	© ISO New England, Inc. 2009	Master/ LCC Procedure # 13 Communications Between the ISO and Local Control Centers Attachment A
		Revision Number: 1 Revision Date: March 12, 2009
Contact: ISO Director, Operations		Approved by: M/LCC Heads
		Review Due Date: March 12, 2011

Attachment A – Contingency Actions and Communications Protocol


Contents

1.	Objective.....	2
2.	Situational Awareness and Control Center Communication Actions.....	2
2.1	S-O-U-T-H Principle	2
3.	Contingency Actions	4
3.1	Initial Contingency Evaluation and Actions	4
3.2	Post Contingency Evaluation and Communications	5
3.3	Post-Contingency Communications.	6
4.	References	7
	Revision History.....	7

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1. Objective

- Minimize the number of calls between the ISO New England (ISO) and Local Control Center (LCC) system operators.
- Maximize transfer of information through clear concise conversations and directives.
- Recognize the requirements for immediate and follow up actions.
- Minimize errors by conducting a shift brief prior to implementing follow up actions with LCCs and Market Participants.

2. Situational Awareness and Control Center Communication Actions

NOTE


All communications set forth in this appendix shall be performed in accordance with NERC Reliability Standard COM-002 - Communications and Coordination.

Any Control Room System Operator has the authority to take action(s) required to comply with NERC Standards.

2.1 S-O-U-T-H Principle

1. The ISO Control Room Operations personnel and LCC personnel shall utilize the S-O- U-T-H Principle to ensure clear, concise, and effective communications between the two control centers.

S	STOP	Stop what you had previously been doing.
O	OBSERVE	Investigate the event that has just occurred.
U	UNDERSTAND	Discuss, as a team, the extent of the event and available actions.
T	TALK	Talk to the LCC and convey Clear and Concise orders, utilizing 3-way communication.
H	HEAR	Receive information from the LCC. Ex. Possible alternative solutions, actions already implemented, etc.

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2. Following a contingency, the ISO Control Room personnel shall perform the following:

STOP

- a. Ensure accurate system information.

OBSERVE

- a. Evaluate extent of the outage and existing violations.
 - Are pre-determined post contingency plans in place with the LCC?
 - What portion should be implemented?
 - If so, Operations Shift Supervisor, Senior System Operator and affected System Operator shall agree on the directive(s) to be given.
- b. Contact affected LCC(s):
 - Ensure all parties are aware of the problem.
 - Give any directive(s) based on pre-determined plans using pre-agreed to phrasing.
 - When possible, contingency directives should be monitored by the Senior System Operator or Operations Shift Supervisor.

UNDERSTAND

- a. Monitor & verify that mitigation actions correct violations.
- b. Evaluate post-contingent system conditions.
- c. As a team, discuss actions necessary to return system to within ISO New England Operating Procedure No. 19 – Transmission Operations (OP-19) Criteria and develop a plan to convey to the applicable LCC.


TALK

- a. Implement and/or order necessary actions.
- b. ISO Contacts LCC: Discuss system status, actions being taken, post contingent plans, and further required planning (Load Shed) and actions.

HEAR

- a. LCC Contacts ISO: Report detailed plans, reports actions have been implemented.
- b. Both Control Rooms continuously monitor system status and report to each other as necessary.

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3. Contingency Actions

(Consists of the following categories: 3.1 Initial Contingency Evaluation and Actions; 3.2 Post-Contingency Evaluation and Communications; & 3.3 Post-Contingency Communications)

3.1 Initial Contingency Evaluation and Actions

1. Contingency Occurs
2. Sequence is run to calculate accurate system topology and conditions.
3. Evaluate Post-Contingency Conditions
 - a. Check for present violations.
 - b. Check for Reportable supply loss (Generation/Loss of inter-area supply)
4. Are pre-determined post contingency plans in place with the LCC? What portion should be implemented? If so, Operations Shift Supervisor, Senior System Operator and affected System Operator shall agree on the directive(s) to be given.
5. Begin tracking the applicable allowable time constraints.
6. Take immediate actions to alleviate any overloads and/or violations
 - a. Implement No-Cost Options
 - i. Adjust Phase Shifting Transformers.
 - ii. Implement Use of Weather Sensitive Ratings.
 - iii. Evaluate reactive flows for potential adjustments to alleviate violations.
 - b. Select and Activate Constraints and begin to move generation.
7. Contact LCC and confirm Contingency and actual violations.
 - a. Give any directive(s) based on pre-determined plans using pre-agreed to phrasing. When possible, contingency directives should be monitored by the Senior System Operator or Operations Shift Supervisor.
8. Evaluate the actual and expected effects of the previous actions.
9. Implement additional Emergency Actions as necessary.
 - a. Shed Load
 - b. Trip Generation.


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3.2 Post Contingency Evaluation and Communications

(Real-time violations no longer exist or are being corrected, Post-Contingent and/or interface violations exist)

1. Determine the extent of the outage.
2. Evaluate the following for potential violations or required actions.
 - a. RTCA
 - b. ILC
 - c. TOGs
3. Determine and track the remaining time available to prepare the system for the next contingency .
4. Evaluate ILC and RTCA results to ensure their validity.
5. A Shift-Brief should be convened to update the present situation and suggest options. (Very-brief although allowing all members input)
6. Determine actions to be taken to position the power system per OP-19 criteria.
 - a. Implement No-Cost Options
 - i. Adjust Phase Shifting Transformers.
 - ii. Implement Weather Sensitive Ratings.
 - iii. Pre-arranged and studied switching.
 - b. Select and activate Contingencies , positioning generation.
 - c. Evaluate external contract flows and their potential effects.
 - d. Determine if pre- and/or post- contingent load shedding is necessary.
7. The System Operator, Senior System Operator and Operations Shift Supervisor shall finalize the ISO plan and any necessary actions to discuss with the LCC.
8. Contact the applicable LCC and discuss the following:
 - a. System condition and the status of the contingent element.
 - b. Actions being taken to prepare the system for the next contingency.
 - c. Discuss the use of Weather Sensitive Ratings.
 - d. Additional actions and/or load shedding required to be taken Pre-contingent.
 - e. Remaining amount of time allowed to restore the system to within OP-19 criteria.
 - f. Discuss any plans for actions to be taken on a post-contingent basis.
 - g. Direct LCC to develop Load Shedding plan of a specific MW value and area to be implemented.

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9. LCC shall report the following:
 - a. Actions have been implemented as directed by ISO.
 - b. Detailed plans for load shedding have been determined.
10. ISO Security operator shall evaluate the ongoing effects of actions being implemented, the remaining time to position system, and the effects of any load shed plans and post-contingent actions.

3.3 Post-Contingency Communications.

(All Contingencies and Interfaces are within OP-19 criteria)

1. As needed, ISO will monitor and inform the LCC of any of the following:
 - a. System condition changes in adjacent LCC which could have an effect.
 - b. External contract flow changes.
 - c. Significant expected changes in load forecast.
 - d. Need for additional planning or actions.
 - e. Required need to implement any planned actions.
2. As needed, the LCC will monitor and inform the ISO of any of the following:
 - a. LCC area condition changes which could be detrimental to the situation.
 - b. Status updates on the contingent element.
 - c. Any changes to planned actions.
 - d. Suggestions of new actions available.

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4. References

NERC Reliability Standard COM-002 - Communications and Coordination

SOP-RTMKTS.0125.0020 - Communicate With Internal and External Parties

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

Revision History

Rev. No.	Date	Reason
0	01/15/09	Original Procedure
1	03/12/09	Biennial review completed; Header Review Due Date: changed from calendar date to 24 months from the Effective Date: