# Master/Local Control Center Procedure No. 13

# (M/LCC 13)

# ISO and LCC Communication Practices

# 1. References

North American Electric Reliability Corporation (NERC) Reliability Standard COM-001 - Communications

North American Electric Reliability Corporation (NERC) Reliability Standard COM-002 - Operating Personnel Communications Protocols

North American Electric Reliability Corporation (NERC) Reliability Standard TOP-001 - Transmission Operations

Northeast Power Coordinating Council Inc. (NPCC) Regional Reliability Reference Directory #7 - Remedial Action Schemes

ISO New England Operating Procedure No. 2 - Maintenance of Communications, Computers, Metering, and Computer Support Equipment (OP-2)

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

ISO New England Operating Procedure No. 7 - Action in an Emergency (OP-7)

ISO New England Operating Procedure No. 10 - Emergency Incident and Disturbance Notifications (OP-10)

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

ISO New England Operating Procedure No. 20 - Analysis and Reporting of Power System Incidents (OP-20)

Master/Local Control Center Procedure No.1 - Nuclear Plant Transmission Operations (M/LCC 1)

Master/Local Control Center Procedure No. 2 - Abnormal Conditions Alert (M/LCC 2)

Master/Local Control Center Procedure No. 4 - Emergency Load Reduction Plans for Mitigating IROL Violations (M/LCC 4)

Master/Local Control Center Procedure No. 11 - Maintenance and Verification of New England System Restoration Plan (M/LCC 11) Attachment D – New England System Restoration Plan Resources List

Master/Local Control Center Procedure No. 12 - Identification and Coordination of ISO and LCC TOP Responsibilities (M/LCC 12)

Master/Local Control Center Procedure No. 15 - System Operating Limits Methodology (M/LCC 15) Attachment H - Voltage SOL Identification Procedure

Master/Local Control Center Procedure No. 20 - Operating Plan for Operating Emergencies (M/LCC 20)

## 2. Background

The intent of Master/Local Control Center No. 13 - ISO and LCC Communication Practices (M/LCC 13) is to establish common ISO New England (ISO) and Local Control Center (LCC) communication protocols and practices to promote effective communication especially between the operating personnel of ISO and each LCC. North American Electric Reliability Corporation (NERC) Reliability Standard COM-001 - Communications and NERC Reliability Standard COM-002 - Operating Personnel Communications Protocols establish requirements for effective communications; NERC Reliability Standard TOP-001 - Transmission Operations establishes the requirement to comply with Operating Instructions from the Transmission Operator (TOP).

ISO and each LCC have internal communication procedures that are already established, however M/LCC 13 is intended to supplement those procedures and provide specific guidance for communications practices for ISO and LCCs.

## 3. Responsibilities

ISO and each LCC are responsible for precise, accurate, and professional communications involving collaborative efforts to meet NERC TOP requirements as set forth in Master/Local Control Center Procedure No. 12 - Identification and Coordination of ISO and LCC TOP Responsibilities (M/LCC 12).

ISO and each LCC are responsible for gathering and providing complete and accurate information during operational communications. This can be accomplished through verbal or electronic Inter Control Center Communications Protocol (ICCP) telemetry. In the case of SOL and IROL Interface exceedances, ICCP will be used to confirm when an exceedance occurs and when it is cleared.

**NOTE**

Using three-part communication is required whenever issuing an Operating Instruction. Communications conducted for the purpose of confirming Interchange Schedules are not considered Operating Instructions, however, the use of three-part communications is expected. It is considered a best practice to use three-part communication in all situations where its use will enhance communication.

NERC defines an Operating Instruction as "A command by operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System (A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is **not** a command and is **not** considered an Operating Instruction)." For the purposes of this procedure and other ISO and LCC procedures, the term "Operating Instruction" is consistent with the NERC definition of this term. Also, the terms "Operating Instruction" and "directive" as used in ISO and LCC procedures are considered to be equivalent terms.

ISO and each LCC are responsible for using three-part communication whenever a verbal Operating Instruction is issued.

The M/LCC Heads are responsible for reviewing M/LCC 13 to assess the effectiveness of M/LCC 13 communications protocols and for modifying those protocols, as necessary, to enhance their effectiveness.

# 4. Procedure

## 4.1 Basic Protocol for All Operational Communications

**NOTE**

The initial communication each shift between ISO and each LCC and between ISO and each Reliability Coordinator (RC) requires stating names and locations. For subsequent communication during the shift between ISO and each LCC and between ISO and each RC, it is acceptable to state names only.

Verbal communication is extremely important and the primary method by which the ISO and LCC System Operators provide and receive information.

A. ISO and LCC System Operators verbal communications shall make use of the following standard practices:

- English language shall be used when issuing or receiving an Operating Instruction.
- Identify yourself, including your name and location.
    - For ISO System Operators include your assigned desk (e.g., Loader, Generation, Senior, etc.)
- Separate the conversational portion of a discussion from the portion when an Operating Instruction is being issued.
- Be precise, accurate, and professional.
- Be proactive rather than reactive in communications.
- Limit all unnecessary distractions that could hamper good communications.
- Be free of ambiguity. Avoid the use of slang terms and words that have a similar sound. Use correct nomenclature for any devices mentioned.
- Be direct. Use simple, straightforward language. Avoid technical terms and acronyms. Be aware that technical terms, jargon, and acronyms may be confusing and meaningless to people with backgrounds and experience different from your own.
- Make every effort to provide clear communications and intentions that are understood completely. Listen to cues from the other party to gauge their interest in and understanding of your comments. If the other party sounds confused or distracted, stop speaking and make sure the conversation is on track. If there is a concern of misunderstanding or confusion, stop the evolution and resolve the concerns.
- Communications with team members shall be concise and prioritized such that urgent or high consequence information is conveyed with minimum distraction and delay.

- If a request for information is received, obtain the information and promptly communicate it back to the party or provide the party with a knowledgeable contact.

B. After an exchange of general operational information, the discussion shall be summarized and acknowledged by the receiver by repeating back enough information in summary so that the issuer knows the issued message was correctly received.

**NOTE**

ISO and LCC System Operators should use 24-hour clock time when issuing an Operating Instruction with a time identification.

**NOTE**

ISO and LCCs do **not** issue Operating Instructions to any entity outside of the New England Reliability Control Area (RCA). All Operating Instructions issued by ISO and LCCs are to entities within the New England RCA time zone, so there are **no** instances that would require time zone identification when an Operating Instruction is issued. However, time zone identification should be used whenever it adds clarity to a discussion.

C. ISO and LCC System Operators shall issue each Operating Instruction in a clear, concise and definitive manner and use three-part communication, taking one of the following actions whenever such Operating Instruction is issued:

- If the repeated information is correct, confirm the receiver's response.
- If the repeated information is wrong or if requested by the receiver, reissue the original Operating Instruction.
- If a response is **not** received or if the Operating Instruction was **not** understood by the receiver, take an alternative action.

D. When an LCC System Operator receives an Operating Instruction, the LCC System Operator shall perform one of the following actions:

- Repeat, **not** necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that your response was correct.
- Request that the issuer restate the Operating Instruction.

E. When an LCC System Operator receives an Operating Instruction from ISO, the LCC shall comply with the Operating Instruction, or if **not** able to perform the Operating Instruction, the LCC shall immediately inform ISO it **cannot** perform the required action

F. When an ISO System Operator receives a verbal request to take action from an RC or an LCC, the ISO System Operator is expected to follow three-part communication protocol and perform the requested action, subject to due consideration of the reliability of the New England transmission system.

G. When an ISO System Operator issues a verbal request to a neighboring RC to take action, the ISO System Operator is expected to follow three-part communication protocol.

**NOTE**

The nomenclature for transmission interface elements and transmission interface facilities can be found in the ISO Interface Limit Calculator (ILC) or in the Generic Interface Constraints document on the ISO-NE website found at: https://www.iso-ne.com/isoexpress/web/reports/pricing/-/tree/pricing-support-documents

H. The nomenclature for transmission interface elements and transmission interface facilities shall include the following:

- For a line with two terminals, use the line number identifier
- For a line with more than two terminals, use the line number identifier and substation

**NOTE**

A single-party to multiple-party burst messaging system is used for notifying or communicating, by electronic means, a common message to multiple parties in a short period of time. Although such systems could be used to issue a verbal or written Operating Instruction, they are **not** used for that purpose by ISO and typically **not** used for that purpose by the LCCs. However, NERC Reliability Standard COM-002 requires that communications protocols for operating personnel require that whenever an Operating Instruction is issued using a burst messaging system that the issuer confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.

ISO/LCC "All LCC" conference calls are treated as a series of two-person communications requiring repeat-backs from each recipient.

I. If an LCC System Operator issues an Operating Instruction using a single-party to multiple-party burst messaging system, the issuer shall confirm or verify that the Operating Instruction was received by at least one of the receiving parties.

## 4.2 ISO and LCC Communications Involving Normal Operations

**NOTE**

Routine Resource Desired Dispatch Points (DDPs) issued by ISO are **not** communicated to the applicable LCC verbally and do **not** require any special communications protocols.

**NOTE**

Attachment B - Accepted RAS/ACS Terminology, is a listing of terms that are expected to be used when communicating the state of a Remedial Action Scheme (RAS) or Automatic Control Scheme (ACS).

**NOTE**

Steps 4.2.1.C and 4.2.2.D are **not** to be changed without agreement from NYISO.

To avoid a public safety issue, prevent equipment damage, or a violation of any thermal time limit, ISO or the LCC may take immediate action to reduce the flow to within acceptable limits prior to making notifications.

### *4.2.1 ISO Initiated*

A. For each of the following conditions, the ISO System Operator shall make the applicable communication(s):

(1) If a Generator greater than 500 MW trips, notify each LCC

(2) If a non-Fast Start Generator with a capability of 50 MW or greater is a Self-Schedule or is supplementally committed for any reason outside of the Current Operating Plan (COP), notify each affected LCC

(3) If a non-Fast Start Generator is capable of 50 MW or greater or identified in a Transmission Operating Guide (TOG), notify each affected LCC prior to releasing for shutdown

(4) If significant tie-line changes occur, notify each affected LCC

(5) If a significant Resource redeclaration occurs, notify each affected LCC

(6) If a Reactive Resource Automatic Voltage Regulator (AVR) or Power System Stabilizer (PSS) or governor device is inoperable, notify the applicable LCC

B. Following a contingency which disables the automatic control of the Northport (NNC) Phase Shifting Transformer (PST), ISO shall provide agreement prior to NYISO making tap adjustments or returning the PST to automatic control.

C. The ISO System Operator shall communicate, to each affected LCC, system reliability issues that suddenly emerge.

D. The ISO System Operator shall communicate, to the appropriate LCC(s), any

significant changes to an Approved or Implemented outage application. Examples include, but are **not** limited to:

(1) Modification to "Must Run" requirements

(2) Newly added or modifications to attached guidance

(3) Modifications to notes

E. The ISO System Operator shall maintain close communication with each LCC when a capacity and reserve-constrained condition is expected or imminent and during any actual capacity and reserve-constrained conditions.

F. If ISO is operating close to any operating limit or if there is any reliability concern, the ISO System Operator shall notify each applicable LCC of any status changes in a Resource that may affect the operating limit in question.

G. The ISO System Operator shall provide agreement to the applicable LCC prior to changing the state of a Type I or Type II RAS.

H. When ISO is notified by an entity other than the LCC, of a failure or test failure of a Key Facility Critical Component (KFCC) listed on Master/Local Control Center Procedure No. 11 – Maintenance and Verification of New England System Restoration Plan (M/LCC 11) Attachment D – New England System Restoration Plan Resources List (M/LCC 11D), the ISO System Operator shall notify the LCC System Operator of the KFCC status change.

I. When ISO is notified by an LCC of a failure of their State Estimator (SE) or Contingency Analysis (CA), the ISO System Operator shall notify all remaining LCCs of the failure.

(1) Log notification to remaining LCCs of LCC SE/CA Software Failure

J. When ISO is notified by an LCC of a loss of their ICCP data exchange capabilities, the ISO System Operator shall assess the impact and notify all remaining LCCs of the loss.

K. When ISO implements seasonal transmission facility limits, is notified by a neighboring RC of a limit change on a facility identified on the NPCC Facilities Notification List, or is notified by an LCC of a change to an in-use Real-Time transmission facility limit, the ISO System Operator shall implement and communicate the new limits to the LCCs using the applicable internal procedure.

L. When notified by an LCC of the start or completion of an ISO New England Operating Procedure No.2 - Maintenance of Communications, Computers, Metering, and Computer Support Equipment (OP-2) outage request, either Routine or Emergency/unscheduled, the ISO System Operator shall notify any affected LCC or RC.

### *4.2.2 LCC Initiated*

A. When an LCC becomes aware of a system reliability issue, transmission element operability problem/outage, or voltage/reactive control problem, the LCC shall communicate that condition to the ISO System Operator.

B. If an LCC performs any action to address an operating limit exceedance or violation, the LCC shall notify ISO of the action taken.

C. Each LCC shall notify the ISO System Operator prior to making changes to an in-use Real-Time transmission facility limit.

D. Following a contingency which disables the automatic control on either of the following PSTs, VELCO shall obtain approval from the ISO prior to making tap adjustments or returning the PST to automatic control. ISO shall seek agreement with NYISO prior to providing approval to VELCO:

(1) Sandbar (PV20)

(2) Blissville (K7)

E. Each LCC shall notify and obtain agreement from the ISO System Operator prior to changing the state of a Type I or Type II RAS.

F. Each LCC shall notify the ISO System Operator when the state of a Limited Impact RAS or Automatic Control Scheme (ACS) is changed.

G. When issuing an Operating Instruction to change a Generator voltage schedule, the LCC or ISO System Operator shall communicate the revised voltage setpoint to the Generator Operator (GOP) and instruct the GOP to maintain its AVR in automatic voltage control mode.

H. When the LCC becomes aware of scheduled maintenance that will result in the loss of functionality of a KFCC, the LCC shall notify the ISO System Operator of the scheduled maintenance.

I. When an LCC becomes aware of an unplanned outage due to failure during testing or operation of either a KFCC listed on M/LCC 11D, or a non-identified piece of equipment considered a Critical Component to System Restoration, the LCC System Operator shall communicate that outage to ISO by performing the following actions:

(1) Create an Informational Outage in the ISO Outage Scheduling software as follows:

a. “Search” and enter the affected station in the “1-Line Designation” field

b. Select the affected Station

c. From the “Constraints/Commitment” drop-down menu select “KF Impact”

d. In the “Reason/Priority” section, record the details that identify the exact piece of equipment

(2) Notify the ISO System Operator of the submitted Informational Outage Application and discuss the outage pertinent details.

(3) When the facility is returned to service, notify the ISO System Operator.

J. When an LCC loses the ability to shed load, the applicable LCC System Operator shall notify the ISO System Operator.

K. When an LCC experiences an unplanned interruption of ICCP data exchange with more than one LCC for greater than 10 minutes, the LCC System Operator experiencing the ICCP data loss shall notify the ISO System Operator.

L. The LCC System Operator shall notify the ISO System Operator of actions being taken to address the loss of high-speed protection, breaker failure protection, or breaker failure transfer trip protection, and provide updates on whether or **not** the protection system should be considered in- or out-of-service as the information becomes known.

M. The LCC System Operator shall request approval of OP-2 maintenance requests either Routine or Emergency/Unplanned, from the ISO System Operator and report the return-to-service.

N. As needed, each applicable LCC shall monitor and inform the ISO of any of the following

(1) Any LCC area condition changes which could be detrimental to the situation.

(2) Any status update on a contingent element.

(3) Any changes to implementation of planned actions.

(4) Suggestions of new actions available.

### *4.2.3 Next Day Study Results*

A. In preparation for Next Day operations, the ISO and LCCs shall evaluate and discuss potential System Operating Limit (SOL) exceedances. Should potential SOL exceedances be identified that that could impact neighboring RC/BAs, ISO System Operators shall discuss these with the applicable entity. These discussions shall include:

(1) Compare Reliability Assessment tool results

a. Compare Pre- and Post-Contingent flows and topology

b. Attempt to identify reasons for any discrepancies

(2) Confirm the applicable limits

a. Identify available Weather Sensitive Ratings

(3) Identify the type of exceedance

(4) Identify available actions

(5) Identify applicable TOGs

(6) Identify an action plan to mitigate the potential exceedance

a. Confirm the time allowed to restore the system to within ISO New England Operating Procedure No. 19 - Transmission Operations (OP-19) or Master/Local Control Center Procedure No. 15 - System Operating Limits Methodology Attachment H - Voltage SOL Identification Procedure (M/LCC 15H) criteria

## 4.3 ISO and LCC Communications During Abnormal Conditions

**NOTE**

The term “Emergency” may be used during operational communications to convey a sense of urgency to the intended recipient. The use of the term “Emergency” is not indicative of the existence of OP-19 Emergency Conditions, a reduction of overall system reliability, or the existence of an “Operating Emergency” as defined in Section 4.5 ISO and LCC Communications During Operating Emergencies.

A. If ISO or any LCC evacuates to their Backup Control Center (BCC), ISO shall notify each LCC and each adjacent RC / Balancing Authority (BA) of the situation.

B. When ISO declares Master Local Control Center Procedure No. 2 - Abnormal Conditions Alert (M/LCC 2), ISO shall immediately perform M/LCC 2 notifications to each LCC.

C. When ISO implements or cancels any Action of ISO New England Operating Procedure No. 4 - Action During a Capacity Deficiency, ISO shall immediately perform OP-4 notifications to each LCC.

D. If ISO and any LCC are both **not** able to monitor system reliability (i.e., ISO Energy Management System (EMS) and the LCC EMS systems are **not** operable at the same time), the ISO shall notify each affected nuclear power station GOP to take all of the appropriate required action(s).

E. When any LCC declares M/LCC 2 or OP-4, ISO shall immediately notify each remaining LCC.

F. When a neighboring RC/BA notifies ISO of an abnormal or emergency condition in its area, which could have potential impact to an LCC, ISO shall notify the applicable LCCs.

G. When ISO and/or any LCC are required to perform emergency reporting/communications, ISO and/or the LCC shall refer to ISO New England Operating Procedure No. 10 - Emergency Incident and Disturbance Notifications (OP-10) and ISO New England Operating Procedure No. 20 - Analysis and Reporting of Power System Incidents (OP-20).

## 4.4 ISO and LCC Communications During Transmission Events

**NOTE**

When a decision results in a plan to implement any Operating Instruction that is time dependent to restore OP-19 criteria, the Operating Instruction for that plan should be implemented and changes to that plan should be avoided.

**NOTE**

When an event involves more than one LCC, a conference call among all involved parties is recommended, if time allows. The discussion should include event evaluation, system status and the plan for any Operating Instruction implementation.

**NOTE**

When the ISO and LCC System Operators encounter modeling or solution discrepancies discovered during RTA discussions, the System Operators shall inform their respective Power System Modeling teams to conduct a verification of EMS solutions and to resolve discrepancies identified for both the pre- and post-contingency states.

**NOTE**

The term “Emergency” may be used during operational communications to convey a sense of urgency to the intended recipient. The use of the term “Emergency” is not indicative of the existence of OP-19 Emergency Conditions, a reduction of overall system reliability, or the existence of an “Operating Emergency” as defined in Section 4.5 ISO and LCC Communications During Operating Emergencies.

### *4.4.1 Exceedance of an Operating Limit in Real-Time*

A. If a pre-determined post contingency plan is in place with the LCC, the ISO System Operator shall contact the applicable LCC Operator and verify the actions are being implemented.

B. Upon identification by the ISO or LCC System Operator of a potential Operating Limit exceedance, the entities shall use the M/LCC 13 Attachment C - Communication Items checklist.

### *4.4.2 Contingency Analysis Results or Interface Limits Indicate the Exceedance of an Operating Limit*

A. Upon identification by the ISO or LCC System Operator of a potential LTE or STE limit exceedance, as indicated by CA results or an Interface Limit exceedance, the entities shall use the M/LCC 13 Attachment C - Communication Items checklist.

B. ISO and LCC System Operators should refer to the Current Transfers vs Calculated Limits of SOL or IROL Interfaces for indication of an exceedance. This information is communicated electronically via ICCP and also provides indication that an exceedance has cleared.

C. When applicable, the ISO and LCC System Operators should compare results of independent RTAs:

(1) If time allows, ISO and LCC System Operators should discuss and agree upon a plan of action to restore the system to within OP-19 or M/LCC 15 H criteria

D. As mitigating actions are being taken, the ISO and LCC System Operators should evaluate and discuss the effectiveness of these actions:

(1) Further actions should be discussed as required

E. Should the use of Post-Contingent action plans become necessary, the ISO and LCC System Operators should evaluate and discuss the following:

(1) Finalize actions and determine when these are to be implemented

(2) Consider the implementation of M/LCC 2

## 4.5 ISO and LCC Communications During Operating Emergencies

**NOTE**

The term "Operating Emergency" as defined in the Table below and as used in ISO and LCC procedures fully encompasses the NERC terms "Emergency", "BES Emergency", "Capacity Emergency" and "Energy Emergency" defined in the Glossary of Terms Used in NERC Reliability Standards. An Operating Emergency exists on the New England BES when one or more of the specific set of conditions listed in the Table below occurs. ISO and the LCCs have determined that these conditions align with these NERC "Emergency" terms. NERC defines "Emergency" as "any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System".

NERC Reliability Standard COM-002 requires that ISO and LCC communications protocols require that three-part communication be used when issuing or receiving Operating Instructions. While Section 4.1 above describes these protocols, the protocols are repeated in this Section because it is especially important that ISO and LCC System Operators adhere to three-part communication protocols during Operating Emergencies. NERC Reliability Standard COM-002 has "zero tolerance" for failures to adhere to three-part communication protocols during Operating Emergencies.

A. The following table identifies the ISO/LCC criteria that define when an Operating Emergency begins and ends on the New England BES. If ISO or an LCC determines that the current system condition as listed in the "Point at which Operating Emergency Begins" column has been reached, ISO and the LCC shall follow the communication requirements in the following steps until the conditions in the "Point at which Operating Emergency Ends" have been reached.

| Point at which Operating Emergency Begins | Point at which Operating Emergency Ends |
|---|---|
| Any Real-Time exceedance of a thermal or voltage Short Time Emergency (STE) IROL | Real-Time IROL exceedance ended |
| An IROL exceedance [Real Time Contingency Analysis (RTCA) or interface] for period greater than 20 minutes (must resolve in 30 min.) | IROL exceedance ended |
| OP-4 Action 6 or greater implemented* | The last of implemented OP-4 Actions 6 or greater are cancelled |
| Load shed Operating Instruction issued | Load shed has mitigated the Operating Emergency. |

* If Action 10 or 11 is implemented at a time prior to an actual capacity deficiency or transmission reliability issue or extended beyond an actual capacity deficiency or transmission reliability issue (e.g., extended heatwave), ISO or the applicable LCC is **not** considered to be in an Operating Emergency until the time that the actual capacity deficiency or transmission reliability issue occurs (which will be the point at which the Operating Emergency begins) and will remain in the Operating Emergency until implemented OP-4 Actions 6 or greater are cancelled (which will be the point at which the Operating Emergency ends).

**NOTE**

For any OP-4 implementation of Action 6 or greater by an individual LCC to deal with local conditions, that individual LCC and ISO would be considered to be in an Operating Emergency, but the other LCCs would **not** be in an Operating Emergency.

**NOTE**

OP-4 provides the specific messages that are to be used when communicating OP-4 Action Steps.

ISO New England Operating Procedure No. 7 - Action in an Emergency (OP-7) provides the specific messages to be used when communicating OP-7 actions.

Master/Local Control Center Procedure No. 4 - Emergency Load Reduction Plans for Mitigating IROL Violations (M/LCC 4) provides specific messages to be used when communicating verbal Operating Instructions to the LCC for load shed to alleviate an IROL contingency.

A single-party to multiple-party burst messaging system is typically **not** used by ISO or an LCC to issue an Operating Instruction during an Operating Emergency (or any other time), but if it ever is used for that purpose, confirmation of receipt by at least one receiver is required.

ISO and LCC System Operators shall issue each Operating Instruction during an Operating Emergency (excluding single-party to multiple-party burst Operating Instructions) in a clear, concise and definitive manner and use three-part communication, taking one of the following actions whenever such Operating Instruction is issued:

- If the repeated information is correct confirm the receiver's response.
- If the repeated information is wrong or if requested by the receiver, reissue the original Operating Instruction.
- If a response is **not** received or if the Operating Instruction was **not** understood by the receiver, take an alternative action.

When an LCC System Operator receives an Operating Instruction during an Operating Emergency (excluding single-party to multiple-party burst Operating Instructions) the LCC System Operator shall perform one of the following actions:

- Repeat, **not** necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that your response was correct.
- Request that the issuer restate the Operating Instruction.

**NOTE**

Although a single-party to multiple-party burst messaging system could be used to issue a verbal or written Operating Instruction, it is **not** used for that purpose by ISO and typically **not** used for that purpose by the LCCs.

When an LCC System Operator receives an Operating Instruction from ISO during an Operating Emergency:

(1) The LCC System Operator shall comply with the Operating Instruction, or if **not** able to perform the Operating Instruction, the LCC System Operator shall immediately inform the ISO System Operator it **cannot** perform the required action.

(2) When the LCC System Operator has completed the applicable action for the Operating Instruction, the LCC System Operator shall report back to the ISO System Operator that they have performed the required action.

If an LCC System Operator issues an Operating Instruction using a single-party to multiple-party burst messaging system during an Operating Emergency, the issuer must confirm or verify that the Operating Instruction was received by at least one of the receiving parties.

If load shed is required in one (or more) LCC area(s), ISO shall:

(1) Activate Loadshed Notification for applicable LCCs

(2) Issue the load shed Operating Instruction to applicable LCCs

(3) Immediately notify each remaining unaffected LCC

If an LCC is experiencing an Operating Emergency within its LCC area, the LCC shall promptly inform ISO of its current and projected system conditions.

An LCC shall inform the following entities if its actual or expected operations result in, or could result in, an Operating Emergency and when that condition has ended:

- ISO
- Known impacted other LCCs, if ISO is unable to perform these communications.
- Known impacted other TOPs with which they are synchronously interconnected that are located in adjacent RCAs and that are **not** also an RC/BA (ISO makes notifications to affected TOPs that are RCs/BAs, as described in 4.5.9, below)
- Generators, if being dispatched by the LCC to correct the Operating Emergency.

If ISO is experiencing, or receives a notification from an LCC of an actual or expected Operating Emergency, ISO shall:

- Notify the following entities of the existence of an Operating Emergency and the end

of this condition:

- Known Impacted LCCs
- Known Impacted RCs
- Resource DEs verbally dispatched to correct the Operating Emergency

- Make a log entry regarding this notification in the Control Room Event Log Server, indicating the time that the notification from the LCC was received.
- Notify all other LCCs and remaining adjacent RCs (NYISO, HQTÉ, and NBP-SO) or other impacted RCs within 30 minutes of identifying that the Operating Emergency exists.

## 4.6 Determine NERC Event Analysis Reporting Requirements

A. When a transmission system event requires ISO and/or LCC NERC Event Analysis Reporting, the ISO Operations Shift Supervisor shall perform the following actions:

   A. Refer to ISO internal procedures to determine if the event meets the NERC Event Analysis Categories and to determine the required event analysis reporting actions.

   B. Contact the applicable LCC to discuss the event and based on the severity of the event:

      (1) Determine which organization performs the event analysis reporting

      (2) Verify one of the following applicable actions is performed:

         - ISO shall perform the applicable actions of ISO internal procedures.
         - The LCC shall perform the actions prescribed in the LCC internal procedure(s) for reporting.

## 4.7 Communicating an Inability to Perform Real Time Assessments

**NOTE**

In accordance with NERC Standards TOP-001 and IRO-008, ISO and the LCCs are required to perform a Real-time Assessment (RTA) for their applicable area of responsibility at least once every 30 minutes. This RTA is an evaluation of system conditions using Real-time data to assess existing (pre-Contingency) and potential (post-Contingency) operating conditions. The assessment shall reflect applicable inputs including, but not limited to: load, generation output levels, known Protection System and RAS/ACS status or degradation, Transmission outages, generator outages, Interchange, Facility Ratings, and identified phase angle and equipment limitations. (RTAs may be provided through internal systems or through third-party services.)

RTAs are inherently dependent on data and telemetry systems, such as SCADA and ICCP, as well as EMS systems, such as State Estimator (SE), Contingency Analysis (CA), and Powerflow. If, at any point, ISO or an LCC believes they will be unable to perform a RTA within 30 minutes, they shall make appropriate notifications and take actions so that another entity is requested to perform a RTA on their behalf within that period.

A. When an LCC becomes aware of an unplanned interruption of telemetering and control equipment or a persistent failure of their SE, CA, or other systems affecting its ability to perform a RTA at least once every 30 minutes, the LCC System Operator shall contact the ISO System Operator and perform the following:

   (1) Provide the following information:

      a. Estimated start time of the failure

      b. Cause of the failure, if known

      c. Time of completion of last RTA

      d. Expected duration of failure, if known

   (2) Request ISO to perform a RTA and continue to perform a RTA on their behalf at least once every 30 minutes for the duration of the failure.

B. When ISO becomes aware of an unplanned interruption of telemetering and control equipment or a persistent failure of their SE, CA, or other systems affecting its ability to perform a RTA at least once every 30 minutes, the ISO System Operator shall complete the following:

   (1) Contact LCCs and perform the following:

      a. Provide the following information:

         (i) Estimated start time of the failure

(ii) Cause of the failure, if known

(iii) Time of completion of last RTA

(iv) Expected duration of failure, if known

b. Request each LCC perform a RTA and continue to perform RTAs on ISO-NE's behalf at least once every 30 minutes for the duration of the failure.

(2) Contact NPCC RC/BAs and perform the following:

a. Notify the RC/BAs that ISO-NE has lost automated contingency monitoring capability and manual CA is, or is not, available

b. Request monitoring of ISO-NE contingencies that can impact their area

c. Request notification to ISO-NE of schedule deviations or other reliability concerns

C. When requested to perform RTAs on behalf of another entity, the assisting entity becomes responsible for completing an assessment at least once every 30 minutes and performing the following:

(1) Monitoring interface flows, base case violations, and CA results

(2) Coordinating with adjacent LCCs

(3) Notify the entity being assisted upon identification of any of the following:

a. Generator or transmission equipment status changes

b. Real-Time base case thermal or voltage exceedances or violations

c. Interfaces within 10% of a limit or exceeding a limit

d. Contingencies solving at or above Long Time Emergency (LTE) or STE

e. Identification of Unsolved Contingencies

f. Unable to perform a RTA at least once every 30 minutes during the duration of the outage

g. Any other identified condition that impacts reliability

## 4.8 Determine Complete Loss of Monitoring and/or Control Capability

A. For ISO, a complete loss of monitoring capability at its staffed control center would include one of the following:

- Complete failure of the ICCP system.
- Complete failure of the EMS for both Real-Time and Study applications.

B. When ISO determines a complete loss of monitoring capability at its staffed control center has occurred, the ISO System Operator shall notify all LCCs and adjacent RCs.

C. For an LCC, a complete loss of monitoring or control capabilities at its staffed control center would include one of the following:

- Complete failure of the Supervisory Control and Data Acquisition (SCADA) system i.e.:
  - Complete loss of supervisory control function or;
  - Complete loss of monitoring function
- Complete failure of the EMS for both Real-Time and Study applications.
- Complete loss of communications with all of its applicable LCC Remote Terminal Units (RTUs).

D. When an LCC determines a complete loss of monitoring and/or control capability at its staffed control center has occurred, the LCC shall notify the ISO System Operator.

## 4.9 Assess Effectiveness and Modify M/LCC 13 Communications Protocols

**NOTE**

If the annual review of M/LCC 13 by the M/LCC Heads does **not** result in any changes to the communication protocols, it is because the M/LCC Heads have determined that the M/LCC 13 communication protocols continue to be effective; this determination shall be noted in the revision history.

Whenever a change to the M/LCC 13 communication protocols is made, the reason(s) for the change should be explained with sufficient detail in the revision history, including a brief description of how the change enhanced the effectiveness of the communication protocols, as applicable.

A. At least once every 12 calendar months, the M/LCC Heads will review and assess M/LCC 13 communication protocols for their effectiveness for System Operators that issue and receive Operating Instructions and, as necessary, modify the M/LCC 13 communication protocols to enhance their effectiveness.

- In the M/LCC Heads assessment of the effectiveness of these protocols, the M/LCC Heads may consider, among other factors, the following:

  (1) Feedback from their respective training departments regarding training related to M/LCC 13 communications protocols

  (2) Assessments conducted by each respective company of their System Operator adherence to M/LCC 13 communications protocols

## Revision History

| Rev. No. | Date | Reason |
|---|---|---|
| - | 07/28/21 | For previous revision history, refer to Rev 30 available through Ask ISO |
| 30.1 | 6/26/20 | Corrected typo in 3rd note in the beginning of section 4.2;<br>This revision includes a Heads review of communication protocols; the Heads determined existing communication protocols are effective and no changes were made as a result of the review. |
| 31 | 10/21/20 | Annual review performed by procedure owner;<br>This revision includes a Heads review of communication protocols; the Heads determined existing communication protocols are effective and no changes were made as a result of the review. |
| 32 | 12/21/20 | Amended 3.2 and added 4.4.2.B to include ICCP data as a communication method for Interface exceedances. |
| 33 | 04/19/21 | Added new step 4.2.1.M & 4.2.2.O to identify OP-2 communications requirements. Modified 4.2.2.A to identify element operability problem notifications. Added new title for Att. B. |
| 34 | 07/28/21 | Annual review performed by procedure owner;<br>Revision history truncated in accordance with SOP-RTMKTS.0210.0010 Section 5.6;<br>Added clarification for the expectation of the use of 3-part communication for Interchange schedules in the Note following 3.2;<br>This revision includes a Heads review of communication protocols; the Heads determined existing communication protocols are effective and no changes were made as a result of the review |
| 35 | 03/21/22 | Modified 4.2.1.L to address seasonal limit changes;<br>Created new Section 4.7 to address RTA communications. |
| 35.1 | 03/22/22 | Corrected hyperlink in footnote on page 22. |
| 36 | 05/26/22 | Modified Step 4.2.1.L for RC limit change notification;<br>Added Note to Sections 4.3 and 4.4;<br>Removed language referencing M/LCC 20 from Note in Section 4.5;<br>Modified instructions in Steps 4.5.8 and 4.5.9. |
| 36.1 | 07/25/22 | This revision includes a Heads review of communication protocols;<br>The Heads determined existing communication protocols are effective and no changes were made as a result of the review. |
| 37 | 12/13/22 | Removed discussion items from 4.4.1 and 4.4.2 and referenced using M/LCC 13 Attachment C - Communication Items checklist. |
| 38 | 05/25/23 | Deleted 4.2.1.B;<br>Clarified 4.2.1.D, 4.2.1.E, 4.2.2.M, and 4.3.F;<br>Modified 4.7.2.1.b;<br>Deleted 4.7.2.1.c as it was incorporated within 4.7.2.1.b;<br>Deleted bullet in Section 3 and 4.4.2.B.a with EMS 3.2.7 release. |
| 38.1 | 08/24/23 | This revision includes a Heads review of communication protocols performed at the M/LCC Heads meeting on 06/23/23;<br>The Heads determined existing communication protocols are effective and no changes were made as a result of the review. |
| 39 | 07/31/24 | Annual review performed by procedure owner;<br>This revision includes a Heads review of communication protocols performed at the M/LCC Heads meeting on 06/21/24;<br>The Heads determined existing communication protocols are effective and no changes were made as a result of the review;<br>Modified 4.2.3.A. |
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## 5. Attachments

Attachment A - Retired (07/17/17)

Attachment B - Accepted RAS/ACS Terminology

Attachment C - Communication Items