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

Contents

1. Objective

The intent of this procedure is to define the business process that is performed to determine which Resources need to be committed to meet system or local reliability concerns, and to verify the transfer of Real-Time reliability Commitment Decisions from the Advanced Presentation Framework - Market Operator Interface (APF-MOI) Commitment Decision Processor (CDP) software to the Gateway Data Modification Application (GDMA).

2. Background

ISO performs a Reserve Adequacy Analysis (RAA) and, if necessary, will commit Resources to meet system-wide and/or local reliability requirements.

Additional commitments for the following system-wide requirements are defined in SOP-RTMKTS.0050.0010 - Perform Reserve Adequacy Analysis:

- Spinning Reserve
- Operating Reserve
- Replacement Reserve

3. Responsibilities

1. The Forecaster is responsible for:

   - Completing the Reliability Commitment Checklist on a daily basis for prior day Reliability Commitments
   - Using the Forecaster Case Input spreadsheet to log commitment requests for the Day-Ahead Market (DAM).
   - Entering commitment information into the APF-MOI software, the Forecast Daily Report and/or the Control Room Event Logserver, as applicable:
     - For a Generator or a Demand Response Resource (DRR), creating a manual Commitment Decision in the APF-MOI software
     - For a Dispatchable Asset Related Demand (DARD), entering the appropriate DARD information into a Supplemental Commitments Log Entry in the Control Room Event Logserver.

4. Controls

1. The Forecaster uses the most up-to-date Generation Requirements for Transmission (GRT) spreadsheet

2. The Forecaster uses the most up-to-date Transmission Operating Guides (TOGs)
3. The Forecaster uses the Reliability Must Run (RMR) Calculation Worksheet (Excel Spreadsheet)
4. The Forecaster uses the APF-MOI "General Input, Manage Commitments" display to determine the least-cost eligible Resource to commit.
5. The Forecaster completes the Reliability Commitment Checklist on a daily basis for prior day Reliability Commitments.
6. The Forecaster uses the Forecaster Case Input spreadsheet to log commitment requests for the DAM.

5. Instructions

5.1 Determine Time of Reliability Commitment

NOTE

Descriptions of settlement reliability commitments and policy are contained in Attachment D of this procedure.

1. When the Load Forecast is completed in accordance with SOP-OUTSCH.0040.0010 - Create Demand Forecast, the Forecaster shall begin assessment of local area commitment requirements for the next Operating Day.

2. When it is recognized that required Resources have long notification and start-up times, the Forecaster may advance the assessment time of local area commitment requirements.

3. In accordance with SOP-RTMKTS.0050.0010 - Perform Reserve Adequacy Analysis, the Forecaster shall finalize the commitment of Resources for Real-Time (RT) during the RAA process.

4. As required by system conditions, the Forecaster shall make modifications to reliability commitments throughout the Operating Day. Explicit decisions to commit Resources or extend existing Resource commitments shall be documented by a non-implicit Commitment Decision in the APF MOI.

5.2 Verify Changes Due to Temporary, New or Updated Guides

1. When a temporary guide is issued, updated, or retired, as part of the Forecaster sign-off, the Forecaster shall incorporate any generation requirements or restrictions associated with the guide into Attachment A - Load/Resource Considerations

5.3 Determine Day-Ahead Supplemental Commitment

NOTE

Any Resource that has been identified as being needed for reliability for the next day should be committed in the DAM.

1. The Forecaster shall determine each Resource needed to meet one of the following:
   - The voltage control requirements in accordance with a TOG
   - The RMR requirements that are **not** addressed by the GRT Spreadsheet
   - Any local or area transmission requirement as defined in transmission outage application maintained in the ISO Outage Scheduling software
   - Any Resource identified in a Control Room study
2. The Forecaster shall send an email using the "Forecaster Case Input " spreadsheet to perform the following for any Resource needed for reliability:

NOTE

This email automatically includes a list of Resources with a minimum runtime carryover that have been issued a Commitment Decision (CD) that will be active in the next day DAM.

   A. Select the date, Reason, Region (if required), all required hours of commitment, and Resource Shortname or group of shortnames for the commitment. If more than one Resource meets a requirement, list all Resources that are capable of meeting the requirement.

5.4 Determine RT Resource Commitment for Voltage Support/Control

NOTE

This section shall be performed after the DAM case for the next day has been approved.

1. The Forecaster shall conduct a review and determine each Resource that cleared in the DAM or is a Self-Schedule (SS) during the Re-Offer Period.

2. The Forecaster shall determine if an additional Resource is needed to meet the RT voltage control requirements as defined in the TOGs or outage-specific guidance.

3. If more than one eligible Resource is capable of meeting the voltage control requirement, the Forecaster shall perform an economic analysis using the APF MOI "General Input, Manage Commitments" display and determine the least-cost eligible Resource (s) that can meet the requirement, minimizing the total commitment cost.

NOTE

A Resource committed to meet voltage control requirements is issued a CD with a commitment reason of VAR UP HIGH or VAR UP LOW in either the APF-MOI "General Input, Manage Commitments" display, or as an input to an RAA or Security Constrained Reserve Adequacy (SCRA) case.

4. The Forecaster shall document the reliability commitment data per Section 5.9.

5.5 Determine Resource Commitment for Local Transmission 1st Contingency

1. The Forecaster shall conduct a review and determine each Resource that cleared in the DAM or SS during the Re-Offer Period.

2. The Forecaster shall determine if an additional Resource is needed to support the RT local transmission maintenance schedule as defined in the individual transmission outage applications maintained in the ISO Outage Scheduling software.

3. If more than one eligible Resource is capable of meeting the local transmission 1st contingency requirement, the Forecaster shall perform an economic analysis using the APF MOI "General Input, Manage Commitments" display to determine the least commitment cost eligible Resource that can meet the requirement and perform the following:

   - If Resource commitment prevents a post-contingency thermal overload, the Forecaster shall issue a CD with a commitment reason of Transmission Constrained Up (TCU) in either the APF-MOI "General Input, Manage Commitments" display or as an input to an RAA or SCRA case.

   - If Resource commitment prevents a post contingency voltage decline or collapse, the Forecaster shall issue a CD with a commitment reason of VAR UP LOW in the APF-MOI "General Input, Manage Commitments" display, or as an input to an RAA or SCRA case.

4. The Forecaster shall document reliability commitment data per Section 5.9.

5.6 Determine Resource Commitment for Congestion Area 1st and 2nd Contingency

NOTE

Each Resource determined to be needed for Local Second Contingency Protection (LSCPR) is issued a CD with a commitment reason of RMR for Settlements. The Outage Scheduling software uses the term RMR for this type of commitment and Settlements uses the term LSCPR for the same commitment.

1. The Forecaster shall determine each Resource needed to meet the Real-Time congestion area 1st and 2nd contingency interface transfer limits for the following areas using the RMR Calculation Worksheet (Excel spreadsheet).
   - Boston
   - New England East-West
   - New England West-East
   - North East New England
   - Connecticut
   - Southwest (SW) Connecticut
   - Western Connecticut
   - Maine
   - Rhode Island
2. The Forecaster shall import the following interface limits from the GRT Spreadsheet into the Boston, New England East-West, New England West-East, North East New England, Connecticut, SW Connecticut, Western Connecticut, Maine, and Rhode Island reserve zones:
   - N-1 Interface Locational Reserve Requirements (LRR) limit
   - N-2 Generation Interface limit
   - N-2 Line Interface limit
3. The Forecaster shall import the approved load shed value from the GRT Spreadsheet into the 2nd line analysis of the RMR worksheet.
4. The Forecaster shall import each Resource that cleared in the DAM or SS during the Re-Offer Period into the RMR Calculation Worksheet (Excel spreadsheet).
5. The Forecaster shall enter any Local Second Contingency Commitment (LSCC) transaction that has been scheduled in the DAM and has been identified as "capacity backed" as an addition to the Congestion Area load in the RMR Calculation Worksheet (Excel spreadsheet).

NOTE

If commitment is necessary to meet a 1st or 2nd contingency requirement, the APF-MOI "General Input, Manage Commitments" display is used to determine the least-cost capacity to commit.

6. The Forecaster shall review and determine if 1st and 2nd contingency coverage is satisfied and perform the following:

   - If 1st and 2nd contingency coverage is satisfied, **no** more Resources need to be committed.
   - If required to meet 1st contingency coverage, perform the following applicable action:
     - If the commitment is made to meet a thermal interface limit, the Resource is issued a CD with a commitment reason of TCU
     - If the commitment is made to meet a voltage / reactive limit, the Resource is issued a CD with a commitment reason of VAR UP (LOW or HIGH as appropriate)
   - If required to meet 2nd contingency coverage, perform the following applicable action:
     - If the commitment is made to meet a thermal interface limit, the Resource is issued a CD with a commitment reason of RMR for the appropriate reliability area.
     - If the commitment is made to meet a voltage / reactive limit, the Resource is issued a CD with a commitment reason of VAR UP LOW and RMR for the appropriate reliability area.

7. The Forecaster shall save the RMR Spreadsheet to the Forecast Folder "SavedCapAnalysis" for later review.

8. The Forecaster shall commit any eligible Resource needed for 2nd contingency coverage for any other local area **not** covered by the RMR Calculation Worksheet, based on special studies performed in accordance with SOP-OUTSCH.0050.0020 - Perform Complex Studies and perform the following applicable action:

   - If commitment is made to meet a thermal interface limit, the Resource is issued a CD with a commitment reason of RMR for the appropriate reliability area.
   - If the commitment is made to meet a voltage reactive limit, the Resource is issued a CD with a commitment reason of VAR UP LOW and RMR for the appropriate reliability area.

9. If the Short-Term Outage Coordinator, designated as D1, changes the transfer limit for any of the congestion areas (listed in Step 5.6.1), the Forecaster shall return through the process until 1st and 2nd contingency coverage for each area is

satisfied.

10. The Forecaster shall document reliability commitment data per Section 5.9.

5.7 Determine Reliability Requirements/Generation Constraints

1. Using the ISO Outage Scheduling software, the Forecaster shall verify any transmission-related Must Runs (MRs) or Transmission Constraints (TCs) by performing the following:

   A. View "Transmission Outage Requests" in the Outage Scheduling software.

   B. Click on the "Overall" radio button and select the "Forecaster Print View"

   C. Print out the list of MRs and TCs.

   D. For each Transmission Outage Request listed in the print out, perform the following actions:

      (1) Review each outage request and view the MR or restriction listed.

      (2) Using the solved DAM case(s), determine if the MR or restricted requirements are satisfied by the DAM solution.

         a. If MR or restricted requirements are satisfied by the DAM solution, **no** further action is required.

         b. If MR or restricted requirements are **not** satisfied by the DAM solution, perform the following applicable action:

            i. For MRs, use the APF-MOI "General Input, Manage Commitments" display to identify Resources for MR and commit Resources as needed.

            ii. For TCs, discuss with the Operations Shift Supervisor and determine the proper way to account for the constraint (e.g., Cap Analysis adjustment or an ISO imposed TC in EMS).

      (3) When each analysis is complete, use the print out and document how each MR or constraint is satisfied.

   E. When all analyses are complete, perform the following actions:

      1) Open the "Forecaster" view in the Outage Scheduling software, highlight each outage request and click the "Gen Review" radio button.

      2) Provide the completed printout documentation to the night-shift Forecaster.

   F. Document reliability commitment data per Section 5.9.

5.8 Receive Requests to Commit Special Constraint Resources

NOTE

Requests for Special Constraint Resources (SCRs) may be received by Control Room System Operators prior to being passed on to the Forecaster.

The Transmission Owner (TO) or Local Control Center (LCC) may request contingency protection that is more stringent than ISO New England Operating Procedure No. 19 - Transmission Operation (OP-19) criteria (i.e., stuck breaker or bus fault without inter-area impact). The Resource committed should be flagged as an SCR.

In the event that the ISO requires that a Resource, previously designated and flagged as SCR becomes a Resource required by the ISO to be on-line in accordance with the ISO's systems and procedures, the SCR designation and flag will be removed.

1. When an eligible Resources commitment request for an SCR is received from a TO or a Distribution Provider (DP), the Forecaster shall review Resources committed in the DAM, SS, or already committed for a different reliability reason and perform the following applicable action:

   - If the requested Resource has already been committed, but the Resource output is raised out-of-merit, the SCR commitment reason must be used for the incremental MWs that are out-of-merit. This is handled in a downstream process, which is initiated by the Questionable Flags email.

   - If the requested Resource has **not** already been committed, the Forecaster shall issue a CD with a commitment reason of SCR either in the APF-MOI "General Input, Manage Commitments" display, or as an input into an RAA or SCRA case.

2. If the request comes from an LCC or is received by a Control Room System Operator, the Forecaster shall enter the SCR flag into the APF-MOI "General Input, Manage Commitments" display.

3. The Forecaster shall notify the applicable LCC via email that the Resource is committed as an SCR and will be billed to the local TO/DP.

4. After reviewing and accepting such requests, the Forecaster shall document reliability commitment data per Section 5.9.

5.9 Document Reliability Commitment

NOTE

If a reliability commitment is performed subsequent to1830 on the day prior to the Operating Day (OD-1), (when Hourly Offers unlock for the next Operating Day), a manual CD must be issued in the APF-MOI "General Input, Manage Commitments" display. This CD must be accompanied by a verbal startup/interruption order to the Resource as soon as possible.

1. For each reliability commitment, the Forecaster shall enter the following information into the Control Room Event Logserver using the Supplemental Commitments Log Entry:
   - Select the Resource name
   - Select LCC Notified (Yes/No)
   - Enter Breaker and Release times
   - Commitment reason code (VAR UP HIGH, VAR UP LOW, SCR, RMR, TCU, Storm Constrained Up (SCU), Fuel Diversity (FUELDIV), Demand Resource Performance Audits (DRPA) or Generator Performance Audits (GPA))
   - Select or enter applicable document that is referenced to determine the need for commitment
   - Select or enter applicable Reason
   - Add comments to the log entry, as necessary.
2. As necessary, the Forecaster shall enter each Resource committed for reliability reasons in the Reserve and Scheduling Commitment (RSC) case (or subsequent SCRA cases) in accordance with SOP-RTMTKS.0050.0010 - Perform Reserve Adequacy Analysis.

5.10 Document Settlement Reliability Commitment

NOTE

Attachment D– Settlement Reliability Commitments, provides descriptions of the Settlements reliability reasons that use the acronyms VAR_UP_HIGH, VAR_UP_LOW, RMR, GPA, DRPA, FUELDIV, SCU, and SCR.

1. The night-shift Forecaster shall perform the following steps after 0200 and document the completion of these steps on the Reliability Commitment Checklist:

   A. Review Supplemental Commitment log entries in the Control Room Logserver and determine which reliability commitments are expected in the APF-MOI

   B. Review the APF-MOI Forecast Reliability Commitment Report to verify that Commitments were transferred from the APF-MOI to GDMA for the prior Operating Day

NOTE

DARDs **cannot** be committed in the APF-MOI "General Input, Manage Commitments" display. All DARD commitment for reliability is handled in RT.

NOTE

The "Forecast Reliability Commitment Report" is the new name of the former "Forecast Flagging Report" and retains all of the same functionality of the previous version.

   C. Save copies of the APF-MOI Forecast Reliability Commitment Reports by performing the following actions:

      (1) Run the Forecast Reliability Commitment Report after 0200 by selecting the SCRA_A case for the previous Operating Day and running the report from the Report Viewer

      (2) File a hard copy in the Transferred Reliability Commitment Binder at the Forecast Desk in the Control Room

      (3) Save an electronic copy in the Forecast Office shared network folder

   D. For each Resource listed in the Forecast Reliability Commitment Report for the pertinent Operating Day, perform the following actions:

      (1) Verify that the Resource operated in RT.

      (2) Verify that any Resource on the Forecast Reliability Commitment Report is **not** a Self-Schedule in the same hour as the reliability commitment. The Forecaster shall remove the Self-Schedule flag for hours with reliability commitments.

(3) Verify the Resource name, reason, hours, and region for the reliability commitment that was selected in the APF-MOI is consistent with GDMA, as indicated on the report, and in the Control Room Event Logserver. Verify that the hours following the cancellation of a CD are **not** in GDMA.

(4) Verify that the first hour of the CD is the first full hour of the commitment. (e.g., if the Resource is committed to release for dispatch at 1401, the CD shall start in hour ending 16)

(5) If **not** consistent, report any differences to the Manager, Forecast & Scheduling (or designee) for correction.

NOTE

The affected Reliability Region is **not** necessarily the Reliability Region in which the Resource is located.

e.g., If BERK is committed for RMR for CT and the Resource is physically located in WCMASS, the selected reason will be RMR_CT

(6) When a commitment is made for Northern New England 345 kV high voltage control (VAR_UP_HIGH) verify that the commitment is for both the Maine and New Hampshire regions unless the TO has specifically waived the requirement for high voltage control commitment.

NOTE

Commitments that require notification via the questionable commitments protocol include commitments added on during the Operating Day without obvious justification and commitment with an SCR reliability reason.

E. If there are any questionable commitments, notify the applicable parties using the "Questionable Commitments" email template located in the MCC Shortcuts folder:

(1) Enter all known information in the table included in the template

(2) Provide any additional information in the email to the pre-selected addressees in the template

6. Performance Measures

RMR worksheets are re-calculated periodically throughout the Operating Day and saved for review by the External Market Monitor.

7. References

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

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

SOP-OUTSCH.0040.0010 - Create Demand Forecast

SOP-OUTSCH.0050.0020 - Perform Complex Studies

SOP-RTMTKS.0050.0010 - Perform Reserve Adequacy Analysis

8. Revision History

Rev. No.	Date	Reason	Contact
- -	09/22/15	For previous revision history, refer to Rev 30 available through Ask ISO	Thomas Knowland
31	09/22/15	Section 3.1, 2nd bullet - Responsibilities – Clarified language- DARD's do not receive Settlement flags in the APF-MOI; Section 3.4 Changed notification source from Security Operator to Shift Supervisor to conform with RT operation; 5.1.1.B.3.a – Note: Clarification of obligation for RT commitment ; 5.3.1 - Removed reference to ISO Outage Scheduling software, removed redundant references to Text Guides; 5.4.2 - Removed reference to ISO Outage Scheduling software and added new method of DAM notification of Reliability commitment; 5.7 - Terminology clarification; 5.7.1 - Removed references to Norwalk Stamford and Northwest Vermont Import areas; 5.7.2 - Process step clarification and removed references to Norwalk Stamford and Northwest Vermont Import areas; 5.7.3 - Process step clarification; 5.7.4 – Process step clarification; 5.7.10 - Process step clarification; 5.8.1.D.1 - Spelling change, Caps; 5.8.1.D.2 - Spelling change, Caps; 5.8.1.D.2.a - Spelling change, Caps; 5.8.1.D.2.b - Spelling change, Caps; 5.81.D..2.b.i - Removed reference to Outage Scheduling application; 5.8.1.D.2.b.ii - Removed reference to outage Scheduling application; 5.9.2 - Removed reference to TO notification ; 5.9.3 - Clarified process; 5.11 Note - Clarification of event timing; 5.11.2 - Step clarification; 5.11.2 - 5th bullet - Removed reference to "text comments;	William Callan

Rev. No.	Date	Reason	Contact
32	06/23/16	Biennial Review completed by procedure owner; Procedure Owner replaced William Callan with Thomas Knowland; Section 3.2, Deleted redundant responsibility covered in SOP-RTMKTS.0110.0015; Section 3.3. Deleted redundant responsibility covered in SOP.OUTSCH.0030.0020; Section 3.4. Deleted redundant responsibility covered in CROP.36003; Step 5.4.1 Deleted "real-time". This is done on a day-ahead basis; Step 5.4.1 Added determination of RMR notification to align with current practice; Step 5.4.2.A.NOTE: Reworded, grammar; Step 5.4.2.B: Added more information to be communicated using the Forecaster DAM Case Input email; Section 5.5.NOTE: reworded, grammar; Step 5.7.6, 3rd bullet, 2nd bullet: Removed second contingency high voltage flagging; Step 5.7.8. 2nd bullet: removed second contingency high voltage flagging; Step 5.10.2: removed redundant actions covered in Implement Capacity Remedial Actions CROP; Step 5.11.3: updated to align with log entry template; Sub-section 5.12: removed redundant action covered in Flagging for RT Market Settlements SOP (entire sub-section deleted); Section 6: Removed redundant Performance Measure covered in SOP-RTMKTS.0110.0015. Added performance measure that the RMR worksheets are saved and shared with the external mkt monitor; Section 7 deleted OP-12 A and SOP-OUTSCH.0030.0020 not referred to in this document; Attachment A: Added language from Western Maine Voltage Support Guide. Removed requirement to flag both Maine and New Hampshire. Changed the load requirement from 10,000 MW to 12,000 MW. All changes to Attachment A are to align with guides.;	Thomas Knowland

Rev. No.	Date	Reason	Contact
33	06/01/18	Biennial Review completed by procedure owner; Added required corporate document identity to all page footers; Retired the Flagging for RT Market Settlements SOP and included pertinent steps into this SOP; Globally changed terminology for PRD. "Generator" to "Resource", added DRR references; Globally changed references to "flag" to "reliability commitment" and "commitment reason"; Objective: included wording from Flagging SOP; 5.1: removed section, no longer applicable; 5.4.NOTE: added to reflect practice of including units in DAM whenever possible; 5.4.1.NOTE: removed location of TOGs from the SOP. Unnecessary; 5.4.1: added other potential reasons for commitment; 5.4.2: consolidated Forecaster Case Input email instructions; 5.5.NOTE: removed reference to retired SOP. Added timing note; 5.5.2: changed web address for documents to new ODMS; 5.5.3: added instruction for minimizing commitment cost; 5.5.3.NOTE: added RAA/SCRA as another way to issue CD; 5.6.2.NOTE: removed note. Common knowledge; 5.6.3: added "commitment" to least cost; 5.6.3.1st: added RAA/SCRA as another way to issue CD; 5.6.3.2nd: added RAA/SCRA as another way to issue CD; 5.9.NOTE: removed repetition; 5.10: FCM compliance report actions removed from tariff and SOP; 5.11: removed redundant steps; 5.12: added from Flagging procedure; References: removed SOP-RTMKTS.0110.0015; Truncated the Revision History per SOP-RTMKTS.0210.0010 Section 5.6; Att A: changed load levels for Boston High Voltage and ALTR; New Att C: added Reliability Commitment Policy; New Att D: added Settlement Reliability Commitments	Thomas Knowland
34	01/29/20	Biennial Review completed by procedure owner; 3.1: modified (removed redundant details that exist in Attachment D); 4.5 and 4.6 Added control to utilize checklist and spreadsheet for commitments; 5.1.4: added language for creating a CD rather than relying on an implicit CD; 5.3.NOTE: wording change (non-substantive); 5.3.1: minor edit for clarification; 5.3.2: Made part of a former step a preceding NOTE, changed the method for communicating the Forecaster Case Input to the DAM from a simple email to a spreadsheet; 5.4.2: removed unnecessary link to a commonly used tool; 5.8.NOTE: added 3rd paragraph to clarify when to remove SCR flag; 5.10.1: modified to perform commitment review in accordance with checklist, including timing and verification steps, deleted 5.10.1.B, added 5.10.1.E.(2 and (4)), modified 5.10.E.(5); Att B: Added Maine to Seacoast due to Bolt Hill substation within boundaries;	Thomas Knowland

Rev. No.	Date	Reason	Contact
34.1	01/28/22	Biennial review by procedure owner, administrative and non-intent changes only	Thomas Knowland
35	01/24/24	Biennial review by procedure owner; 5.10.1 NOTE: Replaced WSP3 with BERK, as WSP3 no longer exists; Updated Attachment A load levels; 5.6.1 Added North East New England to the reserve zone list; 5.6.2 Added North East New England bullet to the region list.	Thomas Knowland

9. Attachments

Attachment A - Load/Resource Considerations (Confidential)

Attachment B - Correlation of Dispatch Zones to Settlement Reliability Regions

Attachment C - Reliability Commitment Policy

Attachment D - Settlement Reliability Commitments

Attachment A - Load/Resource Considerations (Confidential)

Contents redacted for publication

Attachment B - Correlation of Dispatch Zones to Settlement Reliability Regions

Table 1	
ISO Outage Scheduling software Dispatch Zones	**Settlements Reliability Regions**
Eastern CT Northern CT Norwalk-Stamford Western CT	CT
Bangor Hydro Maine Portland Maine	ME
Boston North Shore	NEMASS & B
New Hampshire	NH
Seacoast	NH and ME
Rhode Island	RI
Lower SEMA SEMA	SEMASS
Northwest Vermont Vermont	VT
Central MA Springfield MA Western MA	WCMASS

Attachment C - Reliability Commitment Policy

Voltage Control	VAR UP HIGH
Local 1st Contingency Thermal	TCU
Local 1st Contingency Voltage	VAR UP LOW
Interface 1st Contingency Thermal	TCU
Interface 1st Contingency Voltage	VAR UP LOW
Interface 2nd Contingency Thermal	RMR
Interface 2nd Contingency Voltage	VAR UP LOW & RMR
Special Constraint Resource	SCR
Fuel Diversity	FUELDIV
Storm Constrained Up	SCU
Generator Performance Audits	GPA
Demand Resource Performance Audit	DRPA

1. Commit a Resource VAR UP HIGH or VAR UP LOW that is out-of-merit to control or support voltage. This includes:

   - Enter the appropriate TO or DP for each Resource committed for SCR.
   - Committed for 1st contingency voltage interface limit
   - Committed for 2nd contingency voltage interface limit (VAR UP LOW & RMR only)

   A. Commit each Resource, RMR, if it is out-of-merit for 2nd contingency thermal or 2nd contingency voltage limits.

   B. Commit each Resource, RMR, that is committed for local area protection [non-Interconnection Reliability Operating Limit (IROL)] if post first contingency load shed is required within 30 min to prepare for the next contingency.

NOTE

A Resource that is committed out of merit for 2nd contingency voltage limits will have both RMR and VAR UP LOW commitment reasons assigned to a specific area.

If a Resource is brought on-line for reliability, it should be committed for all hours of its Minimum Run Time for the reliability reason for which it is committed.

   C. Commit each Resource RMR that is postured to provide 2nd contingency protection at a later time and provide a commitment reason for the zone/zones for which the Resource was postured.

D. If a Resource is committed or incrementally loaded out of merit for contingency protection that is more stringent than ISO New England Operating Procedure No. 19 - Transmission Operations (OP-19) criteria (i.e., stuck breaker or bus fault without inter-area impact) at the request of the TO or Local Control Center (LCC), it is committed as an SCR.

E. If a RT Resource is committed out-of-merit or if an on-line Resource is loaded out-of-merit at the request of a local transmission/distribution TO as required to provide relief for a constraint (i.e., thermal, voltage or stability) **not** reflected in ISO systems or Operating Procedures, it is to be committed for SCR.

- If an SCR Resource was committed out-of-merit, the SCR commitment remains for at least the Minimum Run Time or as long as required by the TO.
- If an SCR Resource was on-line and loaded out of merit, the SCR commitment remains for as long as required by the TO.

2. A Resource reliability CD is issued for as long as required, and at least until the Minimum Run Time has been met. A Resource that is on-line and has already met its Minimum Run Time requirement is issued an additional reliability CD for as long as required for the reliability reason.

3. An exception to this would be if a Resource has an upcoming DAM award that begins prior to the completion of the Minimum Run Time and this award was **not** the result of this reliability commitment. In this case, the Reliability CD is issued for all hours up to the start of its DAM award.

4. If a Resource is needed to meet non-contiguous reliability requirements during an Operating Day and the time between the requirements does **not** permit the Resource to shutdown, the Resource will be issued a CD for all the interim hours for the reliability reason of the latter commitment requirement.

5. Enter the appropriate Reliability Region for each Resource committed for RMR, VAR UP LOW or VAR UP HIGH and verify the appropriate Reliability Region is the region the Resource was brought on to protect, **not** necessarily the region in which the Resource is located.

6. Enter the appropriate TO or DP for each Resource committed for SCR.

Attachment D - Settlement Reliability Commitments

Commitment Reason	Issue Reliability CD When:
Out-of-Merit Upward for VAR Control or Support (VAR UP HIGH) (VAR UP LOW)	A low or high voltage condition exists that requires a Resource to be committed for reliability reasons. VAR UP HIGH applies when a Resource is committed to control high voltage. VAR UP LOW applies when a Resource is committed to support low voltage. Combine with RMR when committing for 2nd contingency voltage protection
Storm Constrained Up (SCU)	A Resource is brought on for reliability due to anticipated transmission issues due to weather conditions.
Reliability Must Run (RMR)	A Resource is committed or postured for LSCPR or a Resource is committed for local area protection (non-IROL) if post first contingency load shed is required within 30 minutes to prepare for the next contingency.
Fuel Diversity (FUELDIV)	A Resource is committed due to anticipated fuel problems
Special Constraint Resource (SCR)	A Resource is committed or an on-line Resource has been incrementally loaded out-of-merit, at the request of the local transmission/distribution TO, in order to provide relief for constraints (thermal, voltage or stability) **not** reflected by ISO Systems or Operating Procedures or TO/LCC requests a Resource commitment or Resource incrementally loaded out-of-merit for contingency protection that is more stringent than OP-19 (i.e., stuck breaker or bus fault without inter area impact).
Generator Performance Audits (GPA)	For ISO-initiated Generator Performance Audits. ISO-approved dual fuel audits
Demand Resource Performance Audits (DRPA)	For ISO-initiated Demand Resource Performance Audits