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Procedure Background

In this procedure "Guide" is an all-inclusive term for: TOG Stability, TOG Text, TOG RAS/ACS, and TOG temporary.

The word Unit is inclusive to all dynamic reactive equipment found under the UNIT display in EMS applications Powerflow, STCA, RTNET, RTCA, and CAJR.

Control Room Operators, NERC certified at the RC level, determine valid contingencies after analysis of the RTCA output.

NOTE: When ESTIMATES executes the following are triggered to run: ISORRM, OP12B, and MLCC15H N-0
For a manual initiation of the Network Sequence (Run Sequence is clicked) the following items will run:
- RTNET (ESTIMATES and LOSSES), ILC, EMSOUT/UDSWRITE function, RTCA, EMSOUT/AOL function (if pre-line switching active: STCA will run), CLOGGER and CAJR.

For an automatic execution of the Network Sequence the following occurs:
- For all sequence executions the following items run: RTNET (ESTIMATES and LOSSES), ILC, and EMSOUT/UDSWRITE function.
- For every second execution the following items run after the items that run each time have completed: RTCA, EMSOUT/AOL (if pre-line switching active: STCA will run), CLOGGER and CAJR.

RSYNCER is **NOT** a part of the Network Sequence (Run Sequence) process. It runs every 4 seconds.
- RSYNCER SE FILES time/date stamp indicates that the process has updated the associated files after RTNET has completed running.
- RSYNCER CLOGGER time/date stamp indicates that the process has updated the associated files after CLOGGER has completed running.

RTNET takes SCADA measurements, manually entered items, and the power system models for ISO-NE, New Brunswick Power and New York ISO, to provide an estimate of the state of the power system. The estimated state of the power system network can then be monitored to provide an indication of System Operating Limit (SOL) exceedances and to determine any Interconnection Reliability Operating Limit (IROL) exceedances in New England. RTNET will present thermal exceedances when the flow is $\geq$ 90% of the Normal limit.

RTCA provides an indication of the steady state system post contingent after Units with an AVR flag set and connected to the system, shunt devices with an AVR flag set, and transformers with an AVR flag set have had a chance to respond (this would be greater than a minute post contingent).

CAJR provides an indication of the steady state system post contingent after only Units with an AVR flag set and connected to the system have responded (this would be within seconds post contingent).

The New England modeled contingency events in RTCA and CAJR are listed in OP19 Appendix J – Contingency List and Criteria/Limits. External neighboring area contingencies are modeled as identified and requested by Operations Support Services and Operations Management. The Control Room maintains an External Contingency List which identifies neighboring selected NPCC Facilities for Notification elements, at least 2 busses out from the New England tie stations. NPCC Facilities for Notification List updates are monitored to identify necessary changes to the External Contingency List. This External Contingency List is periodically reviewed and maintained in the Control Room SharePoint.

RTCA and CAJR sort the Branch, High Voltage (HV) and Low Voltage (LV) violations by the percent severity, displayed as either % Dev or % Rating. Contingency Violation displays show the Contingency ID by the % Dev or % Rating. Component Violation displays show the monitored element by % Rating.
% Rating is used on the following displays: Contingency Branch Violation, Component Branch Violation, Component Voltage Violation (both high and low), and CA Voltage Quadrant.
% Dev is used on the following display: Contingency Voltage Violation (both high and low).

Surveillance of the RTCA security software shall include review of the RTCA Summary results. RTCA Contingency exceedances are only presented to a Control Room Operator after reaching a certain percentage of the transmission limit, which is designated by the Real Time Services group in coordination with Operations Management. RTCA will present thermal exceedances when post-contingent flow is $\geq$ 90% of the LTE limit.

Audible alarms have been provided to alert the Control Room Operators to the exceedance of an LTE or STE limit in RTCA. When a contingency results in a limiting element exceeding 90% of its LTE, or 100% of its STE, an audible alarm is triggered and a SYSACT Log entry is made. The log entry identifies the CTGY and the triggered setpoint, but **NOT** the limiting element. The alarms occur only on the initial exceedance of the corresponding limit; **no** subsequent alarm will be generated until the post-contingent flow has reduced below the threshold and reset.

Many of the RAS/ACS devices have been incorporated into the RTCA and STCA software. By selecting the "RAS/ACS Directory" icon, the Control Room Operator can assess which RAS/ACS was incorporated in the RTCA software analysis. RAS/ACS Devices in red are Active and have been triggered in the base case or during contingency analysis.

Nuclear station voltage monitoring
Nuclear station voltage monitoring is included in RTCA to comply with NPIRs. The following contingencies will be evaluated by the "Non-Field SPS's" feature of the RTCA software: MIL2, MIL3, and SBRK. The modeling of these contingencies, in conjunction with the Non-Field SPS programming, provide an indication that post-contingent station voltage limits will be exceeded following a unit trip with the addition of Emergency Core Cooling System (ECCS) loads.
The NPIR voltage setpoints are programmed into the SPS logic and will trigger an "LV" indication if the Low Voltage limit is exceeded. A "WLV" Warning Low Voltage limit, set 2kV above the Low Voltage limit, is provided to alert the Operator of a potential problem. Upon an exceedance of either limit, the applicable CTGY ID will be displayed in the "Special Processed contingencies that triggered an SPS" column of the "Contingency Branch Violations" RTCA EMS display with an indicator for the limit violated (LV or WLV) to the right.
Along with the visual indication, the initial exceedance of a Nuclear Voltage Alarm setting will trigger an audible alarm. No subsequent exceedance will trigger an audible alarm until all associated alarms have been returned to normal.

Reclosing badge

A flow bandwidth is required when reclosing either 390/3016, 3001, or 396 lines. RTCA monitors this bandwidth through the use of non-field SPS's that measure the flow between NB and NE. Special Process Contingency badges in RTCA provide an indication if reclosing is allowed. If reclosing is or isn't allowed, the applicable CTGY ID will be displayed in the "Special Processed contingencies that triggered an SPS" column of the "Contingency Branch Violations" RTCA EMS display with an indication of (RECL) to the right, accompanied by a "Reclosure allowed" or "Reclosure not allowed" message on the display.

STCA

STCA has a Solution Control panel that allows the user to select different modes of operation. The modes of operation are as follows:

- Default mode - Unit MVAr, Shunt Switching and Xfmr Tapping: Has the same settings as RTCA. It will allow STCA to use Units on AVR, Shunt Devices on AVR and Xfmrs on AVR in the contingency solution. Used for all studies, except for ones involved with CAJR.
- Enable Unit MVAr Control: has the same setting as CAJR. It will allow STCA to only use Units on AVR in the contingency solution. Used for studies associated with CAJR.
- Enable Unit MVAr and Shunt Switching. It will allow STCA to use Units on AVR and Shunt Devices on AVR in the contingency solution. No defined use requirement at this time.
- Enable Unit MVAr and Xfmr Tapping. It will allow STCA to use Units on AVR and Xfmrs on AVR in the contingency solution. No defined use requirement at this time.
- Enable Unit MVAr, Phase shifter changing (Maintain MW sched). It will allow STCA to use Units on AVR and Phase shifters on AWR in the contingency solution. Represents CAJR post contingent flows with Phase shifter brought back to schedule.
- Apply All. It will allow STCA to use Units on AVR, Shunt Devices on AVR, Xrmrs on AVR, and phase shifters on AWR in the contingency solution. Used to mimic RTCA with phase shifter brought back to schedule.

STCA Flat Start status:

- Non Flat Start is normally selected. It utilizes the bus voltages and phase angles that were solved for by RTNET.
- Flat Start is selected when a user manually alters the basecase bus structure or makes a lot of load and generation changes; the basecase might solve more easily from a flat start than from the voltages and angles of the previous solution. Setting the Flat Start flag will: resets the bus voltages and phase angles to their reference values (initialize all voltages to 1.0 PU and all angles to zero degrees).

Voltage Node

Actions to relate a voltage exceedance nodal indication to its corresponding network topology component:

- ❑ Click "RTN" button to access RTNET;
- ❑ Click "Analyst Displays" from menu;
- ❑ Select "Network Topology Model";
- ❑ Locate the applicable station;
- ❑ Identify the location of the node at the station

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:
- **RTCA, CAJR or STCA indicates a contingency and corrective actions need to be determined; Or**
- **An RTCA or CAJR unsolved contingency needs to be studied; Or**
- **An LCC Operator notifies the ISO of a potential issue.**

Section 1 : Studying a contingency

Step 1.1   Primary Responsibility: Security Operator
Verify the Pre CTG Value is consistent with the RTNET and SCADA value.

Step 1.1.1   Primary Responsibility: Security Operator

Condition(s) to perform this step:
- **The RTCA or CAJR Pre CTG Value is NOT consistent with RTNET.**

Determine what is causing the issue and correct it using CROP.27002 Telemetry and Topology Problems.

Step 1.2   Primary Responsibility: Security Operator

Condition(s) to perform this step:
- **For 115 kV lines with more than 3 terminals; Or**
- **Indication a node (ND) is exceeded.**

Identify the contingency definition of the contingency to be studied.

Instructions

Access the Contingency Definition display and locate the contingency definition by:
- ❑ Opening the "Analyst Displays" or "Related Displays" menu then
  - ❑ Hovering over "Contingency Analysis Displays"
  - ❑ Clicking on Contingency Definition; and
  - ❑ Typing "find ctg=XXXX" or "find ctg=XXX" in the command line, where XXXX and XXX is the contingency ID; Or
  - ❑ Using the file folder to access the directory.

Notes
- This would be identified by the applicable LCC Operator, if studying a contingency identified by an LCC.
- To determine where a node is located, perform the actions as described in the Procedure Background.

Step 1.3   Primary Responsibility: Security Operator
Determine if there are any Guides associated with the identified contingency.

Step 1.3.1   Primary Responsibility: Security Operator

Condition(s) to perform this step:
- **A Guide is applicable to the identified contingency.**

Determine what the required actions or limitations are per the Guide.

Step 1.4   Primary Responsibility: Security Operator

Access Powerflow and verify the proper Options are selected.

Notes:
- The current Options Set selected will be displayed in the Active Options Set well.
- There are currently three sets of Powerflow Options:
  - CONTROL_ROOM_GENREF: used when retrieving and studying a basecase.
  - CONTROL_ROOM_RTNET: used when taking a snapshot of Real-Time or a save case of Real-Time
  - CONTROL_ROOM_CAJR: used when taking a snapshot of Real-Time and studying CAJR contingencies.

Step 1.4.1   Primary Responsibility: Security Operator

Condition(s) to perform this step:
- **The Options selected are NOT proper for the study being performed.**

Select the proper Options for the study being performed.

Instructions
To select new Powerflow Options:
- ❑ Select the appropriate Option Set;
- ❑ Select "YES" in the pop up dialogue box;
- ❑ Verify Options indicated in the "Active Options Set" well are correct

Step 1.5   Primary Responsibility: Security Operator

Model the identified contingency out-of-service.

Notes
- Multiple iterations of modeling the contingency in and out of service might be required while performing the study and making adjustments (e.g., changing generation output, switching shunt devices, tapping phase shifters or LTCs).
- If a Guide is applicable, ensure to model the required actions and/or limitations

Step 1.5.1   Primary Responsibility: Security Operator

Run Powerflow and check the base case or one-line for element exceedances.

Notes
- Base case is normally used to check for exceedances.
- The one-line display is used when studying NSTAR cable contingencies.
- While studying a CAJR contingency use the following limits:
  - Low voltage at 90% of nominal voltage
  - High voltage at 105% of nominal voltage
- If CAJR reports an exceedance that is less than the OP-19 and MLCC15H criteria but greater than 90% of the nominal voltage and RTCA does **NOT** report an exceedance, use available pre-contingent no cost options.
- While studying NSTAR cable contingencies Powerflow will **NOT** display the single cable and **no** circulation limits. When determining if a cable / cable section limit is being exceeded the actual line flow within Powerflow will have to be checked using the applicable one-line and checked against the limit in the NX-9 or ILC Cable Pair monitoring tool.
- If Powerflow base case is not showing the expected results basd on RTCA, CAJR or STCA contingency results, ensure the contingency is is being modeled correctly per the contingency definition.

Step 1.5.2   Primary Responsibility: Security Operator

Determine the associated Adjustment and Distribution Factors for the contingency.

Notes

- Δ is equal to the Post value - Pre Value

- Adjustment Factor = Δ Generation MW Adjustment / Limiting Element Δ MVA Flow

- Distribution Factor = Limiting Element Δ MVA Flow / Contingent Element MVA Pre Flow

Notes

If required, adjust reactive resources to maintain OP-19 or MLCC15H voltage criteria for the post contingent solution.

Step 1.5.3   Primary Responsibility: Security Operator

Determine if pre or post contingent actions are required.

Instructions

- ❑ Pre-contingent actions are required if:
  - An STE exceedance is present; Or
  - An LTE exceedance cannot be cleared within 15 minutes; Or
  - A Normal exceedance cannot be cleared within 30 minutes (IROL), 120 minutes (SOL) when the next contingency causes an LTE exceedance; Or
  - A stability limit exceedance cannot be cleared within 30 minutes (IROL), 120 minutes (SOL); Or
  - CAJR voltage exceedance is present that is less than 90% of nominal voltage or greater than 105% of nominal voltage; Or
  - RTCA MLCC15H voltage exceedance is present that does not allow an action plan to be utilized.
- ❑ For CAJR, if pre-contingent actions are **NOT** available or are insufficient to raise voltage to greater than 90% of nominal and post contingent actions are required; contact Real Time Studies On-Call Engineer.

Step 1.6   Primary Responsibility: Security Operator

Condition(s) to perform this step:

- **An unsolved contingency is being studied and the reason could not be determined using Powerflow.**

Return the identified contingency to service in Powerflow.

Step 1.7   Primary Responsibility: Security Operator

Condition(s) to perform this step:

- **An unsolved contingency is being studied and the reason could NOT be determined using Powerflow.**

Conduct a STCA study while holding the contingency to determine the effects on the system.

Instructions

- ❑ If CAJR unsolved contingency is being studied, select "Enable Unit MVAr Control" from the STCA Solution Control. This mode is selected so that the final results displayed when the process is resumed, will align with CAJR processing.
- ❑ To hold a contingency, perform the following:
  - ❑ Click the Input Setup button on the Contingency Analysis Study display.
  - ❑ Enter the contingency ID in the "Identifier of Contingency to be Studied:" well.
  - ❑ Click the "Hold CA Processing in the Contingency State:" box to place a check mark.
  - ❑ Click the "OK".
  - ❑ Click the "Run Contingency Analysis" button.
- ❑ To finish running STCA click the "Resume Analysis" button.
- ❑ Remove the check mark for "Hold CA Processing in the Contingency State:" when complete.

Notes

Holding the CA Process in the contingency state shows the initial topology change associated with the contingency without assessing RAS/ACS logic for operation. During this operation STCA can use devices on automatic control (AVR or AWR).

Step 1.8   Primary Responsibility: Operations Shift Supervisor

Condition(s) to perform this step:

- **The limiting element is a non-BES distribution circuit.**

Notify Operations Support Services of the contingency details via email.

Instructions

- Use the distribution list "OPER Real Time Studies"
- It is **NOT** necessary to notify the associated LCC Operator of a limiting element that is a non-BES distribution circuit.

Step 1.9   Primary Responsibility: Security Operator

Contact the associated LCC Operator(s), review the analysis information and determine the actions required to be performed to alleviate the potential exceedances/violations to satisfy OP-19 and/or MLCC15H criteria.

Condition(s) to perform this section:
- **RTCA indicates post contingent voltage exceeds a NPIR voltage limit for a nuclear plant; Or**
- **RTCA indicates post contingent voltage is within 2 kV of a NPIR voltage limit for a nuclear plant.**

Section 2 : Indication of a special processed voltage exceedance

Step 2.1   Primary Responsibility: Security Operator

Determine the associated Nuclear Generator's applicable voltage setpoints.

Notes

The voltage setpoints can be found:
- On the "Trigger Conditions" display of the Non-Field SPS-TRIP(S)-VOLT.
- In the associated M/LCC 1 Attachment for that Nuclear Generator.

Step 2.2   Primary Responsibility: Security Operator

Study the contingency using Section 1.

Notes

Ensure the station service loads are modeled per the applicable M/LCC 1 Attachment.

Step 2.3   Primary Responsibility: Security Operator

Notify the Senior System Operator and Operations Shift Supervisor of the actions required to be taken.

Step 2.4   Primary Responsibility: Security Operator

Contact the LCC Operator to take action as determined by the study performed.

Notes

The ISO and LCC System Operators shall each, as applicable, take the appropriate Normal actions in accordance with OP-19 and applicable ISO Guides to recover the voltage.

Step 2.5   Primary Responsibility: Security Operator

Condition(s) to perform this step:
- **NPIR voltage limit exceedance cannot be resolved within 30 minutes.**

Notify the applicable Nuclear Plant I.A.W. M/LCC1.

Condition(s) to perform this section:

- **RTCA indicates post contingent exceedance of a cable pair limit.**

Section 3 : Indication of a special processed cable contingency

Step 3.1   Primary Responsibility: Security Operator

Identify the cable contingency and applicable limits.

Instructions

The single cable limit with no oil circulation rating can be found by:
- ❑ Access the "In use Cable Pair ratings" display in ILC
- ❑ Locate the applicable cable / cable section
- ❑ Determine the limit(s)

OR
- ❑ Access the NX-9 database
- ❑ Find the applicable cable / cable section
- ❑ Determine the limit(s)

Step 3.2   Primary Responsibility: Security Operator

Study the contingency using Section 1.

Notes

Powerflow will **NOT** display the single cable and **no** circulation limits. When determining if a cable / cable section limit is being exceeded the actual line flow within Powerflow will have to be checked using the applicable one-line and checked against the limit in the NX-9 or ILC Cable Pair monitoring tool.

Step 3.3   Primary Responsibility: Security Operator

Notify the Senior System Operator and Operations Shift Supervisor of the actions required to be taken.

Condition(s) to perform this section:
- **An unsolved contingency is blinking pink/purple in RTCA. System Activity Log has an unsolved contingency entry; Or**
- **An unsolved contingency is indicated in CAJR.**

Section 4 : Respond to an Unsolved Contingency

Notes
- Only Unsolved Contingencies in RTCA will generate an audible alarm and System Activity log entry.
- Unsolved contingencies shall be solved within 30 minutes from the last successful Real-Time Assessment to meet the NERC Reliability Standard requirement.

Step 4.1   Primary Responsibility: Security Operator

Condition(s) to perform this step:
- **If it is an RTCA unsolved contingency.**

Acknowledge the unsolved contingency.

Instructions
An unsolved contingency is acknowledged by clicking on the contingency ID button in RTCA on the Contingency Violation Summary display or CA Voltage Quadrant display.

Notes
- If the unsolved contingency is **NOT** acknowledged from an RTCA display it will be logged as improperly acknowledged in Alarm Event Log 2.
- Unsolved contingencies in CAJR cannot be acknowledged.

Step 4.2   Primary Responsibility: Security Operator
Study the unsolved contingency using Section 1.

Step 4.3   Primary Responsibility: Security Operator
Contact the applicable LCC(s) and/or neighboring RC/BA (if applicable).

Instructions
Compare contingency analysis solutions and take corrective actions, if necessary.

Step 4.3.1   Primary Responsibility: Security Operator

Condition(s) to perform this step:
- **The unsolved contingency solved for LCC and/or neighboring RC/BA (if applicable) but remains unsolved for ISO.**

Request the applicable LCC(s) and/or neighboring RC/BA (if applicable) perform Real-Time Assessments at least once every 30 minutes for the unsolved contingency and to notify ISO if the contingency does NOT solve in their contingency analysis solution.

Notes
A Real-time Assessment shall be performed at least once every 30 minutes.

Step 4.3.2   Primary Responsibility: Security Operator

Condition(s) to perform this step:
- **The unsolved contingency is unsolved for ISO and the applicable LCC(s).**

Perform a Real Time Assessment (RTA) using Section 1.

Step 4.3.2.1   Primary Responsibility: Security Operator

Log the completion of the RTA on the unsolved contingency.

Instructions
Use log entry: > TRANSMISSION > CONTINGENCY > Performed RTA for Unsolved Contingency

Identify the following items in the entry:
- ❑ Contingency ID;
- ❑ Solved in Powerflow status;

Step 4.4   Primary Responsibility: Security Operator

Condition(s) to perform this step:
- **The reason for the unsolved contingency cannot be determined within 15 minutes; Or**
- **The unsolved contingency is unsolved for ISO and the applicable LCC(s).**

Notify the IT On Call Technician that EMS support is needed.

Step 4.5   Primary Responsibility: Security Operator
Log the unsolved contingency.

Instructions
Use log entry: > TRANSMISSION > CONTINGENCY > Unsolved Contingency in CA

Identify the following items in the entry:
- ❑ Contingency ID;
- ❑ Solved in Powerflow status;
- ❑ Application the contingency was unsolved in, RTCA and/or CAJR;
- ❑ Contingency solved for LCC;
- ❑ Contingency solved for RC/BA if applicable;
- ❑ Identify "LCCs requested to perform Real-Time Assessment at least once every 30 minutes";
- ❑ Identify "Neighboring RC/BA requested to perform Real-Time Assessment at least once every 30 minutes"
- ❑ Reason for Unsolved.

Step 4.6   Primary Responsibility: Security Operator

Condition(s) to perform this step:
- **If the RTCA unsolved contingency was not acknowledged properly.**

Update Log 2.

Instructions
- ❑ Log 2 can be accessed by either clicking the LOG2 in the tool bar or Log #2 tab;
- ❑ Access the Log Annotation display by clicking the "Annotate Log" icon ;
- ❑ Enter the date and time in the "Time:" well;
- ❑ Enter the improperly acknowledge contingency ID and if the unsolved was solved in Powerflow in the "Message:" well.

Step 4.7　　　Primary Responsibility:　　Security Operator

Condition(s) to perform this step:
- **The unsolved contingency is solving in ISONE Contingency Analysis tool; And**
- **Affected LCC and RC/BA (if applicable) were performing Real Time Assessments for the contingency.**

Notify the affected LCC and RC/BA (if applicable) that the contingency is now solving in ISONE Contingency Analysis.

Condition(s) to perform this section:
- **A contingency definition needs to be activated for monitoring in Real Time due to a Transmission Operating Guide, an Operating Guide, an Outage Application, a change in transmission status, or a Bus Fault, DCT or Stuck Breaker contingency has been determined to be harmful; Or**
- **A contingency no longer needs to be monitored in Real Time and needs to be deactivated.**

Section 5 : Activate or Deactivate a Contingency Definition in RTCA and CAJR

Step 5.1   Primary Responsibility: Security Operator

Access the RTCA Contingency Activation Control display.

Instructions

Access the Contingency Activation Control display by:
- ❑ Clicking the "CTG ACT" button;

OR
- ❑ Opening the "Analyst Displays" or "Related Displays" menu
- ❑ Hovering over Contingency Analyst Display
- ❑ Clicking on Contingency Activation Control.

Step 5.2   Primary Responsibility: Security Operator

Locate and modify the status of the contingency definition.

Instructions
- ❑ To locate a contingency using the command line, type "find ctg=XXXX" or "find ctg=XXX" where XXXX and XXX is the contingency ID; OR use the file folder.
- ❑ To activate a contingency definition, right click "INELIGIBLE" and select "Set to DEFAULT".
- ❑ To deactivate a contingency definition, right click "DEFAULT" and select "Set to INELIGIBLE".

Notes

Bus fault, Stuck Breaker or DCT contingencies not identified in the MLCC15 documents as having unacceptable inter-area impact may remain inactive in RTCA, unless determined to be harmful due to analysis. Then, they should be activated.

Step 5.3   Primary Responsibility: Security Operator

Transfer the RTCA contingency definition database to CAJR by clicking the "Transfer CTGS to RTCAJR" button.

Notes

Failure to perform this step would mean that CAJR would **NOT** be assessing the same Contingencies as RTCA.

Step 5.4   Primary Responsibility: Security Operator

Run a Network Sequence.

Step 5.5   Primary Responsibility: Security Operator

Verify the transfer contingency definition database time and date stamp updated.

Instructions

The time and date stamp to the right of the "Transfer CTGs to RTCAJR" button indicates when the SCRIPTOR process has been initiated to push the CAJR database update.

Step 5.6   Primary Responsibility: Security Operator

Verify the contingency definition Status, on the Contingency Activation Control display, has updated in RTCA and CAJR.

> **Notes**
> - If Activating, the status should update to "ACTIVE".
> - If Deactivating, the status should update to "INACTIVE".

Step 5.7   Primary Responsibility: Security Operator

Log the contingency activation or deactivation.

> **Instructions**
> For activation:
> - ❑ Use log entry: > TRANSMISSION > CONTINGENCY > Activated Contingency in CA
>
> For deactivation:
> - ❑ Use log entry: > TRANSMISSION > CONTINGENCY > Deactivated Contingency in CA
>
> Identify the following items in the entry:
> - ❑ Contingency ID;
> - ❑ Reason for the activation or deactivation.

Step 5.8   Primary Responsibility: Security Operator

Determine if the contingency definition needs to be activated or deactivated in STCA. If so, proceed to Section 6.

Step 5.9   Primary Responsibility: Security Operator

Update the "List of Activated or Deactivated Contingencies" on the Control Room Sharepoint.

Condition(s) to perform this section:
- **A contingency definition needs to be activated for evaluation in STCA; Or**
- **A contingency no longer needs to be evaluated in STCA and needs to be deactivated.**

Section 6 : Activate or Deactivate a Contingency Definition in STCA

Notes

If a new STCA CTGS savecase is retrieved this will overwrite any changes made to the current STCA clone until Power System Modeling creates an updated CTGS savecase.

Step 6.1   Primary Responsibility: Any Control Room Operator

Access the STCA Contingency Activation Control display.

Instructions

Access the Contingency Activation Control display by:
- ❑ Clicking the "CTG ACT" button.

OR
- ❑ Opening the Analyst Displays menu, hovering over Contingency Analyst Display then clicking on Contingency Activation Control.

OR
- ❑ Opening the Related Displays menu, hovering over Contingency Analyst Display then clicking on Contingency Activation Control.

Step 6.2   Primary Responsibility: Any Control Room Operator

Locate and modify the status of the contingency definition.

Instructions
- ❑ To locate a contingency using the command line, type "find ctg=XXXX" or "find ctg=XXX" where XXXX and XXX is the contingency ID or use the file folder.
- ❑ To activate a contingency definition, right click "INELIGIBLE" and select "Set to DEFAULT".
- ❑ To deactivate a contingency definition, right click "DEFAULT" and select "Set to INELIGIBLE".

Step 6.3   Primary Responsibility: Any Control Room Operator

Run STCA.

Step 6.4   Primary Responsibility: Any Control Room Operator

Verify the contingency definition Status, on the Contingency Activation Control display, has updated.

Instructions
- ❑ If Activating, the status should update to "ACTIVE".
- ❑ If Deactivating, the status should update to "INACTIVE".

Step 6.5   Primary Responsibility: Any Control Room Operator

Determine if the contingency definition needs to be activated or deactivated in RTCA. If so, proceed to Section 5.

Condition(s) to perform this section:
- **A transmission element is expected out of service for greater than two days and study results show the need for a new contingency definition; Or**
- **A current contingency definition is NOT correct.**

Section 7 : Identify a new Contingency Definition

Step 7.1   Primary Responsibility: Any Control Room Operator

Inform the Operations Shift Supervisor that a new or modified contingency definition may be required.

Step 7.2   Primary Responsibility: Operations Shift Supervisor

Determine if the need for a new or modified contingency definition is valid.

Step 7.3   Primary Responsibility: Operations Shift Supervisor

Notify the Manager, Control Room Operations (or designee) of the need for a new or modified contingency definition.

Condition(s) to perform this section:

- **Performed once per shift by the Operations Shift Supervisor.**

Section 8 : Perform a review of the unsolved contingencies for the shift

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Step 8.1   Primary Responsibility: Operations Shift Supervisor

Access "Log 2" in the EMS Alarms.

Step 8.2   Primary Responsibility: Operations Shift Supervisor

Review "Log 2" or "Alarm Viewer" for proper acknowledgement of all unsolved contingencies that have occurred since the last review.

Step 8.3   Primary Responsibility: Operations Shift Supervisor

Condition(s) to perform this step:

- **If the RTCA unsolved contingency was NOT acknowledged properly, within 30 minutes.**

Notify the Manager, Control Room Operations.

Step 8.4   Primary Responsibility: Operations Shift Supervisor

Log the review in the System Activity Log.

Instructions

To log the review select "Ack. Unsolved" from the SEC dropdown menu.

Revision History

Rev. No.	Date (MM/DD/YY)	Reason	Contact
--	05/16/17	For previous revision history, refer to Rev 7 available through Ask ISO	Steven Gould
8	10/11/17	Administrative Format change	Steven Gould
9	02/26/18	Clarification added to Steps 1.5.2 and 3.2	Steven Gould
10	03/28/19	Added guidance in section 4 for unsolved contingencies	Steven Gould
11	08/06/19	Updated background section for nuclear voltage monitoring. Minor changes to 1.5.2 and 5.3	Steven Gould
12	10/09/19	Clarification for solving unsolved contingencies to step 4.3.1	Steven Gould
13	06/04/20	Updated background section for RTNET, STCA and modeling of contingencies; Added OP 19 Appendix J reference	Steven Gould
14	07/20/20	Add background information to document monitoring of NPCC Facilities for Notification list contingencies	Steven Gould
15	01/14/21	Changed background section for running a net sequence due to EMP 3.2 changes	Steven Gould
16	03/11/21	Updated background information for indications of Reclosing Special Processed contingencies, Modified Condition to Perform Section 1. Step 5.3 Removed old reference to MLCC15D, Added step 2.5 to notify the applicable Nuclear Plant of a NPIR voltage limit exceedance, Added Note to Section 6 describing STCA CTG savecases. Combined Steps 5.1 with 5.2 and 6.1 with 6.2	Steven Gould
17	05/23/22	Formatted Table of Contents, Updated References, Updated Common Procedure Information, Clarified Step 1.5.4 and Section 4, Added Step 4.9	Jonathan Gravelin
18	01/19/24	Deleted Step 1.5, converted Step 1.5.1 into Step 1.5; Changed Step 4.6; Converted Steps 4.6.1, 4.6.2, Step 4.7 & 4.8 to instructions of Step 4.6; Updated Procedure Background; Added Step 4.3.2, 4.3.2.1, & 5.9, added notes to Step 5.2, added conditions to enter in Section 5.	Jonathan Gravelin