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|  | © ISO New England Inc. 2024 | Procedure: Perform Reserve Adequacy Analysis |
| | Process Name: Perform Reserve Adequacy Commitment | |
| | Procedure Number: RTMKTS.0050.0010 | Revision Number: 68 |
| | Procedure Owner: Thomas Knowland | Effective Date: November 20, 2024 |
| | Approved By: Director, Operations | Valid Through: November 20, 2025 |

SOP-RTMKTS.0050.0010 - Perform Reserve Adequacy Analysis

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1. Objective

The intent of this procedure is to define the business process that is performed to ensure sufficient Resources are available to meet capacity and reserve requirements for the current and next Operating Day.

2. Background


ISO New England (ISO) will perform a Reserve Adequacy Analysis (RAA) and if necessary commit Resources to meet capacity and reserve requirements. Its primary focus is to review the difference between the ISO forecast of demand and the total demand that was cleared in the Day-Ahead Market (DAM). Should insufficient capacity be committed in the DAM, Resources are committed to ensure adequacy of capacity in Real-Time (RT) to meet load, Operating Reserve, and Replacement Reserve requirements (Replacement Reserve requirements may be set to zero). The objective function in the RAA is the minimization of the Start-Up Fees and costs to operate at Economic Minimum (Eco Min) or Minimum Reduction for any additional Resources that are committed.

ISO will normally perform the initial run of the RAA process after the close of the Re-Offer Period each day. ISO will also perform additional RAA process runs throughout the Operating Day, based on updated ISO load forecasts and updated Resource and transmission maintenance availability information.

Cases within the RAA process are Security Constrained Reserve Adequacy (SCRA) cases and are created by copying the approved Day-Ahead (DA) case for a given day and applying forecasted load (as opposed to DA cleared load). SCRA Cases are solved by the Application Presentation Framework Market Operator Interface (APF-MOI) software.

The ISO Forecaster will run SCRA cases at pre-determined schedules and as required based on updated ISO load forecasts and updated Resource and transmission maintenance availability information.

Initial SCRA Cases are created by copying the approved DA case and are solved by the APF-MOI running a Scheduling and Price Dispatch (SPD) analysis and Simultaneous Feasibility Test (SFT) analysis. Subsequent SCRA Cases for a given day are created by copying the previously approved SCRA, updating it as described above and running an SPD analysis. SFT analysis is **not** required for intra-day SCRA cases.

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3. Responsibilities

NOTE

Any North American Electric Reliability Corporation (NERC) Certified System Operator, certified at the RC level, has the authority to take action(s) required to comply with NERC Reliability Standards

1. The Forecaster is responsible for:
 - A. Performing the RAA process
 - B. Communicating a forecasted Minimum Generation Emergency to the Operations Shift Supervisor
 - C. Verifying Resource startup cancellation and de-commitment events are recorded in the Control Room Event Logserver.
 - D. Performing the Forecast Capacity Analysis (FCA) and comparing the results with the results of the Energy Management System Market User Interface (EMU) System Capacity Monitor
 - E. Committing non-fast start Resources on a DA basis and in RT
 - F. Verifying long lead-time Resources that are being committed receive necessary Start-Up orders.


NOTE

A Forecaster is **not** to release an on-line Resource for shutdown in RT.

2. When a decision is made to cancel a commitment or de-commit an on-line Resource for future hours, the Forecaster is responsible for ensuring the Designated Entity (DE) is notified of the new schedule.

4. Controls

- The approved SCRA cases are time stamped upon completion
- The RAA process, through approval of the initial SCRA case (SCRA_A), is completed by 1700
- The Operating Reserve requirement is met 100% of the time except when all Resources have been committed
- Forecaster enters each cancelled start from the SCRA_A process in the Control Room Event Logserver and also cancels the appropriate RT Commitment Decision (CD) in the APF-MOI software.

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5. Instructions

5.1 Time of RAA

1. The Forecaster shall perform, an SCRA_A and an ISO FCA when the Real-Time (RT) Energy Market (RTM) Re-Offer Period closes.
2. The Forecaster shall periodically perform an SCRA and update the ISO FCA.

5.2 Set Up the RAA Case During the Re-Offer Period

NOTE


Under normal conditions, the Re-Offer Period is between the DA case approval and 1400 on the day prior to the Operating Day.

Market Participants (MPs) that wish to re-offer, normally submit re-offers through eMarket.

The term “Redeclaration” is defined in ISO New England Manual for Definitions and Abbreviations Manual M-35 (Manual 35) as “A restatement of a resource’s availability, limits, or other Offer Data, except price, submitted by a Market Participant to the ISO to reflect a change in the status or capability of the resource or changed by the ISO based upon the resource’s actual performance.”

For Redeclarations and schedule changes, DEs should contact the Forecaster or System Operators with the changes. Redeclarations are performed using the Energy Management System (EMS).

1. The Forecaster accepting a Redeclaration shall verify the Asset ID to confirm that the Redeclaration is applied to the correct Resource
2. The Forecaster shall evaluate any DE requested change for the following:
 - Operating limit Redeclarations to reflect physical limitations
 - Self-Schedule (SS) changes
 - De-commit requests
 - SS (commit) requests
 - Limited Energy Generation (LEG) Max Daily Energy
 - LEG Hourly Limit
 - SS pumping energy
 - Manual Response rates


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- Automatic Ramp rates
- Claim10/Claim30
- Notification Times (Hot, Inter, Cold)
- Start-up Times (Hot, Inter, Cold)

NOTE

A Redeclaration request received after the close of the Re-Offer period is taken in accordance with CROP.36002 Redeclarations.

3. The Forecaster shall review each requested change and determine to accept or reject the requested change by performing the following:
 - A. Use the Current Operating Plan FCA tool to assist in determining to either accept or reject the requested change.
 - B. If the requested change can be accommodated according to system capacity, reserves and Reliability Coordinator Area/Balancing Authority Area (RCA/BAA) capacity, enter the requested change in the “Unit Limits” display.
 - If the requested change results in any commitment changes, use the APF-MOI to enter the commitment change into the “Case Inputs, Units / DRRs (Demand Response Resources)” display and issue any appropriate CD.
 - If the requested change is approved and affects a current day startup or shutdown or the initial conditions of the next day’s initial SCRA_A, as required, modify each appropriate SCRA.
 - C. If the requested change **cannot** be accommodated, inform the DE of the denial.
 - D. Enter the reason for any SS or de-commitment denial in the Control Room Event Logserver

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NOTE

For combined cycle Generators modeled as a single Generator the Economic Maximum Limit (Eco Max) is Redeclared to properly account for the operating configuration of the Generator.

Combined Cycle Redeclarations will normally be performed by the Control Room System Operators in accordance with CROP.36002 Redeclarations.

4. The Forecaster shall **not** include combined cycle Generator Redeclarations in the SCRA_A unless a material condition restricts the output of the combined cycle Generator, e.g., one combustion turbine is Out-of-Service (OOS).

NOTE

Ramps are included and will be shown in all SCRA cases.

5. The Forecaster shall ensure a ramp profile is displayed in the SCRA case for any Generator that has a commitment from the DAM.
6. If the DE requests a ramp profile different from the offered-in profile to meet its commitment the Forecaster shall enter the appropriate Redeclaration in the “Unit Limits” display and the “ISO Unit Times Data” display of the EMU.
 - A. If a known Minimum Generation Emergency exists and the ramp schedule or run-through causes or contributes to the Minimum Generation Emergency, deny the ramping request.


NOTE

The approved SCRA solution will overwrite the DA Schedule or any prior SCRA schedule in the “Planned Leg MW” column of the “ISO Unit LEG/Posture” display in EMU.


When a DE requests a Generator be run as a LEG, the Unit Dispatch System (UDS) will use the schedule in the “LEG Limit” column on the “LEG Units” display.

When a value is placed in the LEG Limit column the LEG flag will automatically be set and the UDS will run the Generator as a LEG.

7. For each Generator with a LEG, the Forecaster shall perform the following:
 - A. Upon a DE request to be run as a LEG (follow LEG schedule), re-declare its hourly Limited Energy Maximums with the DA, SCRA or Generator requested schedule in the “LEG Limit” column of the “ISO Unit LEG/Posture” display.

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- B. When Re-declaring a Generator LEG Hourly Max Limit (Schedule), verify the LEG Hourly Max Limit is at least one (1) MW greater than the Eco Min in each hour (unless the Redeclaration is for zero (0) MW).
- C. Upon DE request, Re-declare the Generator Maximum Daily Energy available.

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5.3 Run the SCRA_A Case

5.3.1 Run the SCRA_A Case

1. The Forecaster shall perform the following steps after the final approval of the DAM case for the same Operating Day.
 2. The Forecaster shall set up the SCRA_A case as follows:
 - A. Duplicate the APPROVED Day-Ahead case file, and rename it as an SCRA_A case:
 - (1) Set up a case to run selecting the Use COP (Current Operating Plan) checkbox.
 - (2) Set the case end for Hour 24 of the following day.
 - B. Evaluate any newly excluded or created DAM contingencies and discuss newly excluded or created DAM contingencies with the Operations Shift Supervisor, and as directed by the Operations Shift Supervisor either include or exclude these contingencies in the SCRA_A case.
3. The Forecaster shall enter pump data per step 5.5 of this procedure.
4. Using the Day Ahead Import Export tool, the Forecaster shall enter the following:
 - A. The Generation Requirements for Transmission (GRT) Constraint file
 - B. The anticipated Fixed External Transactions using the transaction schedules provided by the TSO Administrator.
 - (1) Interchange schedules shall match the mutually cleared day ahead market interchange schedules (i.e., day ahead common), adjusting interchange totals as necessary to reflect conditions that will impact deliverability of certain External Transactions.
 - C. System wide and Locational Reserve Requirements:
 - (1) As necessary, adjust reserve numbers on reserve tab for MISC for any units that may constitute largest or second largest contingency.
 - (2) As necessary, adjust or enter reserve numbers for Hydro Quebec (HQ) Phase II HVDC.
 - (3) Adjust or enter reserve numbers to reflect Resource status.
 - (4) Adjust or enter the correct Replacement Reserve requirement:
 - 160 MW during Daylight Savings Time

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- 180 MW during Standard Time
- (5) Sets Spinning Reserve requirement to 25%.
- (6) Verify the imported System Reserve Requirements are consistent with the requirements stated in CROP.35003 Reserve Requirement Adjustments.

D. Initialize Zonal Demand.

NOTE


Approximately 20 minutes after the close of the Re-Offer Period, the Forecaster should receive an email showing that the Market Monitoring price schedules have been uploaded automatically.

If this email is **not** present, additional Resource commitment must be coordinated with Market Monitoring and Mitigation on-call staff but the RAA process may continue.


- 5. The Forecaster shall save the case.
- 6. The Forecaster shall run the SCRA_A study case.

5.3.2 Review the SCRA_A Case

- 1. Upon SCRA_A case solution, the Forecaster shall perform the following actions:
 - A. Review the following
 - (1) System-wide Ten-Minute Spinning reserve (TMSR), Ten-Minute Non-Spinning Reserve (TMNSR) and Thirty-Minute Operating Reserve (TMOR).
 - a. If deficient in TMSR, TMNSR or TMOR, consult with the Operations Shift Supervisor before committing additional non-fast start Resources and verify that a 50% Spinning Reserve requirement can be met in RT and that pumped storage pond levels are adequate for the expected day’s run.
 - b. When it is necessary to commit for reserve:
 - i. Utilize the APF-MOI General Input “Manage Commitments” tab to determine the least-cost capacity to commit
 - ii. Consider the minimum run time constraints.
 - iii. All pool-scheduled CDs that are created in the SCRA_A may be approved.

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- B. Load the results into FCA and verify that sufficient system capacity has been committed.
 - C. Use the Commitment Differences Report to determine which Resources were committed in the SCRA_A or if their DA commitment was extended.
2. The Forecaster shall run the “Data Validation function” in the Day Ahead Import Export tool and take any necessary actions.
 3. If required for reliability (i.e., due to anticipated storms, hurricanes or other conditions that affect Bulk Electric System (BES) reliability), the Forecaster shall commit additional Resources.
 4. After running the SCRA case prior to approval, the Forecaster shall load the case into the FCA then the Forecaster shall click on the “Approve case” button in the FCA tool for archiving purposes.
 5. The Forecaster shall approve the case in the APF-MOI as follows:
 - A. Open the “Case Solution” tab
 - B. Select the Case Approval menu option
 - C. Select “Approve”


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5.4 SCRA_A and Intraday SCRA unit commitment.

1. If loads are running over forecast by more than 400 MW and that trend is expected to last through the peak of the day, or there has been a loss of capacity (External Transactions, Wind Deviation, etc.) in excess of 400 MW, and due to either of those reasons the current SCRA case indicates a need for additional commitment, it may warrant the Forecaster using the scheduling tab of the APF-MOI to determine additional commitment with agreement of security evaluation directed by the Control Room Shift Supervisor.

5.5 Schedule Pumping

1. During the Re-Offer Period, SCRA_A process and RT, the Forecaster shall be in communications with the DDE to receive any RT SS.
2. If requested, the Forecaster shall SS pumps by performing the following:
 - A. Redeclare the Minimum Consumption (Min Cons) value in the “Demand Limits” display for the MW value and hours of SS requested.
 - B. Set the Must Run flag for the requested hours.

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5.6 Run Intraday SCRA Case


5.6.1 Run the SCRA Case

1. To run intraday SCRA_ cases, the Forecaster shall:
 - A. Make a duplicate of the previous SCRA case and re-name case as applicable based on time of day.
 - B. Make certain the case is set to run an SCRA study mode.
 - C. Select the Use COP checkbox.
 - D. If an SCRA study case has changed from the previously run SCRA case, use the Day Ahead Import Export tool to enter the following data:
 - (1) Any changes in the “GRT Constraint” file.
 - (2) The system-wide and Locational Reserve Requirements.

NOTE

The Forecaster needs to determine which Resources are running and adjust or input the reserve numbers into the Reserve Requirements to reflect actual Resource status.

- (3) The anticipated Fixed External Transactions using the transaction schedules provided by the TSO Administrator.
 - a. Interchange schedules shall match the mutually cleared day ahead market interchange schedules (i.e., day ahead common), adjusting interchange totals as necessary to reflect conditions that will impact deliverability of certain External Transactions.
- E. Enter requested changes to Pumped Storage SS for RT operation as described in Step 5.5.
- F. Enter any reliability commitment identified in the ISO Outage Scheduling software into the APF-MOI “General Input, Manage Commitments” display as:
 - (1) SCU - Reliability Commitment
 - (2) VAR_UP_HIGH - Reliability Commitment
 - (3) VAR_UP_LOW - Reliability Commitment
 - (4) TCU Reliability Commitment
 - (5) RMR Reliability Commitment
 - (6) SCR Reliability Commitment

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- (7) GPA - Reliability Commitment
- (8) FUELDIV - Reliability Commitment
- (9) DRPA - Reliability Commitment

NOTE

A Resource that has a Claim 10/30 demonstration scheduled (as indicated in the ISO Outage Scheduling software) is **not** to be put into the SCRA case.


- G. Save the case.
- H. Run SCRA study.

5.6.2
Review the SCRA Solution

NOTE

Executing the SCRA case gives a security-constrained dispatch to meet ISO load forecast with Resources committed in the DA and RAA processes. Running the SCRA_A case will normally include the SPD and SFT run.

1. Upon completion of the SCRA case solution, the Forecaster shall review the following Report information and perform the applicable action(s):
 - A. RMR worksheets for TMOR:
 - (1) If deficient in Locational TMOR, commit additional Resources.
 - (2) When committing for locational reserve, use the APF-MOI “General Input, Manage Commitments” display to determine the least cost capacity and refer to SOP-RTMKTS.0050.0005 - Determine Reliability Commitment for Real-Time to commit Resources.
 - B. Reserve Summary Report for system wide, TMSR, TMNSR and TMOR:
 - (1) If deficient in TMOR, commit additional Resources.
 - (2) When committing for system-wide reserve, use the APF-MOI “General Input, Manage Commitments” display to determine the least cost capacity to commit and also consider the Minimum Run Time constraints.
 - C. Unit Hourly Details, DRR Hourly Detail, and Commitment Differences Reports:
 - (1) Review for problems with Resources Minimum Down Times / Minimum Time Between Reductions.
 - (2) Review for ramp schedules and commitments outside of DA schedules.

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D. Hourly Resource violations (Ramping, MW output limits):

- (1) If Ramping violations occur on startup or shutdown enter startup/shutdown profile as Redeclared operating limits.

E. Hourly network violations (Branch flow, Interface flow and Phase angle):

- (1) If Branch flow violations exist, manually intervene as necessary by performing the following applicable action(s):

- a. With concurrence from the Operations Shift Supervisor, change the limits in the APF-MOI “Branch” tab
- b. Commit additional Resources.
- c. De-commit on-line Generators or interrupted DRRs.

- (2) If Interface flow violations exist, as necessary perform the following applicable action(s):

- a. With concurrence from the Operations Shift Supervisor, change the limits in the APF-MOI “Input Constraints” tab
- b. For import limited interfaces, commit additional Resources.


NOTE

The magnitude of the interface flow violation is a good indicator of the minimum amount of capacity that must be committed outside of the export area to meet the demand.

- i. If there are insufficient Resources committed outside the export area to meet demand, commit additional Resources outside of the export area
- ii. If the Resource MW output is equal to its Emergency Minimum such that there is an excess of generation on-line in the export area:
 - Prepare a list of Resources for de-commitment in RT including Resources that have Eco Min / Minimum Reduction Limit and Minimum Down Time / Minimum Time Between Reductions that closely match the magnitude and duration of the interface violation.

F. For any hour that has a violation, open the Case Output Constraint tab and perform the following actions:

- (1) Sort the display by marginal value, from greatest value to least value

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Constraints Labeled as GNRC are generic constraints and do **not** cause price separation.

- (2) Find the constraint that has the largest marginal value associated with it and either adjust Resources, or with the concurrence of the Control Room Supervisor, change the limit that is causing the violation.
2. The Forecaster shall import the SCRA case results into the FCA tool as follows:
 - A. Load the Market Data
 - B. Project the difference between:
 - (1) the sum of Fixed External Transaction purchases and all on-line Generator Eco Min Limits, and DRR Minimum Reduction MW and
 - (2) the projected load consumption for all of New England and, if the projected difference is less than 300 MW, notify the Operations Shift Supervisor to consider issuing a Minimum Generation Emergency Warning per CROP 25005 Minimum Generation.

NOTE

The LEG flag defaults to False for each LEG offered in the DAM. The DE must request this flag be set to True in order to be operated as a LEG in RT operations.

3. The Forecaster shall import the SCRA case results into the RMR Worksheets and evaluate the results
 - A. Import the applicable market case
 - B. Import the associated GRT sheet
 - C. Adjust commitment for known differences
 - D. Perform Data Validation and correct any errors presented by the tool
 - E. Ensure that the Surplus/Deficiency indicates positive surplus for every hour of the case for each area presented
 - F. Approve the RMR Worksheet case by pressing the Save All button
4. The Forecaster shall perform a LEG review as follows:
 - A. If the SCRA case uses all of the energy available from a LEG, utilize the FCA to evaluate the effect of the loss of sustainable capacity from the

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LEG.

- (1) If capacity loss results in a capacity deficiency discuss with the Operations Shift Supervisor to determine if Posturing is required, or if further commitment is necessary.
 - (2) If Posturing is required, go to CROP.25001 Posturing and perform required actions.
5. The Forecaster shall use the APF-MOI “General Input, Manage Commitments” display for any commitments.

5.6.3
Approve
SCRA Case

NOTE


When a case is approved the Forecast Information (FI) reports for Generators, External Transactions and DRRs are published to secure sites for review by the Lead Market Participant(s). This information may also be accessed by the LCCs and is available for incorporation into Powerflow. When an SCRA case is approved, the approval will issue CDs for all non-fast start Resources that were committed in the case.

1. The Forecaster shall update the FCA prior to approval of the SCRA case by performing the following:
 - A. Load the Market Data
 - B. Load the (GRT) constraint file

NOTE

Based on system conditions, the Operations Shift Supervisor determines the amount of capacity margin that is required in the FCA.

2. Prior to the Operating Day, the Forecaster shall verify that the capacity margin on the updated FCA is equal to or greater than the amount directed by the Operations Shift Supervisor.
3. The Forecaster shall run the SCRA Data Validation Report in the Day Ahead Import Export tool and make changes as necessary.
4. Review the Publish column for checked boxes indicating CDs to be issued. Boxes checked for fast start Resources that were inserted into the case or Self Schedules are expected. Any other checkbox that is checked must be understood by the Forecaster prior to approving the SCRA case.
5. The Forecaster shall perform the following actions:
 - A. After running the SCRA case prior to approval, the Forecaster shall load the case into the FCA then the Forecaster shall click on the “Approve

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case” button in the FCA tool for archiving purposes


- B. Select the “Case Solution” menu option.
 - C. Select the “Case Approval” option and select “Approve”.
6. The Forecaster shall ensure that each non Fast Start Resource committed during the RAA process is contacted to communicate start-up times.
- A. This commitment must be accompanied by the creation and the issuance of a manual CD.
 - B. In addition, any Resource that is committed after 1830 on the day prior to the Operating Day (OD-1) must have a manual CD created for that commitment.

5.6.4 Post-SCRA Case Approval Discussions

NOTE

A discussion allows the opportunity to familiarize Control Room System Operators with the upcoming load / Resource expectations.

1. After each SCRA case approval, the Forecaster shall provide a summary of the SCRA case to the Operations Shift Supervisor and discuss the following pertinent conditions and the applicable action(s) to be taken:
 - Current / upcoming weather conditions
 - Current Load Forecast Deviation and if load is running 400 MW from expectations, determine whether any remedial actions are needed
 - The latest weather report and determining if any major revision to the weather forecast requires re-running the load forecast.
 - If latest weather forecast indicates any major change, contact the weather providers to verify the weather forecast.
 - If the load forecast is running over but a revised forecast indicates **no** changes to the peak, discuss and consider increasing the surplus to be equal to or greater than the MW amount that the load is running over
 - The surplus capacity requirement (taking into account transactions scheduled on tie-lines and remaining available transfer capability).
2. If the FCA indicates a deficiency of capacity and all available Resources have been committed, the Forecaster shall discuss with the Operations Shift Supervisor the need to call for capacity available with OP-4 Action 7 and declare in accordance with (IAW) SOP-RTMKTS.0050.0005 - Determine Reliability Commitment for Real-Time

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5.7 Update SCRA During Operating Day


5.7.1 Run an Updated SCRA Case

1. The Forecaster shall update the SCRA periodically to reflect:
 - Resource commitment and de-commitment requests
 - SS changes
 - Resource Redeclarations
 - Submittal and cancellation of RT External Transactions
 - Updates to the ISO load forecast
 - Transmission system outages
 - Transmission system limit changes
2. The Forecaster shall make a duplicate of the latest approved SCRA case and rename it for the current case time.
3. The Forecaster shall set the start time of the SCRA case being run to reflect the future hours for that case.
4. The Forecaster shall verify the case is set to study mode SCRA.
5. Using the Day Ahead Import Export tool the Forecaster shall enter the following data if it has changed from the last SCRA case by completing the following applicable action(s):

NOTE

When making changes in the GRT, **never** overwrite a calculation. Only make changes to a cell that has a number in the Excel Spreadsheet Formula Bar. Always confirm that the Operations Shift Supervisor, Security Operator and the Forecaster all are aware of and agree on any changes that are made.

- A. Verify GRT Constraint file and if GRT file needs to be updated, perform the following actions:
 - (1) Click on the GRT Export Icon in the Main Control Center (MCC) Shortcuts Folder or via direct access to the file location.
 - (2) Open the GRT Spreadsheet for the appropriate day.
 - (3) Make changes as necessary in the GRT.
 - (4) Save the GRT csv file to the *GRT Sheet Changes* folder, using the

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Forecaster Export button.

- (5) Re-import the GRT data from the file saved in the previous step into the selected case using the Day Ahead Import Export tool, “Upload Constraint File” and “Upload Locational Reserve Requirements”.
 - B. Verify RCA/BAA External Transaction data as follows:
 - (1) Adjust interchange totals as necessary to reflect conditions that will impact deliverability of certain External Transactions.
 - (2) Do **not** commit any off-line Resources (with the exception of fast start Resources) to support External Transaction sales.
 - C. Update system-wide and Locational Reserve Requirements.
 - D. Update “Units / DRRs” tab to reflect Resource commitment changes.
 - E. Update Pumped Storage fixed and dispatchable demand.
 - F. If the load forecast has been changed, initialize Zonal Demand in the Day Ahead Import Export tool.

NOTE

The SCRA_HE11 case is run after the close of the DAM offer submittal deadline at 10:30, therefore any SS that was called into the Control Room prior to the deadline is included in the case.

6. The Forecaster shall perform the following actions:
 - A. Run an SCRA case.
 - B. Perform SCRA data validation.
 - C. Review the SCRA solution and commit Resources as necessary.

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5.8 Startup Cancellation and De-Commitment of Resources

5.8.1 Decision to Cancel S/Us or De-Commit Resources


NOTE

A Resource that has a commitment from the DAM will **not** be cancelled or de-committed by ISO except for reliability concerns. The Manager, Forecast & Scheduling (or designee) is expected to be notified. A Resource can be removed from a case, but the CD will **not** be cancelled.

1. When condition(s) have changed from the original commitment, the Forecaster shall determine if any Resource committed as part of the RAA process should be de-committed.

Examples of such conditions are:

- Actual load less than originally forecast
 - Unexpected availability of Resources (e.g., a Resource returning from a forced outage)
 - Unexpected availability of contract energy via inter-tie (e.g., due to restoration of transmission capability)
 - Excessive Real-Time Generator SS
2. The Forecaster shall select the highest cost Resources from the APF-MOI “Case Input Scheduling” display for startup cancellation or De-commitment based on the following:
 - Operating Rate
 - Resource energy offers from 0 - Eco Min (or Minimum Reduction)
 - Generator No-Load cost
 - Generator minimum run time or DRR Minimum Reduction Time
 - Generator minimum down time or DRR Minimum Time Between Reductions
 - Future startup schedule
 - Ability to maintain system reliability
 - If a natural gas-fired Resource has been ordered on-line subsequent to the DAM and that Resource has procured gas, the startup shall **not** be cancelled unless there is a reliability concern that needs to be addressed.
 - In addition, when a natural gas-fired Resource is given a schedule in


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the RAA/SCRA process, that schedule is honored in its entirety, unless there is a reliability issue.

- When a Generator clears in the DAM as SS and then requests to de-commit in RT, the Forecaster performs a reliability assessment in accordance with SOP-RTMKTS.0050.0005, Determine Reliability Commitment for Real Time and performs the applicable action(s).
 - This reliability analysis is performed to determine if the reliability criteria determined by the appropriate transfer limits in the RMR Worksheet are satisfied with the requested de-committed Resource off-line.
 - If the target value for the reliability criteria is deficient, use the “General Input, Manage Commitments” display to commit additional Resources to meet the reliability criteria target.
 - If additional Resources are **not** available due to notification time limits, or if there are any scheduled or unscheduled outages, the Resource requesting the SS de-commitment has its SS flag removed and is kept on-line.
 - While using “General Input, Manage Commitments” display, if the Resource requesting the de-commitment is the economic Resource to be called on, the Resource is **not** to be de-committed and the SS flag is to be removed.
 - The same process of a DA SS de-commit request is applicable to capacity commitments.

5.8.2
Communications

1. When a decision is made to cancel a startup or de-commit a Resource for future hours, the Forecaster ensure that prompt notification to the Resource DE of the new schedule has occurred.
2. If ISO requests a start prior to the Resource satisfying its Minimum Down Time / Minimum Time Between Reductions and the Resource agrees to waive its Minimum Down Time / Minimum Time Between Reductions, the Forecaster shall make an entry in the Control Room Event Logserver.
3. When a Resource has been de-committed or a start-up has been cancelled, the Forecaster shall make an entry in the Control Room Event Logserver.
4. The Forecaster shall enter all supplemental commitments and all manual CDs into the Control Room Event Logserver.

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6. Performance Measures

None.

7. References

Northeast Power Coordinating Council Inc. (NPCC) Directory # 5 Reserve

ISO New England Inc. Transmission, Markets and Services Tariff, Section I.2.2, Definitions

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

ISO New England Manual for Market Operations Manual M-11 (Manual 11)

ISO New England Manual for Definitions and Abbreviations Manual M-35 (Manual 35)

ISO New England Operating Procedure No. 4 - Action During a Capacity Deficiency (OP-4)

ISO New England Operating Procedure No. 8 - Operating Reserve and Regulation (OP-8)

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

ISO New England Operating Procedure No. 21 – Operational Surveys, Energy Forecasting & Reporting and Actions During an Energy Emergency (OP-21), Appendix B - Electric/Gas Operations Committee’s (EGOC) Operations Communications Protocol (OP-21B)

DAMKTS.0040.0010 - Create Day-Ahead Market Schedule

SOP-OUTSCH.0040.0010 - Create Demand Forecast

SOP-OUTSCH.0040.0020 - Create Seven-Day Capacity Margin Forecast

SOP-RTMKTS.0050.0005 - Determine Reliability Commitment for Real-Time

SOP-RTMKTS.0050.0007 - Perform Cold Weather Condition Operations


CROP.10002 Implement Capacity Remedial Actions

CROP.25001 Posturing

CROP.25005 Minimum Generation

CROP.35003 Reserve Requirement Adjustments


CROP.36002 Redeclarations

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8. Revision History

| Rev. No. | Date | Reason | Contact |
|----------|----------|---|-----------------|
| -- | 07/27/18 | For previous revision history, refer to Rev 60 available through Ask ISO | Thomas Knowland |
| 61 | 07/27/18 | Truncated the Revision History per SOP-RTMKTS.0210.0010 Section 5.6; Attachment A, based on Forecasters feedback, modified order of some of the steps and, as required, added or modified task steps; | Thomas Knowland |
| 62 | 11/27/18 | Attachment A, updated with feedback from on-shift Forecasters; | Thomas Knowland |
| 62.1 | 05/10/19 | Periodic review performed by procedure owner requiring no changes; Made administrative changes required to publish the Minor Revision; | Thomas Knowland |
| 63 | 12/12/19 | Clarified and improve language on check list, no changes to process or procedure; | Thomas Knowland |
| 63.1 | 09/29/20 | Updated review periodicity to annual, Updated time for final SCRA case run in Attachment A | Thomas Knowland |
| 64 | 12/4/20 | Performed annual review; renamed procedure to align with tariff; 5.3: removed actions to build a case without a DAM case; 5.3.6.B: Changed the source of data for interchange from TSO to DAM case; 5.6.3.4: added step to ensure unnecessary CDs are not created; 5.7.1.6.A.1: generalized file location of GRT; 5.7.1.6.A.4: updated the procedure for exporting GRT to specific location; 5.7.1.6.Note: updated DAM offer submission deadline to 10:30 | Thomas Knowland |
| 65 | 12/02/21 | Annual review performed by procedure owner; Updated process in section 5.6.2; Retired Attachment A | Thomas Knowland |
| 66 | 11/28/22 | Annual review performed by procedure owner; Section 5.2, 1 st Note deleted "This may be performed by phone, email or by fax."; Section 5.3.1.4.C.(5), changed Spinning Reserve requirement to 25%; Step 5.3.6.7 deleted printing of reports; Minor grammatical changes. | Thomas Knowland |
| 67 | 11/27/23 | Annual review performed by procedure owner; Remove references to initial RAA/RSC case due to changes with new nGem commitment engine in APF-MOI. | Thomas Knowland |
| 68 | 11/20/24 | Annual review performed by procedure owner; Section 5.2.5 With nGem release selecting ramp profile is not necessary; Section 5.3.1.4.C.(1) Mystic 8 & 9 retired; Section 5.3.1.4.C.(2) Phase 1 no longer in service; Section 5.3.2.3-5 Re-ordered and worded for clarity; Section 5.6.3.5.A-C Re-ordered and worded for clarity; Section 5.8.2.1 Reworded, as Senior Operator often notifies resource of decommitment. | Thomas Knowland |
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9. Attachments


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Attachment A - Retired (12/02/21)

Attachment B - Retired (05/30/14)

Attachment C - Retired (06/01/12)

Attachment D - Retired (06/01/18)

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