line RAS document.
  - ❑ If NE to NB is scheduled above 100MW, ensure the 396 Line RAS is disarmed in accordance with the 396 Line RAS document.
  - ❑ If NB to NE is scheduled above 650 MW, ensure that NBP-SO has sufficient generation and/or HVdc rejection to arm in an amount greater than the NB to NE schedule above 650 MW in accordance with the DPL RAS document.
- ❑ If deviating from the standard interchange ramps agree on:
  - ❑ Ramp start time
  - ❑ Ramp duration
- ❑ Inform the NBP-SO of the following:
- ❑ NB's ability to provide and receive assistance (combination of SAR and MRA).

Notes

- The expectation is that SAR is discussed with NYISO during the first checkout of the shift and after that only changes are discussed.
- When SAR is NOT available due to a technical reason (e.g. NYISO SAR computer is down) and upon loss of a facility that was flowing wheel-though transactions, the associated wheel-through transactions are curtailed using a start time and ramp duration as mutually agreed upon with the applicable RC/BA.
- The requirement is that the standard interchange ramp start time and duration will be established during the first checkout of the shift and only deviations will be discussed thereafter.
  - Example: "For the Phase II schedule the standard ramp will start at minute :55 over ten minutes".
- Standards for completion were added based on the 2021 audit recommendations, and in response to a non-compliance response.

Step 21.4 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Phase II schedule has changed and requires the converter to move; Or**
- **Highgate schedule has changed; Or**
- **CSC schedule has changed.**

Notify the Converter Operator of the schedule change.

Standard(s) for completion:

- 3-part communication is used.

Instructions

Include the following

- ❑ If this is the first checkout of the shift for the applicable converter:
- ❑ Establish and agree on the standard interchange ramp start time and duration
- ❑ New Schedule including ramp i.e. "standard ramp";
- ❑ If deviating from the standard interchange ramps:
  - ❑ Ramp start time
  - ❑ Ramp duration

Notes

- For Phase II changes: notify Sandy Pond
- For Highgate changes: notify VELCO
- For CSC changes: notify CSC Operator
- The requirement is that the standard interchange ramp start time and duration will be established during the first checkout of the shift and only deviations will be discussed thereafter.
  - Example: "For the Phase II schedule the standard ramp will start at minute :55 over ten minutes".
- Standard for completion was added based on the 2021 audit recommendations.

Step 21.5 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Schedule change requires notification to an LCC.**

Notify applicable LCC Operators of the schedule change.

Instructions

- ❑ CONVEX LCC Operator is notified for the following:
  - ❑ NNC tie change greater than or equal to 100 MW; or
  - ❑ CSC tie change greater than or equal to 200 MW.
- ❑ Maine LCC Operator is notified for the following:
  - ❑ NB tie change greater than or equal to 200 MW when the current Interface schedule is less than or equal to 700 MW; Or
  - ❑ NB tie change greater than or equal to 100 MW when the current Interface schedule is greater than 700 MW
- ❑ NH LCC Operator is notified for the following:
  - ❑ Blocking of Phase II;
  - ❑ De-Blocking of Phase II.

Step 21.6 Primary Responsibility: Generation Operator

Enter the verbally agreed upon interchange schedule in the EMS Interchange Scheduling display.

Instructions

- ❑ Enter the NON-Emergency portion of the Interval Schedule manually in the W_CAP line.
- ❑ Enter the Ramp Start time;
- ❑ Enter the Ramp duration;
- ❑ Click the “Implement” button.

Step 21.7 Primary Responsibility: Generation Operator

Log the verbally agreed upon interchange schedule.

Instructions

Use log entry: > INTERCHANGE SCHEDULING > Verbally Agreed Upon Interchange Schedule

Step 21.8 Primary Responsibility: Generation Operator

Notify the Senior System Operator and Loader Operator that the interchange schedule has been entered.

Step 21.9 Primary Responsibility: Loader Operator

Update the PCEC for the schedule change.

Step 21.10 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **External transaction schedule change ramp is complete.**

Verify that “Actual” interchange MW coincides with “Schedule” interchange MW on the EMS Interchange Scheduling display.

Condition(s) to perform this section:

- **Problem preventing NE Operator from viewing CTS Data and projected NYN NI schedules.**

Section 22: Loss of scheduling software on CTS Interface

Notes

- Possible Indications:
  - Inability to access NYN Scheduling display
  - NYN Scheduling display is not updating

Step 22.1 Primary Responsibility: Generation Operator

Notify the Senior System Operator, Operations Shift Supervisor, IT On-Call Technician, and NYISO Operator.

Step 22.2 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Issue associated with ISONE and is NOT functioning.**

Determine the NYN schedule to be used.

Standard(s) for completion:

- 3-part communication is used.
- Checkout complies with requirements of INT-009.

Instructions

- ❑ Agree to NYN NI as determined by the NYISO Operator and implement the agreed upon schedule as long as it does **NOT** cause a reliability issue

- ❑ Confirm the following with NYISO:
  - ❑ If it is the first checkout of the shift:
  - ❑ Establish and agree on the standard interchange ramp start time and duration
  - ❑ NYN schedule including ramp i.e. “standard ramp”;
  - ❑ CA-to-CA Emergency, if applicable.

- ❑ If deviating from the standard interchange ramps agree on:
  - ❑ Ramp start time
  - ❑ Ramp duration

- ❑ When the ability for New England and/or New Brunswick to provide SAR changes.

Notes

- Action will be taken to populate the NE Sched MW at a later time.
- The expectation is that SAR is discussed during the first checkout of the shift and after that only changes are discussed.
- When SAR is **NOT** available due to a technical reason (e.g. NYISO SAR computer is down) and upon loss of a facility that was flowing wheel-though transactions, the associated wheel-through transactions are curtailed using a start time and ramp duration as mutually agreed upon with the applicable RC/BA.
- The requirement is that the standard interchange ramp start time and duration will be established during the first checkout of the shift and only deviations will be discussed thereafter.
  - Example: “For the minute: 15 interval schedule the standard ramp will start at minute: 10 over ten minutes”.
- Standards for completion were added based on the 2021 audit recommendations, and in response to a non-compliance response.

Step 22.3 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **NYN tie change greater than or equal to 500 MW.**

Notify CONVEX Operators of the schedule change.

Step 22.4 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **Previously scheduled ramps have begun; Or**
- **Previously entered ramp schedule is being modified.**

Enter the verbally agreed upon NYN schedule in the EMS Interchange Scheduling display.

Instructions

Perform the following:

- ❑ Enter the NON-Emergency portion of the Interval Schedule manually in the W_CAP line of the NYPP NX_NRT section.
- ❑ Enter the Ramp Start time;
- ❑ Enter the Ramp duration;
- ❑ Click the "Implement" button.

Notes

If a previously agreed upon ramp has not begun and a new ramp schedule is sent to the EMS Interchange Scheduling display, the old schedule will be overwritten.

Step 22.5 Primary Responsibility: Generation Operator

Log the verbally agreed upon interchange schedule.

Instructions

Use log entry: > INTERCHANGE SCHEDULING > Verbally Agreed Upon Interchange Schedule

Step 22.6 Primary Responsibility: Generation Operator

Notify the Senior System Operator and Loader Operator that a schedule has been manually entered.

Step 22.7 Primary Responsibility: Loader Operator

Update the PCEC for the schedule change.

Step 22.8 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **External transaction schedule change ramp is complete.**

Verify that "Actual" interchange MW coincides with "Present" interchange MW on the EMS Interchange Scheduling display.

Notes

- "Present" " interchange MW value is chosen vice the "Schedule" MW value since the next interval schedule may be sent to the EMS Interchange Scheduling display before the current ramp is complete.
- Take into account NE and NB ACE values when performing verification.

Condition(s) to perform this section:

- **NYISO has indicated that there will be a shift to Hourly Scheduling on the CTS Interface; Or**
- **ISO-NE is planning to shift to Hourly Scheduling on the CTS Interface; Or**
- **NYISO has indicated that there will be a shift to 15-Minute Scheduling on the CTS Interface; Or**
- **ISO-NE is planning to shift to 15-Minute Scheduling on the CTS Interface.**

Section 23: Transition into or out of Hourly Scheduling on the CTS Interface

Step 23.1

Condition(s) to perform this step:

- **NYISO has indicated that there will be a shift to Hourly Scheduling on the CTS Interface; Or**
- **ISO-NE is planning to shift to Hourly Scheduling on the CTS Interface.**

Transition to hourly schedules on the CTS Interface.

Notes

- It may be necessary to schedule hourly instead of every 15 minutes on the CTS Interface, when transitioning to hourly scheduling as part of a planned outage, NYISO requires (and will provide) a minimum of 75 minutes notice.
- Hourly Scheduling on CTS Interface must begin and end at the top of an hour.
- During Hourly Scheduling on the CTS Interface only one checkout is required to be performed each hour with the NYISO operator using the same process described in Section 1 of this CROP (with the exception of those listed in this Section)
- Ramp limitations when performing hourly scheduling of up to 700 MW will be allowed on the CTS Interface during hourly scheduling and while transitioning into and out of hourly scheduling.
- If the total hourly ISONE interchange ramp is greater than 900 MW, the Operations Shift Supervisor will evaluate reliability and the available resources for the ramp. If curtailments are required, then the NYN ramp may be curtailed but **NOT** lower than 400 MW, the remaining curtailments will be applied to the Non-CTS ramp. The Operations Shift Supervisor shall only restrict an hourly ramp exceeding 900 MW if it will result in a reliability problem or exceed the capacity of available resources for the scheduling interval.
- If the ISO-NE prices and limits message could be impacted for > 2 hours, the outage notice email between the two Areas may indicate “Only evaluate DAM-scheduled transactions.”

Step 23.1.1 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **If the transition is being initiated by ISO-NE.**

Notify the NYISO System Operator of the transition to hourly schedules for CTS Interface.

Standard(s) for completion:

- NYISO requires a minimum of 75 minutes notice.

Step 23.1.2 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **ISO-NE and NYISO have communicated to each other that only DAM scheduled transactions will be used.**

Use Day Ahead cleared MW schedule for the interval being scheduled (once per hour).

Instructions

- ❑ Perform the following:
  - ❑ Agree upon the DA NYN schedule with NYISO Operator
  - ❑ Adhere to 300 MW interval ramp limit while ramping to DA schedule
  - ❑ Utilize DA NYN schedule unless a reliability issue dictates the need for a different schedule

Notes

- The Day Ahead Schedule is an hourly value, when scheduling to the DA value that will be used for the whole hour.
- The use of the DAM scheduled transactions prevents Market Participant exposure to stale prices from the CTS solution.

Step 23.1.3 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **ISO-NE and NYISO have NOT communicated to each other that only DAM scheduled transactions will be used.**

Perform Interchange Scheduling for NYN using Section 1 of this CROP (once per hour).

Step 23.1.4 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **If desired.**

Toggle the "Hrly Sch" button on the IFS display to change the scheduling alarming feature to hourly.

Step 23.1.5 Primary Responsibility: Generation Operator

Log the transition to hourly schedules.

Instructions

Use log entry: > INTERCHANGE SCHEDULING > NYN HOURLY SCHEDULING > Begin

Step 23.2

Condition(s) to perform this step:

- **NYISO has indicated that there will be a shift to 15-Minute Scheduling on the CTS Interface; Or**
- **ISO-NE is planning to shift to 15-Minute Scheduling on the CTS Interface.**

Transition to 15-Minute Scheduling on the CTS Interface.

Step 23.2.1 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **If the transition is being initiated by ISO-NE.**

Notify the NYISO System Operator of the transition to 15-Minute Schedules for the CTS Interface.

Standard(s) for completion:

- NYISO requires a minimum of 75 minutes notice.

Step 23.2.2 Primary Responsibility: Generation Operator

Perform Interchange Scheduling for NYN using Section 1 of this CROP.

Step 23.2.3 Primary Responsibility: Generation Operator

Log the transition to 15-Minute schedules.

Instructions

Use log entry: > INTERCHANGE SCHEDULING > NYN HOURLY SCHEDULING > End

Step 23.2.4 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **If the "Hrly Sch" was set on the IFS display.**

Toggle the "Hrly Sch" button to return the schedule alarming feature to 15 – minute scheduling .

Condition(s) to perform this section:

- **NYN Import TTC needs to be increased to be greater than the default TTC value**

Section 24: Change CTS Interface Import TTC Above Default Value

Notes

Changes to the default NYN Import TTC for long durations (e.g. beyond the current operating day) will be coordinated and performed by Control Room Operations Management.

Step 24.1 Primary Responsibility: Generation Operator

Notify NYISO of the change and agree to the higher TTC.

Step 24.2 Primary Responsibility: Generation Operator

Modify the CTS Interface TTC for the applicable hours.

Step 24.3 Primary Responsibility: Operations Shift Supervisor

Condition(s) to perform this step:

- **TTC change is expected to last longer than 24 hours**

Notify Control Room Operations Management.

Condition(s) to perform this section:

- **Tie Line Meter correction needs to be updated**

Section 25: Tie Line Meter Correction

Step 25.1 Primary Responsibility: Generation Operator

Enter the Meter Correction value on the EMS Interchange Scheduling display.

Step 25.2 Primary Responsibility: Generation Operator

Log the Meter Correction.

Instructions

Use log entry: > INTERCHANGE SCHEDULING > Change to Meter Correction

Condition(s) to perform this section:

- **Recevied notification of a TLR from the Forecaster; Or**
- **Received notification that the IDC software auto-acknowledge feature has been disabled.**

Section 26 : Respond to a TLR notification.

Notes

To satisfy NERC Standard IRO-006-EAST – Transmission Loading Relief Procedure for the Eastern Interconnection, the Interchange Distribution Calculator (IDC) software is monitored by the Forecaster and external transactions impacted by TLRs are communicated to the Generation Operator and Senior System Operator. The forecaster is alerted by the IDC when there is a new TLR which and then auto-acknowledged by the IDC software. The Forecaster will then communicate to the Generation Operator and Senior System Operator any transaction associated with the TLR, amount of MW to curtail and curtailment Hour Ending. If the auto-acknowledge feature is disabled in the IDC software, the TLRs will be monitored manually by the Forecaster.

Step 26.1

Primary Responsibility: Senior System Operator

Condition(s) to perform this step:

- **Notification of a TLR by the Forecaster.**

Verify the identified tag(s) have been scheduled to the required value on the applicable interface(s).

Step 26.1.1

Primary Responsibility: Senior System Operator

Condition(s) to perform this step:

- **Identified tag(s) were not automatically scheduled to the TLR value required.**

Instruct the Generation Operator to curtail the identified transaction(s) using Section 11 or Section 16 as applicable.

Step 26.2

Primary Responsibility: Operations Shift Supervisor

Condition(s) to perform this step:

- **Notified that the IDC software auto-acknowledge feature has been disabled.**

Direct the Forecaster to manually monitor for TLRs in the IDC software.

Revision History

Rev. No.	Date (MM/DD/YY)	Reason	Contact
--	12/9/21	For previous revision history, refer to Rev 40 available through Ask ISO	Steven Gould
41	03/22/22	Terminology change Section 1 title, and Section 2 title, Global change "Phase 2" to "Phase II" where needed; Added Notes from Section 23 to Section 1; Added Step 1.1.1; Notes in Step 1.3 incorporated into the overall Section Notes and made an existing note an actual instruction in Step 1.3; Consolidated Steps 1.5.1 & 1.5.2 into streamlined Instructions of 1.5; Corrected log entry terminology for Pre-OP4 and OP-4; Modified Section 2; Added Step 2.2.1, 2.2.2, 2.2.3; Moved Step 2.6 & 2.7 into substeps of Step 2.2; Streamlined all checkout processes in Section 2 to a single step for each interface instead of two substeps; Added Instructions to Step 2.16, 2.17, 2.18 for software problems; Modified Section 3 to consolidate some Steps to Instructions; Added Condition to enter in Section 15; Added ramp restrictions in Section 15; Added Instruction in Step 15.3; Modified Section 20; Modified Section 21, Added Step 15.11	Jonathan Gravelin
42	06/03/22	Updated procedure for REX2 software, modified Section 20 & 21	Jonathan Gravelin
43	08/10/22	Added Step 1.1.3, Added Step 2.16, Deleted Step 6.2, Updated Step 19.2.5, Modified Section 21, Consolidated Steps into Instructions for Sections 2, 4, 5, 9, 10, 11, 16, 17, Added Instructions to Steps 12.3 & 13.3.	Jonathan Gravelin
44	10/24//22	Update Background for FHIP timing	Jonathan Gravelin
45	01/03/23	Updated Procedure Background, Modified Notes in Section 1, 15 &23; Modified Note in Step 2.20.1.1; Deleted Step 3.2; Added Steps 9.1 and 10.1 removed condition to enter for HPI, aligned format to be consistent with CROP.31002;	Jonathan Gravelin
46	01/31/23	Clarified Notes in Section 1,15 and 23; Added Instruciton to Step 15.3; Added Step 9.3 with REX2 software update.	Jonathan Gravelin
47	04/18/23	Deleted Steps 9.2.1, 9.7.1, 10.2.1 & 10.4.1 with REX2 software update; Added Step 2.13.	Jonathan Gravelin
48	06/12/23	Updated Procedure Background, Added Section 26. Deleted Step 21.2.2; Re-ordered steps in Section 21 to keep all unplanned steps together; Modified Step 21.1.1 and added Instructions	Jonathan Gravelin
49	10/12/23	Updated inadvertent value in Section 2; Fixed Step numbers in Section 21; Added Step 2.5, added Notes to Steps 3.5, 3.6.2, 4.1, 5.1, 6.2, 9.2, 9.3, 9.7, and 10.2.	Jonathan Gravelin
50	6/20/24	Updated References & Procedure Background Information. Updated Section 1, 9, 10, 15, 16, 17, 18 & 19 with new CTS software deployment. Deleted Steps 2.6.1, 6.6.6, 14.1, & 14.5; changed Step 14.2 and added instructions. Globally replaced "NYN Interface" with "CTS Interface". Added Steps 23.1.4 and 23.2.4	Jonathan Gravelin

Attachment 1: CTS and Non-CTS Scheduling Flowchart