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References

1. CROP.31001 Scheduling External Transactions
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Procedure Background

Guide is an all-inclusive term for: TOG Stability, TOG Text, TOG SPS, and TOG temporary.

If the conditions presented to the system operators do **NOT** allow for this procedure to be followed as prescribed they will take the actions necessary to preserve reliability given the current or forecasted conditions.

The Control Room Operators use the Current Operating Plan (COP), Forecast Capacity Analysis information, Interchange Scheduling Software, Operator Information System (OIS), RTGEN, and RTUC displays to make decisions on declaring Minimum Generation Warning or Emergency.

When the sum of external transactions and on-line generators provides less than 300 MWs of back down capability to Eco Min, Minimum Generation Warning can be declared.

When Minimum Generation Warning is declared, purchases on the NYN interface should be reduced before curtailing RT Only MWs on the non-CTS interfaces.

If a forecasted Minimum Generation condition exists, and Self Schedule requests could worsen this condition, a Minimum Generation Warning can be declared for the applicable hours and the Self Schedules denied.

Minimum Generation Emergency is declared when the sum of fixed external transactions on the non-CTS interfaces that cleared the Day Ahead Energy Market plus all on-line generators Eco Min values provides less than 100 MWs of backdown capability.

The Forecaster reports to the Operations Shift Supervisor when a potential exists for a Minimum Generation Emergency in accordance with SOP-RTMKTS.0050.0010 - Perform Reserve Adequacy Assessment.

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 communications.

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 Forecaster projects a potential Minimum Generation condition; Or**
- **Potential high frequency due to load and generation mismatch in ISO-NE.**

Section 1 : Minimum Generation Warning / Emergency determination

Step 1.1 Primary Responsibility: Senior System Operator

Review the Forecast Capacity Analysis.

Instructions

Review for the following:

- ❑ The lower margin to Eco Min to ensure that at least 100 MW of lower margin is available for each hour of the operating day;
- ❑ If the lower margin to Eco Min is below 100 MW review the MaxLower Margin, which includes the available MW to Emergency Minimum;
- ❑ The load curve to ensure that loads are still on the forecasted load curve. If the loads are running under the forecast, use this in determining the extent of a Minimum Generation Emergency.

Step 1.2 Primary Responsibility: Senior System Operator

Notify the Operations Shift Supervisor of identified lower margin to Eco Min issues.

Step 1.3 Primary Responsibility: Operations Shift Supervisor

Determine if Minimum Generation Warning or Emergency needs to be declared.

Notes

- When the sum of external transactions and on-line generators provides less than 300 MWs of back down capability to Eco Min, Minimum Generation Warning can be declared.
- Minimum Generation Emergency is declared when the sum of fixed external transactions that cleared the Day Ahead Energy Market plus all on-line generators Eco Min values provides less than 100 MWs of backdown capability.

Section 2 : Declaring Minimum Generation Warning

Step 2.1 Primary Responsibility: Senior System Operator

Notify neighboring RCs/BAs that Minimum Generation Warning has been declared and the expected duration of the event.

Instructions

The following entities are notified:

- ❑ NYISO
- ❑ HQTE
- ❑ NBPSO

Step 2.2 Primary Responsibility: Operations Shift Supervisor

Log the declaration of Minimum Generation Warning.

Instructions

Use log entry: > EMERGENCY PROCEDURE EVENTS > MIN GEN EMERGENCY > Warning [WEB]

Enter the following:

- ❑ Start Date and Time;
- ❑ Expected End Date and Time;
- ❑ Notifications to neighboring RCs/BAs.

Notes

- The entry will indicate the status of posting to the ISO-NE website calendar.
- This log entry will create a posting of the Minimum Generation Warning declaration to the ISO-NE website calendar, the posting may take up to five minutes.

Step 2.2.1 Primary Responsibility: Operations Shift Supervisor

Condition(s) to perform this step:

- **The automatic posting to the ISO-NE website calendar failed.**

Contact the TSO Administrator to post the Minimum Generation Warning Declaration to the ISO-NE Web Calendar.

Instructions

Provide the TSO Administrator the expected Start and End Times and Dates.

Step 2.2.2 Primary Responsibility: Operations Shift Supervisor

Condition(s) to perform this step:

- **The Minimum Generation Warning declaration spans multiple days.**

Verify the posting on the ISO-NE website calendar was made for the subsequent day.

Notes

This is performed regardless of how posting is made to the calendar.

Section 3 : Implement actions for Minimum Generation Warning

Notes

- If the conditions presented to the system operators do **NOT** allow for this procedure to be followed as prescribed they will take the actions necessary to preserve reliability given the current or forecasted conditions.
- Minimum Generation Warning curtailments will affect real time only external transactions.

Step 3.1

Primary Responsibility: Operations Shift Supervisor

Condition(s) to perform this step:

- **NYN Interface net interchange is currently an import.**

Inform the Generation Operator to reduce the scheduling of purchases on the NYN Interface.

Instructions

Use CROP.31001 Scheduling External Transactions or CROP.31002 Curtailing External Transactions to modify the NYN Interface.

Notes

- Ensure Minimum Generation Warning has been declared. If **NOT**, do so using Section 2.
- Purchase transactions on the NYN interface can be reduced to zero or up to a value resulting in a net export interchange from the Day Before Checkout Process.

Step 3.2

Primary Responsibility: Operations Shift Supervisor

Instruct the Generation Operator of the MW amount of "RT Only MWs" transactions to curtail on the non-CTS interfaces and when it will be done, current hour or next hour.

Step 3.2.1

Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **It has been determined that "RT Only MWs" transactions are required to be curtailed in hour.**

Curtail "RT Only MWs" transactions for the current hour using CROP.31002 Curtailing External Transactions.

Step 3.2.2

Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **It has been determined that "RT Only MWs" transactions are required to be curtailed next hour.**

Curtail "RT Only MWs" transactions for the next hour using CROP.31001 Scheduling External Transactions.

Step 3.3

Primary Responsibility: Operations Shift Supervisor

Determine if further actions are required to mitigate the pending Minimum Generation Emergency condition.

Notes

Regulation and operating back down margins can be monitored to provide indication of a Minimum Generation Emergency condition.

Step 3.4 Primary Responsibility: Operations Shift Supervisor

Condition(s) to perform this step:

- **Further actions are required to mitigate the pending Minimum Generation Emergency condition.**

Verify all "RT Only MWs" transactions are curtailed.

Notes

The only scheduled external Transaction purchases should be external transactions that have cleared the Day Ahead Energy Market.

Step 3.4.1 Primary Responsibility: Operations Shift Supervisor

Condition(s) to perform this step:

- **Not all "RT Only MWs" transactions have been curtailed.**

Instruct the Generation Operator to repeat step(s) 3.2.1 or 3.2.2 so that all "RT Only MWs" transaction purchases are curtailed.

Step 3.5 Primary Responsibility: Operations Shift Supervisor

Condition(s) to perform this step:

- **Further actions are required to mitigate the pending Minimum Generation Emergency condition.**

Verify all available DARD pumps are properly dispatched either economically or as SS.

Step 3.5.1 Primary Responsibility: Operations Shift Supervisor

Instruct the Loader Operator to dispatch the available economic or SS DARD pumps.

Step 3.6 Primary Responsibility: Operations Shift Supervisor

Condition(s) to perform this step:

- **Further actions are required to mitigate the pending Minimum Generation Emergency condition.**

Instruct the Generation Operator to determine the anticipated LMP at each external node for the next hour and determine if economical transaction sales can be scheduled.

Step 3.7 Primary Responsibility: Operations Shift Supervisor

Determine if reassigning or relaxing the regulation requirement would provide relief.

Notes

Reassign regulation if a generator can be selected that does **NOT** have a difference between Eco Min and Reg Low.

Step 3.7.1 Primary Responsibility: Operations Shift Supervisor

Instruct the Loader Operator to reassign or relax the regulation requirement.

Step 3.7.1.1 Primary Responsibility: Loader Operator

Modify the regulation requirement using CROP.35002 Regulation.

Section 4 : Cancel Minimum Generation Warning.

Step 4.1 Primary Responsibility: Operations Shift Supervisor

Ensure all RT Only contracts have been restored on all non-CTS interfaces.

Notes

RT Only transaction may still be curtailed due to ramp constraints.

Step 4.2 Primary Responsibility: Operations Shift Supervisor

Restore scheduling to normal on the NYN Interface.

Section 5 : Declaring Minimum Generation Emergency

Notes

- Min Gen Emergency actions can only be taken on a system-wide basis.
- Do **NOT** declare Min Gen Emergency for an area.
- Do **NOT** select Min Gen Emergency dropdown for a zone.
- Declaring a Minimum Generation Emergency should occur on the hour to promote equity between external transaction cuts and generation reductions. However, the declaration may also be made within the hour, if necessary to respond to sudden events such as the tripping of a DARD pump.
- Manual shut down of DARD pumps may become necessary due to reliability concerns when the upper pond availability is limited.

Step 5.1

Primary Responsibility: Senior System Operator

Initiate the Minimum Generation Emergency notification using ENS.

Instructions

Use the "Min Generation Emergency Declared" icon.

Notes

"Min Generation Emergency Declared" is set up to perform the following notifications:

- ISO Management and staff will receive an email notification
- The Generator/DARD pump Designated Entities (DEs) will receive telephone notification

Step 5.2

Primary Responsibility: Senior System Operator

Notify neighboring RCs/BAs and LCCs that Minimum Generation Emergency has been declared and the expected duration of the event.

Instructions

The following entities are notified:

- ❑ NYISO
- ❑ HQTE
- ❑ NBP-SO
- ❑ CONVEX
- ❑ Maine
- ❑ NGrid
- ❑ NH
- ❑ NSTAR
- ❑ VELCO

Step 5.3 Primary Responsibility: Operations Shift Supervisor

Log the declaration of Minimum Generation Emergency.

Instructions

Use log entry: > EMERGENCY PROCEDURE EVENTS > MIN GEN EMERGENCY > Declared [WEB]

Enter the following:

- ❑ Start Date and Time;
- ❑ Expected End Date and Time;
- ❑ Enter the MW amount of expected Minimum Generation Emergency;
- ❑ Notifications to neighboring RCs/BAs;
- ❑ Notifications to LCCs.

Notes

- The entry will indicate the status of posting to the ISO-NE website calendar.
- This log entry will create a posting of the Minimum Generation Emergency declaration to the ISO-NE website calendar, the posting may take up to five minutes.

Step 5.3.1 Primary Responsibility: Operations Shift Supervisor

Condition(s) to perform this step:

- **The automatic posting to the ISO-NE website calendar failed.**

Contact the TSO Administrator to post the Min Gen Emergency Declaration to the ISO-NE Web Calendar.

Instructions

Provide the TSO Administrator the expected Start and End Times.

Step 5.3.2 Primary Responsibility: Operations Shift Supervisor

Condition(s) to perform this step:

- **The Minimum Generation Emergency declaration spans multiple days.**

Verify the posting on the ISO-NE website calendar was made for the subsequent day.

Notes

This is performed regardless of how a posting is made to the calendar.

Section 6 : Implement actions for Minimum Generation Emergency

Notes

- If the conditions presented to the system operators do **NOT** allow for this procedure to be followed as prescribed they will take the actions necessary to preserve reliability given the current or forecasted conditions.
- Minimum Generation Emergency curtailments will affect Day-Ahead external transactions.

Step 6.1

Primary Responsibility: Operations Shift Supervisor

Determine the expected amount of Minimum Generation Emergency for all of New England.

Notes

This "MW Deficiency" amount is entered as a comment in the declaration of Minimum Generation Emergency log entry.

Step 6.2

Primary Responsibility: Loader Operator

Determine the possible dispatch that will occur for Minimum Generation Emergency in RTUC.

Instructions

Perform the following:

- ❑ Set the Min Gen Emergency flag from the Interval Override display in RTUC;
- ❑ Execute an RTUC case;
- ❑ Review the resultant dispatch.

While reviewing the resultant dispatch determine the following:

- ❑ Which generators are being dispatched below Eco Min,
- ❑ Which generators would shut down a GT.

Notes

- Prior to allowing RTUC to dispatch a combined-cycle generator to a range requiring a gas turbine to shut down, consideration should first be given to starting offline available DARD pumps.
- When the Min Gen Emergency flag is set, RTUC administratively sets the LMP to $-150. Generators and DARD pumps continue to be dispatched using their appropriate bid price.

Step 6.2.1

Primary Responsibility: Loader Operator

Condition(s) to perform this step:

- **Not all available pump storage DARDs are online.**

Review the case and determine if the solution starts all available DARD pumps.

Notes

A DARD pump may be in their Minimum Down Time but may be available in a future interval.

Step 6.2.2

Primary Responsibility: Loader Operator

Notify the Senior System Operator and Security Operator of the resultant dispatch.

Step 6.2.3 Primary Responsibility: Operations Shift Supervisor

Condition(s) to perform this step:

- **Immediate reliability concern exists due to DARD pump upper pond availability.**

Perform an assessment for the DARD pump dispatch.

Notes

Consider the following during the assessment:

- Lower margin to Emergency Minimum;
- Available import transactions for curtailment;
- Possible duration of Minimum Generation Emergency

Step 6.2.4 Primary Responsibility: Loader Operator

Condition(s) to perform this step:

- **RTUC solution recommends a DARD pump shut down; AND**
- **An immediate reliability concern does NOT exist due to DARD pump upper pond availability.**

Exclude the DARD pump from the case.

Step 6.2.5 Primary Responsibility: Loader Operator

Condition(s) to perform this step:

- **An RTUC case does NOT dispatch available DARD pumps on-line; AND**
- **An immediate reliability concern does NOT exist due to upper pond availability.**

Perform a security assessment using the steps outlined in 6.2.6 and manually dispatch all available DARD pumps on-line as conditions allow.

Step 6.2.6 Primary Responsibility: Security Operator

Condition(s) to perform this step:

- **The RTUC solution is dispatching a combined-cycle generator below Eco Min requiring a GT to shut down; Or**
- **A DARD pump is being started.**

Perform a security assessment for the possible generation/DARD pump dispatch.

Step 6.2.6.1 Primary Responsibility: Security Operator

Notify the applicable LCC Operator(s) of the generation/DARD pump dispatch.

Step 6.2.6.2 Primary Responsibility: Security Operator

Determine if there are any guides associated to the generation/DARD pump or dispatch area.

Step 6.2.6.3 Primary Responsibility: Security Operator

Condition(s) to perform this step:

- **A guide is determined to be applicable.**

Determine what the required actions and/or limitations are per the guide.

Step 6.2.6.4 Primary Responsibility: Security Operator

Model the possible generation/DARD pump dispatch in Powerflow.

Step 6.2.6.5 Primary Responsibility: Security Operator

Run Powerflow and check the base case for element exceedances that were created or worsened by the generation/DARD pump dispatch.

Step 6.2.6.6 Primary Responsibility: Security Operator

Run ILC Powerflow and review the solution for exceedances.

Step 6.2.6.7 Primary Responsibility: Security Operator

Condition(s) to perform this step:

- **An Interface limit did NOT update for the generation dispatch as specified in a guide.**

Update an Interface limit and run ILC Powerflow.

Step 6.2.6.8 Primary Responsibility: Security Operator

Run STCA and determine if the generation/DARD pump dispatch created or worsened an exceedance.

Instructions

STCA shall be run twice, using the following modes:

- ❑ Default mode - Unit MVAr, Shunt Switching and Xfmr Tapping
- ❑ Enable Unit MVAr Control

Step 6.2.6.9 Primary Responsibility: Security Operator

Contact the applicable LCC Operator(s); discuss the results of the security assessment and determine if the LCC has a local reliability issue.

Step 6.2.6.10 Primary Responsibility: Security Operator

Condition(s) to perform this step:

- **It was determined that a generator cannot be dispatched below Eco Min for reliability; Or**
- **A DARD pump cannot be started due to reliability.**

Inform the Loader Operator, Senior System Operator and Operations Shift Supervisor of the generator(s) that cannot be dispatched below Eco Min or DARD pump that cannot be started for reliability.

Step 6.2.6.11 Primary Responsibility: Senior System Operator

Perform a Capacity Analysis, which considers future hour loads and minimum down time for generator components, to determine the effect on capacity and reserves.

Step 6.2.6.11.1 Primary Responsibility: Senior System Operator

Condition(s) to perform this step:

- **Minimum down time for a generator's GT is NOT known.**

Contact the applicable DE to determine the minimum down time associated with a GT.

Step 6.2.6.11.2 Primary Responsibility: Senior System Operator

Condition(s) to perform this step:

- **It was determined that a combined-cycle generator cannot be dispatched below Eco Min.**

Inform the Loader Operator and Operations Shift Supervisor of the generator(s) that cannot be dispatched below Eco Min.

Step 6.2.6.12 Primary Responsibility: Loader Operator

Condition(s) to perform this step:

- **It was determined that a generator cannot be dispatched below Eco Min; Or**
- **A DARD pump cannot be started.**

Re-declare the Emergency Minimum value to equal the Eco Min value for the required generators or redeclare the Max Cons and Min Cons to zero for the applicable DARD pump(s).

Step 6.2.6.12.1 Primary Responsibility: Loader Operator

Log the re-declaration of the applicable value(s) and reason.

Instructions

Use log entry: > GENERATION > Redeclarations

- ❑ Enter a reason in the Comments field

Step 6.2.6.13 Primary Responsibility: Loader Operator

Condition(s) to perform this step:

- **Modifications to the existing RTUC case were made; Or**
- **Resource parameters were modified after the RTUC case was executed.**

Re-execute an RTUC case and evaluate the resultant dispatch.

Step 6.2.6.14 Primary Responsibility: Loader Operator

Approve an RTUC Scenario.

Step 6.3 Primary Responsibility: Operations Shift Supervisor

Condition(s) to perform this step:

- **Purchase transactions remain on the NYN Interface.**

Instruct the Generation Operator to reduce the scheduling of purchases on the NYN Interface.

Instructions

Use CROP.31001 Scheduling External Transactions or CROP.31002 Curtailing External Transactions to modify the NYN Interface.

Notes

Purchase transactions on the NYN interface can be reduced up to the value of "Purchase" for the applicable interval on the NYN Scheduling display.

Step 6.4 Primary Responsibility: Operations Shift Supervisor

Instruct the Generation Operator of the MW amount of transactions on the non-CTS interfaces to curtail and for when it will be done, current hour or next hour.

Notes

The Generation Operator shall use the Interchange Scheduling Software to adjust the external transactions by an amount equal to approximately half the estimated Minimum Generation Emergency condition. However, if the capability of either generation or external transactions needed to reduce is exhausted, required reductions shall be taken on the remaining resource type as needed.

Step 6.4.1 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **It has been determined that non-CTS transactions are required to be curtailed in hour.**

Curtail transactions for the current hour using CROP.31002 Curtailing External Transactions.

Step 6.4.2 Primary Responsibility: Generation Operator

Condition(s) to perform this step:

- **It has been determined that non-CTS transactions are required to be curtailed next hour.**

Curtail transactions for the next hour using CROP.31001 Scheduling External Transactions.

Step 6.5 Primary Responsibility: Operations Shift Supervisor

Instruct the Loader Operator to select "Min Gen Emergency" in the Gen Emergency drop down box.

Notes

When "Min Gen Emergency" is selected in the drop down menu, UDS administratively sets the price to $-150. generators and DARD pumps continue to be dispatched using their appropriate bid price.

Step 6.6 Primary Responsibility: Loader Operator

Select "Min Gen Emergency" in the Gen Emergency drop down box and execute a case.

Step 6.7 Primary Responsibility: Loader Operator

Review the case and evaluate the resultant dispatch.

Step 6.8 Primary Responsibility: Loader Operator

Approve a UDS case.

Step 6.9 Primary Responsibility: Operations Shift Supervisor

Condition(s) to perform this step:

- **All previous actions have been exhausted; AND**
- **Further actions are required to mitigate the Minimum Generation Emergency condition.**

Determine what further actions are required to mitigate the Minimum Generation Emergency condition.

Instructions

Possible further actions are:

- ❑ Delaying generator start-ups;
- ❑ Reducing the output of non-dispatchable (UCM 3) generators;
- ❑ De-committing and shut down SS generators;
- ❑ Cancelling generator start-ups.

Notes

Utilize the OIS Destacker to Emergency Min to determine which generators to reduce or de-commit.

Step 6.9.1 Primary Responsibility: Operations Shift Supervisor

Instruct the Security Operator to perform a security assessment for the reduction of non-dispatchable (UCM 3) generators or SS generators being shut down.

Step 6.9.2 Primary Responsibility: Security Operator

Perform a security assessment as outlined above in this section in Step 6.2.6.

Step 6.9.3 Primary Responsibility: Operations Shift Supervisor

Instruct the Senior System Operator to delay generator start-up(s).

Step 6.9.4 Primary Responsibility: Senior System Operator

Notify the applicable DE that the generator start-up is delayed.

Step 6.9.4.1 Primary Responsibility: Senior System Operator

Log the generator start-up delay.

Instructions

Use log entry: > GENERATION > Abnormal Generator Conditions

Step 6.9.5 Primary Responsibility: Operations Shift Supervisor

Instruct the Loader Operator to verbally dispatch non-dispatchable (UCM 3) generators below Eco Min.

Step 6.9.6 Primary Responsibility: Loader Operator

Access and utilize the Operator Information System (OIS) Destacker to Emergency Minimum to determine the non-dispatchable (UCM 3) generation reductions.

Step 6.9.7 Primary Responsibility: Loader Operator

Notify the DE(s) of the identified non-dispatchable (UCM 3) generators to reduce output to Emergency Minimum.

Notes

When verbally dispatching non-dispatchable (UCM 3) generators using the Destacker to Emergency Minimum, Nuclear units will be the last to be reduced.

Step 6.9.8 Primary Responsibility: Operations Shift Supervisor

Instruct the Loader Operator to de-commit and shut down SS generators.

Instructions

De-commit SS generators based on Emergency Minimum limits closest to the amount of MW required to match supply and demand as well as minimum down times and reliability impacts

Step 6.9.9 Primary Responsibility: Loader Operator

Implement the shutdown of a non-Fast Start generator.

Instructions

Utilize CROP.35005 Dispatch using RTUC and UDS "Implement shut down of non-Fast Start generator(s)".

Step 6.9.10 Primary Responsibility: Loader Operator

Log the shutdown of a non-Fast Start generator.

Instructions

Use log entry: > GENERATION > Abnormal Generator Conditions

Step 6.9.11 Primary Responsibility: Operations Shift Supervisor

Instruct the Forecaster to cancel generator start-ups.

Notes

Forecaster will cancel generator start-ups per SOP-RTMKTS.0050.0010 - Perform Reserve Adequacy Assessment.

Section 7 : Cancel Minimum Generation Emergency

Step 7.1 Primary Responsibility: Operations Shift Supervisor

Determine the projected back down margin.

Instructions

Ensure the following is taken in to consideration when determining projected back down margin:

- ❑ Non-dispatchable (UCM 3) generators increasing output to Eco Min, if dispatched below Eco Min;
- ❑ Dispatchable (UCM 4) generators increase output to Eco Min, if dispatched below Eco Min;
- ❑ Generator start-ups, both full plant and GT start-ups;
- ❑ No longer curtailing Day Ahead transactions on non-CTS interfaces for Minimum Generation Emergency.

Step 7.2 Primary Responsibility: Operations Shift Supervisor

Determining when to cancel Minimum Generation Emergency.

Instructions

Minimum Generation Emergency can be cancelled when:

- ❑ Projected back down margin is greater than 100 MW and rising;
- ❑ There is **no** expectation of a recurrence

Step 7.3 Primary Responsibility: Operations Shift Supervisor

Notify the Control Room Personnel when Minimum Generation Emergency will be cancelled.

Step 7.4 Primary Responsibility: Operations Shift Supervisor

Condition(s) to perform this step:

- **If generators were dispatched below Eco Min.**

Instruct the Loader Operator to verbally dispatch generator(s) to Eco Min.

Step 7.4.1 Primary Responsibility: Loader Operator

Condition(s) to perform this step:

- **A non-dispatchable (UCM 3) generator was dispatched below Eco Min.**

Notify the DE of the non-dispatchable (UCM 3) generator to increase output to the Eco Min value.

Notes

- Do **NOT** use manual DDPs.
- Generators operating below their Eco Min are highlighted in red.

Step 7.4.2 Primary Responsibility: Loader Operator

Condition(s) to perform this step:

- **A dispatchable (UCM 4) generator was dispatched below Eco Min.**

Notify the DE of the dispatchable (UCM 4) generator to increase output to the Eco Min value.

Notes

- Do **NOT** use manual DDPs.
- Generators operating below their Eco Min are highlighted in red.

Step 7.4.3 Primary Responsibility: Loader Operator

Condition(s) to perform this step:

- **A DE notified to increase output to Eco Min**

Log the verbal dispatch to return to Eco Min

Instructions

Use log entry: > EMERGENCY PROCEDURE EVENTS > MIN GEN EMERGENCY > Units Ordered Back to Eco Min

Step 7.5 Primary Responsibility: Operations Shift Supervisor

Instruct the Generator Operator to no longer curtail Day Ahead transactions on non-CTS interfaces for Minimum Generation Emergency and resume normal scheduling of external transactions.

Notes

Day Ahead transaction may still be curtailed due to ramp constraints.

Step 7.6 Primary Responsibility: Operations Shift Supervisor

Instruct the Generator Operator to resume normal scheduling of transactions on the NYN Interface.

Step 7.7 Primary Responsibility: Operations Shift Supervisor

Instruct the Loader Operator to adjust RTUC/UDS to return to Normal dispatch.

Notes

Approval of the RTUC/UDS case should coincide with the Minimum Generation Emergency cancellation time.

Step 7.7.1 Primary Responsibility: Loader Operator

In RTUC, remove the "Min Gen Emergency" flags from the Interval Override display and execute and approve an RTUC case.

Notes

Approval of the RTUC/UDS case should coincide with the Minimum Generation Emergency cancellation time.

Step 7.7.2 Primary Responsibility: Loader Operator

In UDS, select "Normal" in the Gen Emergency drop down box and execute and approve a UDS case.

Notes

Approval of the RTUC/UDS case should coincide with the Minimum Generation Emergency cancellation time.

Step 7.8 Primary Responsibility: Senior System Operator

Initiate the Minimum Generation Emergency Cancelled notification using ENS.

Instructions

Use the "Min Generation Emergency Cancelled" icon.

Notes

"Min Generation Emergency Cancelled" is setup to perform the following notifications:

- ISO Management and staff will receive an email notification
- The Generator/DARD pump Designated Entities (DEs) will receive telephone notification

Step 7.9 Primary Responsibility: Senior System Operator

Notify neighboring RCs/BAs and LCCs that Minimum Generation Emergency has been cancelled.

Instructions

The following entities are required to be notified:

- ❑ NYISO
- ❑ HQTE
- ❑ NBPSO
- ❑ CONVEX
- ❑ Maine
- ❑ NGrid
- ❑ NH
- ❑ NSTAR
- ❑ VELCO

Step 7.10 Primary Responsibility: Operations Shift Supervisor

Log the cancellation of Minimum Generation Emergency.

Instructions

Use log entry: > EMERGENCY PROCEDURE EVENTS > MIN GEN EMERGENCY > Cancelled [WEB]

Enter the following:

- ❑ End Date and Time;
- ❑ Notifications to neighboring RCs/BAs;
- ❑ Notifications to LCCs.

Notes

- The entry will indicate the status of posting to the ISO-NE website calendar.
- This log entry will create a posting of the Minimum Generation Emergency cancellation to the ISO-NE website calendar, the posting may take up to five minutes.

Step 7.10.1 Primary Responsibility: Operations Shift Supervisor

Condition(s) to perform this step:

- **The automatic posting to the ISO-NE website calendar failed.**

Contact the TSO Administrator to post the Min Gen Emergency Cancellation to the Web Calendar.

Instructions

Provide the TSO Administrator the expected End Time and Date.

Step 7.11 Primary Responsibility: Loader Operator

Condition(s) to perform this step:

- **Generator had its SS denied; Or**
- **A generator was shut down for Minimum Generation Emergency.**

Notify the DE that it is no longer restricted and can resume its normal schedule.

Step 7.12 Primary Responsibility: Senior System Operator

Request the Forecaster to determine if generation changes are necessary from the COP.

Revision History

Rev. No.	Date (MM/DD/YY)	Reason	Contact
0	01/10/14	Initial revision of this Procedure	Steven Gould
1	04/03/14	Updated logging requirements globally Added a step for pump storage DARD assessment Added clarification note for nuclear generator dispatch Deleted the following items at the request of the Control Room Management Step 6.10, Section 8, and Section 9	Steven Gould
2	11/24/14	Modifications made for Hourly Markets	Steven Gould
3	11/05/15	Update for the implementation of GCA project	Steven Gould
4	12/11/15	Update for the implementation of CTS project	Steven Gould
5	03/07/16	Update procedure background and remove controlled labeling	Steven Gould
6	02/27/17	Approved on 02/27/17 but will not be effective until 03/01/17 to coincide with software migration into production. Update for the implementation of MEP project	Steven Gould
7	09/11/17	Administrative update of modification of procedure format	Steven Gould
8	12/19/17	Update LCC names	Steven Gould
9	01/11/19	Biennial Review	Steven Gould
10	03/10/20	Adjusted Steps 2.1, 2.2, 5.2 and 5.3 to combine log entries. Adjusted 7.6 to encompass current process.	Steven Gould
11	10/14/20	Updated Steps 2.2.1, 5.3.1, 7.9.1 and Removed Attachment 1 to eliminate manual posting to the Web Notices	Steven Gould
12	05/24/21	Updated the following to conform with OP-9 modifications: Background, Steps 3.1, 3.2, 6.7, 6.8, 7.6. Removed standard of completion provided in Common Procedure Information.	Steven Gould
13	08/02/21	Updated Procedure Background with commonly used terminology, Updated Common Procedure Instructions, Replaced instruction in Step 3.7.1 with Step 3.7.1.1, Deleted Step 7.9.1 and combined it with Step 7.10.1 to line up with Opralog entry format, Corrected "Instructions" and "Notes" where applicable, Modified Section 6, Deleted Step 7.13 due to automatically imported into the weekly report, Replaced instruction in Step 7.7 with substeps 7.7.1 and 7.7.2	Steven Gould