




System Operating Procedures

SOP-RTMKTS.0050.0007

Perform Cold Weather Condition Operations

Effective Date: June 1, 2010
Revision No. 10

	© ISO New England Inc. 2010	Procedure: Perform Cold Weather Condition Operations
	Process Name: Perform Reserve Adequacy Commitment	
	Procedure Number: RTMKTS.0050.0007	Revision Number: 10
	Procedure Owner: Steve Weaver	Effective Date: June 1, 2010
	Approved By: Director, Operations	Valid Through: October 27, 2010

SOP-RTMKTS.0050.0007


Perform Cold Weather Condition Operations

Contents

1.	Objective	2
2.	Background	2
3.	Responsibilities.....	3
4.	Controls	4
5.	Instructions.....	5
5.1	Determining Cold Weather Event Status	5
5.1.1	Communication with Regional Natural Gas Pipeline/LDC Operators	5
5.1.2	Determining Cold Weather Temperatures.....	6
5.1.3	Determining Status of Cold Weather Conditions	6
5.2	Perform Actions during a Cold Weather Watch	8
5.3	Perform Actions during a Cold Weather Warning.....	9
5.4	Perform Actions during a Cold Weather Event	10
5.5	Run the RSC case.....	12
5.5.1	Run the Resource Scheduling and Commitment case.....	12
5.5.2	Review the RT-RSC case.	14
6.	Performance Measures.....	14
7.	References.....	15
8.	Revision History	15
9.	Attachments	16

*This document is controlled when viewed on the ISO New England Internet web site. When downloaded and printed, this document becomes **UNCONTROLLED**, and users should check the Internet web site to ensure that they have the latest version. In addition, a Controlled Copy is available in the Master Control Room procedure binder.*

The information contained in this document is for use by ISO New England staff only and is subject to modification. ISO New England Inc. is not responsible for any reliance on this document by others, or for any errors or omissions or misleading information contained herein.

	© <i>ISO New England Inc. 2010</i>	<i>Procedure: Perform Cold Weather Condition Operations</i>
	<i>Process Name: Perform Reserve Adequacy Commitment</i>	
	<i>Procedure Number: RTMKTS.0050.0007</i>	<i>Revision Number: 10</i>
	<i>Procedure Owner: Steve Weaver</i>	<i>Effective Date: June 1, 2010</i>
	<i>Approved By: Director, Operations</i>	<i>Valid Through: October 27, 2010</i>


Attachment A- Electric/Gas Operations Committee’s (EGOC) Operations
Communications Protocol..... 17
Attachment B- Contact Information for Gas Operations (Confidential) 21

1. Objective

The intent of this procedure is to ensure sufficient Generators are available to meet Capacity and Reserve Requirements for the operating day during Cold Weather Conditions per Market Rule 1 Appendix H – Operations During Cold Weather Conditions.

2. Background

Severe cold weather in New England can create problems with Generator availability, particularly gas-fired Generators. When cold weather conditions exist in New England gas supplies can become scarce and expensive, thus limiting the amount of gas-fired generation


	© ISO New England Inc. 2010	Procedure: Perform Cold Weather Condition Operations
	Process Name: Perform Reserve Adequacy Commitment	
	Procedure Number: RTMKTS.0050.0007	Revision Number: 10
	Procedure Owner: Steve Weaver	Effective Date: June 1, 2010
	Approved By: Director, Operations	Valid Through: October 27, 2010

available to ISO New England (ISO) to commit to meet Capacity and Reserve Requirements.

This procedure addresses the coordination between ISO, Market Participants of gas-fired Generators and the regional natural gas industry. With improved communications and coordination between these entities, ISO ability to forecast and operate during cold weather conditions is greatly improved. Contact information is contained in Attachment B- Contact Information for Gas Operations (Confidential)

3. Responsibilities

1. The Manager, Control Room Operations, (or designee) is responsible for communicating with regional natural gas pipeline/Local Distribution Companies (LDC) companies to obtain necessary information.
2. The Forecaster is responsible for:
 - A. Determining if Cold Weather Conditions exist.
 - B. Determining and declaring the following statuses of Cold Weather Conditions:
 - Cold Weather Watch
 - Cold Weather Warning
 - Cold Weather Event
 - No Cold Weather Condition applies
 - C. Performing the Real-Time Resource Scheduling and Commitment (RT-RSC) process.
 - D. Informing Market Support Services of Cold Weather Watch, Warning or Event so they can perform required notifications.
 - E. Notifying gas-fired Generators of pool schedules for Cold Weather Event.
3. The Operations Shift Supervisor is responsible for:
 - A. Notifying NPCC Control Areas/Balancing Authorities (CAs/BAs) and PJM of anticipated capacity deficiencies associated with Cold Weather Event.
 - B. Notifying Local Control Centers (LCCs) of the status of Cold


	© <i>ISO New England Inc. 2010</i>	<i>Procedure: Perform Cold Weather Condition Operations</i>
	<i>Process Name: Perform Reserve Adequacy Commitment</i>	
	<i>Procedure Number: RTMKTS.0050.0007</i>	<i>Revision Number: 10</i>
	<i>Procedure Owner: Steve Weaver</i>	<i>Effective Date: June 1, 2010</i>
	<i>Approved By: Director, Operations</i>	<i>Valid Through: October 27, 2010</i>

Weather Conditions.

- C. Informing the ISO staff of the status of Cold Weather Conditions so they can perform required notifications.

4. Controls

- The RT-RSC save-case shall be time stamped upon completion
- RT-RSC is completed by 0930 hours
- Cold Weather Event is declared by 1100, two days prior to Operating Day

	© ISO New England Inc. 2010	Procedure: Perform Cold Weather Condition Operations
	Process Name: Perform Reserve Adequacy Commitment	
	Procedure Number: RTMKTS.0050.0007	Revision Number: 10
	Procedure Owner: Steve Weaver	Effective Date: June 1, 2010
	Approved By: Director, Operations	Valid Through: October 27, 2010

5. Instructions

5.1 Determining Cold Weather Event Status

NOTE


Attachment A contains the Electric/Gas Operations Committee's (EGOC) Operations Communications Protocol. Contact information located in the emergency communication manual entitled, "Gas Supply Information for the Northeast Gas Industry" can be found on the RTSMB server.

5.1.1 Communication with Regional Natural Gas Pipeline/LDC Operators

1. During the Winter Capability Period, if a Cold Weather Watch, a Cold Weather Warning or Cold Weather Event is declared, or when the gas-fired Generators communicate with ISO that they are experiencing problems with gas supply pressures or obtaining gas supply, or gas transportation services, the Manager, Control Room Operations (or designee) shall, per Attachment A - Electrical/Gas Operations Committee's (EGOC) Operations Communications Protocol, communicate with the regional natural gas pipeline/LDC companies to discuss/determine pertinent gas sector information including but not limited to the following:
 - weather and temperature conditions,
 - anticipated demand on the regional natural gas pipelines/LDCs and
 - any posted Critical or Non-Critical Notices, especially those concerning pipeline capacity constraints or Operational Flow Orders (OFOs).

These communications shall be performed whenever conditions warrant.

2. The Manager, Control Room Operations, (or designee) shall relay information obtained from the regional natural gas companies to the Forecaster.
3. The Forecaster shall utilize the information gathered from the regional natural gas companies in the development of the 7-Day Capacity Margin Forecast.

	© ISO New England Inc. 2010	Procedure: Perform Cold Weather Condition Operations
	Process Name: Perform Reserve Adequacy Commitment	
	Procedure Number: RTMKTS.0050.0007	Revision Number: 10
	Procedure Owner: Steve Weaver	Effective Date: June 1, 2010
	Approved By: Director, Operations	Valid Through: October 27, 2010

5.1.2 Determining Cold Weather Temperatures

1. Each day during the Winter Capability Period, the Forecaster shall determine, for the next six days, the forecasted temperatures (Effective Temperature and Effective Heating Degree Days) for New England using the temperature information obtained in SOP-OUTSCH.0040.0010 – Create Load Forecast.

NOTE

The forecasted temperatures for New England will be the load weighted average of the eight locations throughout New England as described in SOP-OUTSCH.0040.0010 – Create Load Forecast.

2. The Forecaster shall declare Cold Weather Conditions when for any calendar day, the following is forecasted:
 - Effective Temperatures are forecast to be ≤ 0 F for any single on-peak hour AND
 - That day's Total Effective Heating Degree Days are forecast to be ≥ 65

NOTE


Effective Temperature =
Dry bulb temperature - [windspeed X (65- dry bulb temp) / 100]

Effective Heating Degree Days =
68 - (average of max and min Effective Temperature of the day)


3. Whenever Cold Weather Conditions are forecasted, the Forecaster shall perform the temperature analysis on a daily basis and shall update the status of Cold Weather Conditions.

5.1.3 Determining Status of Cold Weather Conditions

1. If Cold Weather Conditions exist, the Forecaster shall determine the need to declare a Cold Weather Watch, a Cold Weather Warning or a Cold Weather Event.
2. Prior to declaring a Cold Weather Watch, Cold Weather Warning or Cold Weather Event, the Forecaster shall obtain approval from the Operations Shift Supervisor.
3. The Forecaster shall use the Capacity Margin determined in SOP-OUTSCH.0040.0020 - Create Seven-Day Capacity Margin Forecast.

	© ISO New England Inc. 2010	Procedure: Perform Cold Weather Condition Operations
	Process Name: Perform Reserve Adequacy Commitment	
	Procedure Number: RTMKTS.0050.0007	Revision Number: 10
	Procedure Owner: Steve Weaver	Effective Date: June 1, 2010
	Approved By: Director, Operations	Valid Through: October 27, 2010

4. If Cold Weather Conditions are forecast to exist and the 7-Day Capacity Margin Forecast indicates a capacity margin greater than or equal to 1000 MW, the Forecaster shall declare a Cold Weather Watch for that day(s) and proceed to Section 5.2.
5. If Cold Weather Conditions are forecast to exist and the 7 Day Capacity Margin Forecast indicates a capacity margin less than 1000 MW, the Forecaster shall declare a Cold Weather Warning for that day (unless the day has already been declared a Cold Weather Event day) and proceed to Section 5.3.
6. If Cold Weather conditions are forecast to exist and the 7 Day Capacity Margin Forecast indicates a capacity margin less than or equal to 0 MW 2 days prior to the Operating Day, the Forecaster shall declare a Cold Weather Event for the Operating Day in accordance with Section 5.4.
7. If a Cold Weather Watch, Warning or Event has been declared, then each day by 1100, and until No Cold Weather Conditions apply:
 - A. The Forecaster shall review and update the Watch or Warning by comparing the temperatures and Capacity Margins for the designated day(s), using the following information below and that gathered in Sections 5.1.1 and 5.1.2 above:
 - (1) Information from regional natural gas pipeline/LDC notices, bulletins and notices and information from individual natural gas-fired Generators in determining the Capacity Margin.
 - (2) The Forecaster shall not redeclare any Generator operating limits based on this information unless requested by the Generator.
 - (3) Information on which dual fuel Generators have switched from natural gas to a secondary fuel source.
 - B. If conditions warrant the Forecaster shall upgrade, reaffirm or cancel the condition as necessary and proceed to the appropriate section for actions (with the exception of a Cold Weather Event which cannot be cancelled after being declared).

	© ISO New England Inc. 2010	Procedure: Perform Cold Weather Condition Operations
	Process Name: Perform Reserve Adequacy Commitment	
	Procedure Number: RTMKTS.0050.0007	Revision Number: 10
	Procedure Owner: Steve Weaver	Effective Date: June 1, 2010
	Approved By: Director, Operations	Valid Through: October 27, 2010

5.2 Perform Actions during a Cold Weather Watch

NOTE


A Cold Weather Watch exists when Cold Weather Conditions are forecasted to exist and the 7-Day Capacity Margin Forecast indicates a capacity margin greater than or equal to 1000 MW.

1. When a Cold Weather Watch is declared or revised, the Operations Shift Supervisor shall inform ISO staff (this includes Market Support Services so they can post a Notice to the ISO website) using the 'Control Rm Emergency Event Rpt' e-mail group listing. E-Mail information to be included:

Subject: ISO New England has issued a Cold Weather Watch for [date]

Body of Text: ISO New England has issued a Cold Weather Watch for [date]. Extreme Cold Weather Conditions are forecast. ISO New England forecasts that sufficient capacity is available to meet the forecasted demand and reserve requirements. The 7-Day Capacity Margin Forecast is posted at: http://www.iso-ne.com/sys_ops/op_frcstng/7day_frcst/index.html.”

2. The Operations Shift Supervisor or designee shall notify the LCCs that a Cold Weather Watch has been declared.

	© ISO New England Inc. 2010	Procedure: Perform Cold Weather Condition Operations
	Process Name: Perform Reserve Adequacy Commitment	
	Procedure Number: RTMKTS.0050.0007	Revision Number: 10
	Procedure Owner: Steve Weaver	Effective Date: June 1, 2010
	Approved By: Director, Operations	Valid Through: October 27, 2010

5.3 Perform Actions during a Cold Weather Warning

NOTE

A Cold Weather Warning exists when Cold Weather Conditions are forecast to exist and the 7-Day Capacity Margin Forecast indicates a capacity margin less than 1000 MW. In addition, a Cold Weather Warning will be issued for all future days within the 7-Day Capacity Margin Forecast when a capacity margin of less than or equal to 0 MW exists for days not yet declared as a Cold Weather Event.

1. When a Cold Weather Warning is declared or revised, the Operations Shift Supervisor shall inform ISO staff (This includes Market Support Services so they can post a Notice to the ISO website) using the “Control Rm Emergency Event Rpt” e-mail group listing. E-Mail information to be included:


Subject: ISO New England has issued a Cold Weather Warning for [date]

Body of Text: ISO New England has issued a Cold Weather Warning for [date]. Extreme Cold Weather Conditions are forecast. ISO New England forecasts that sufficient capacity may not be available to meet the forecasted demand and reserve requirements. The 7-Day Capacity Margin Forecast is posted at: http://www.iso-ne.com/sys_ops/op_frcstng/7day_frcst/index.html.”

NOTE

Load Response Market Participants are notified when Market Support Services post Notice to the ISO website.

2. The Operations Shift Supervisor or designee shall notify the LCCs that a Cold Weather Warning has been declared.
3. The Forecaster shall request all (permits allowing) dual fuel Generators (primary fuel natural gas) to take necessary steps to prepare to switch to secondary fuel in anticipation of Cold Weather Event day(s) being declared.

	© ISO New England Inc. 2010	Procedure: Perform Cold Weather Condition Operations
	Process Name: Perform Reserve Adequacy Commitment	
	Procedure Number: RTMKTS.0050.0007	Revision Number: 10
	Procedure Owner: Steve Weaver	Effective Date: June 1, 2010
	Approved By: Director, Operations	Valid Through: October 27, 2010

5.4 Perform Actions during a Cold Weather Event

NOTE

A Cold Weather Event exists when Cold Weather Conditions exist and the 7-Day Capacity Margin Forecast indicates a Capacity Margin less than or equal to 0 MW for an Operating Day.

A Cold Weather Event shall normally be declared no later than 1100 two days prior to the Operating Day.

A Cold Weather Event may be declared earlier than 1100 two days prior to the Operating Day if circumstances dictate an earlier notice time (e.g. Holiday weekend).

Once a Cold Weather Event is declared it shall not be cancelled.

When a Cold Weather Event is declared the Trading Deadline will be changed from 1200 to 0900 of the day prior to the Operating Day. The DA activities will be performed by 1200 (noon) and the Re-Offer Period will be between 1200 (noon) and 1400.

1. When a Cold Weather Event is declared, the Operations Shift Supervisor shall inform ISO staff (This includes Market Support Services so they can post a Notice to the ISO website) using the “Control Rm Emergency Event Rpt” e-mail group listing. E-Mail information to be included:


Subject: ISO New England has declared a Cold Weather Event for [date]

Body of Text: Cold Weather Event conditions are forecasted to occur. ISO New England forecasts that OP-4 actions may be taken to address anticipated capacity deficiency on [date(s)]. All Supply Offers, Demand Bids, Increment Offers, Decrement Bids, and all External Transactions normally required to be submitted by 1200 hrs on [date], shall be due by **0900** hrs on [date]. The ISO-NE Three Day Load Forecast normally published by 1000 hrs on [date] will be published by 0700 hrs on [date]. The Three Day Load Forecast is posted at:

http://www.iso-ne.com/op_fcstng/sys_load/loadForecast.do

The ISO-NE Seven Day Capacity Margin Forecast normally published by 1100 hrs on [date] will be published by 0800 hrs on [date]. The Seven Day Capacity Margin Forecast is posted at:


http://www.iso-ne.com/sys_ops/op_fcstng/7day_fcst/index.html.

	© ISO New England Inc. 2010	Procedure: Perform Cold Weather Condition Operations
	Process Name: Perform Reserve Adequacy Commitment	
	Procedure Number: RTMKTS.0050.0007	Revision Number: 10
	Procedure Owner: Steve Weaver	Effective Date: June 1, 2010
	Approved By: Director, Operations	Valid Through: October 27, 2010

NOTE

State Regulators, the Electric/Gas Operations Committee, members of the Markets, Reliability and Participants Committees, Load Response Market Participants, Lead Participants and Designated Entities are notified when Market Support Services posts this Notice to the ISO website.


2. The Operations Shift Supervisor shall notify NPCC CAs/BAAAs and PJM that a Cold Weather Event has been declared and that potential capacity shortages may exist.
3. The Operations Shift Supervisor shall notify the LCCs that a Cold Weather Event has been declared.
4. The Operations Shift Supervisor shall consult with the Manager, Control Room Operations and establish a time for when to implement M/LCC 2 per SOP-RTMKTS.0120.0010 - Implement Operations During Abnormal Conditions.
5. The Forecaster shall request all permitted and equipped dual fuel units (primary fuel natural gas) to voluntarily switch to secondary fuel.
6. The Forecaster shall follow-up with communications to verify if dual fuel units have switched or are planning to switch to secondary fuel.
7. During a Cold Weather Event the Senior Outage Coordinator / Short-term Outage Specialist / Forecaster shall perform the following per SOP-OUTSCH.0030.0010 - Evaluate Generation Outage Requests:
8. On the day prior to a Cold Weather Event day, the Forecaster shall perform the following:
 - A. Export the Load Forecast by 07:00 per SOP-OUTSCH.0040.0010 Create Load Forecast.
 - B. Export the Seven-Day Capacity Margin Forecast by 08:00 per SOP-OUTSCH.0040.0020 Create Seven-Day Capacity Margin Forecast.
 - C. Run an RT-RSC case between 09:00 and 10:00 per Step 5.5 of this procedure.
 - D. Run the normal Reserve Adequacy Assessment after the Re-Offer Period per SOP-RTMKTS.0050.0010-Perform Reserve Adequacy Assessment and complete by 18:00.

	© ISO New England Inc. 2010	Procedure: Perform Cold Weather Condition Operations
	Process Name: Perform Reserve Adequacy Commitment	
	Procedure Number: RTMKTS.0050.0007	Revision Number: 10
	Procedure Owner: Steve Weaver	Effective Date: June 1, 2010
	Approved By: Director, Operations	Valid Through: October 27, 2010

5.5 Run the RSC case

5.5.1 Run the Resource Scheduling and Commitment case.

1. After the offers have been submitted the day prior to the Operating Day the Forecaster shall complete a Real-Time Resource Scheduling and Commitment (RT-RSC) case.
2. Import the necessary information from the Markets Database.
 - A. Copy latest SCRA case file, and rename as a RT-RSC case.
 - (1) Set-up case to execute a Reserve Adequacy study mode RT-RSC.
 - (2) Set the case start time to the next day for hour ending one.
 - (3) Set the case end and Resource Scheduling and Commitment (RSC) end hours for hour 24 of the following day.
3. Remove outaged Generators from the SCRA case on the Units Tab of the MSS.
4. Enter Generator commitments as determined by SOP-RTMKTS.0050.0005- Determine Reliability Commitment for Real-Time.
5. Input anticipated dispatchable demand pumping schedules.
6. Using the DA/RAA Import application, select the newly created RSC case.
7. Using the DA/RAA Import application enter the following:
 - A. GRT Constraint file.

	© ISO New England Inc. 2010	Procedure: Perform Cold Weather Condition Operations
	Process Name: Perform Reserve Adequacy Commitment	
	Procedure Number: RTMKTS.0050.0007	Revision Number: 10
	Procedure Owner: Steve Weaver	Effective Date: June 1, 2010
	Approved By: Director, Operations	Valid Through: October 27, 2010

NOTE

Operating Reserve will be equal to the First Contingency (as 10-Minute Reserve) plus 50% of the Second Contingency (as 30-Minute Reserve).

B. The Reserve Requirements (which includes Operating Reserves and Replacement Reserves):


- (1) Adjust reserve numbers on reserve tab for Mystic 8 and 9 as necessary.
- (2) Adjust or input reserve numbers for HQ as necessary.
- (3) Adjust or input reserve numbers for NB as necessary.

NOTE

Forecaster will need to determine which Generators are running and adjust or input the reserve numbers into the Reserve Requirements to reflect actual Generator status.

C. Manually input the anticipated Fixed External Transactions submitted in the DA Market. **Do not** utilize the “Initialize External Transactions” function in the DA/RAA Import Utility.

- (1) Review the historical data provided by the TSO to determine adjustments to interchange totals.
 - (2) Adjust interchange totals as necessary to reflect conditions that will impact deliverability of certain External Transactions.
8. Using the DA/RAA Import application, perform a RT-RSC data validation.
 9. Verify correct loads are successfully uploaded in the window menu of the MSS-MOI Input Datafield.
 10. Review the validation report and take any necessary actions.
 11. Save the case.
 12. Execute the RT-RSC study case.


	© <i>ISO New England Inc. 2010</i>	<i>Procedure: Perform Cold Weather Condition Operations</i>
	<i>Process Name: Perform Reserve Adequacy Commitment</i>	
	<i>Procedure Number: RTMKTS.0050.0007</i>	<i>Revision Number: 10</i>
	<i>Procedure Owner: Steve Weaver</i>	<i>Effective Date: June 1, 2010</i>
	<i>Approved By: Director, Operations</i>	<i>Valid Through: October 27, 2010</i>

5.5.2 Review the RT-RSC case.

1. Upon RT-RSC case solution, review the following:
 - A. Hourly Spinning and Operating Reserve.
 - (1) If deficient in either Spinning or Operating Reserves, commit additional Generators if available.
 - (2) When committing for reserve utilize the RA Priority List to determine the least cost capacity to commit and also consider the minimum run time constraints.
2. The Forecaster may commit additional Generators as needed for reliability.
3. Using the DA/RAA Import application, perform a RT-RSC data validation.
4. Review the validation report and take any necessary actions.
5. Approve the case by checking the InitUnitPlan box and saving prior to approval.
6. Print a Commitment Differences Report-and forward it to the Market Administrator and verbally confirm all gas generation units for input into Day-Ahead Market.
7. After completing the RT-RSC case, the Forecaster shall contact the gas Generators listed on the Gas Generation report, between 0930 and 1000, and inform them of the hours that they will be pool scheduled in the Day-Ahead Energy Market.

6. Performance Measures

None.

	© ISO New England Inc. 2010	Procedure: Perform Cold Weather Condition Operations
	Process Name: Perform Reserve Adequacy Commitment	
	Procedure Number: RTMKTS.0050.0007	Revision Number: 10
	Procedure Owner: Steve Weaver	Effective Date: June 1, 2010
	Approved By: Director, Operations	Valid Through: October 27, 2010

7. References

Market Rule 1 – Standard Market Design

Market Rule 1 Appendix H – Operations During Cold Weather Conditions

ISO New England Operating Procedure No. 4 – Actions During a Capacity Deficiency

SOP-OUTSCH.0030.0010 – Evaluate Generation Outage Requests

SOP-OUTSCH.0040.0010 – Create Load Forecast

SOP-OUTSCH.0040.0020 – Create Seven-Day Capacity Margin Forecast


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

SOP-RTMKTS.0050.0010 - Perform Reserve Adequacy Assessment

SOP- RTMKTS.0120.0010 - Implement Operations During Abnormal Conditions

8. Revision History

Rev. No.	Date	Reason	Contact
0	12/08/04	New Procedure	Seamus McGovern
1	02/01/05	Updated SOP for RTO terminology	Seamus McGovern
2	03/03/05	Changed Supervisor, Forecast to Forecaster were applicable, made change for MR 1, Revised NOTE concerning Reserve percentages commitment	Seamus McGovern
3	11/28/05	Revised for changes in MR 1 App H (cold Weather)	Seamus McGovern
4	11/30/06	Revised for new changes in MR 1 App H	Steve Weaver
5	10/04/07	Revised to incorporate reference to the new Electric/Gas Operations Committee's (EGOC) Operations Communications Protocol, as Approved by the EGOC on September 27, 2007	Steve Weaver
6	10/23/07	Added contact information for Gas Operations	Steve Weaver
7	12/17/07	Revised to make it a requirement to communicate with the regional natural gas pipeline/LDC companies to discuss/determine pertinent gas sector information when conditions warrant.	Steve Weaver


	© ISO New England Inc. 2010	Procedure: Perform Cold Weather Condition Operations
	Process Name: Perform Reserve Adequacy Commitment	
	Procedure Number: RTMKTS.0050.0007	Revision Number: 10
	Procedure Owner: Steve Weaver	Effective Date: June 1, 2010
	Approved By: Director, Operations	Valid Through: October 27, 2010

Rev. No.	Date	Reason	Contact
8	10/27/08	Annual Review by Procedure Owner; Changed "Review Due Date" to "Valid Through: mm/dd/yyyy (24 months from effective date) Step 5.3.3 changed Operations Shift Supervisor to Forecaster; Step 5.4.1 modified Body of Text to include info for Three Day Load Forecast and its link, and added publishing info for Seven Day Load Forecast Modified step 5.5.1.7.C to add warning to not use the Initialize Load function; Added new step 5.5.1.9 to verify correct loads successfully uploaded in MSS-MOI; Modified Step 5.5.2.6 to change Gas Generation Report to Commitment Differences Report and to verbally confirm all gas generation units	Steve Weaver
9	06/05/09	Changed copyright date in Header; Changed Header Approved By: from VP Operations to Director, Operations; Added new sub-step 5.1.3.2	Steve Weaver
10	06/01/10	Changes for FCM/DRI conformance, removed all references to Economic Outages	Steve Weaver

9. Attachments

Attachment A- Electric/Gas Operations Committee's (EGOC) Operations Communications Protocol

Attachment B- Contact Information for Gas Operations (Confidential)

	© ISO New England Inc. 2010	Procedure: Perform Cold Weather Condition Operations
	Process Name: Perform Reserve Adequacy Commitment	
	Procedure Number: RTMKTS.0050.0007	Revision Number: 10
	Procedure Owner: Steve Weaver	Effective Date: June 1, 2010
	Approved By: Director, Operations	Valid Through: October 27, 2010

Attachment A- Electric/Gas Operations Committee's (EGOC) Operations Communications Protocol

ISO New England Inc.
&
Northeast Gas Association
Electric/Gas Operations Communications Protocol

Approved by the
Electric/Gas Operations Committee
On September 27, 2007

Introduction


The purpose of this Electric/Gas Operations Communications Protocol (the “*protocol*”) is to enhance communication between ISO New England Inc.* (ISO-NE) and the Northeast Gas Association’s** (NGA) member companies. This protocol identifies the mechanisms to be used should ISO-NE need the assistance of any regional natural gas company(s) to help mitigate electric power grid operating emergencies and/or other abnormal conditions jeopardizing the reliability of New England’s electric power system. The reciprocal is true of the regional natural gas industry. This protocol was first developed in 2004 and is regularly reviewed and updated by ISO-NE, NGA and NGA’s member companies.

Regular Information Flow

Ongoing communication is expected to occur between the electric and natural gas industries on a daily basis as part of their regular business processes. For example, regular communications occur between ISO-NE and electric generators interconnected with the regional transmission system and communications also occurs between those generators, specifically gas-fired generators, with their corresponding transportation service providers (TSP), i.e. interstate or intrastate pipelines, local gas distribution companies (LDCs), and other natural gas suppliers.

It is anticipated that most issues or events will be mitigated through this regular information flow, which are in place to support their bilateral and contractual arrangements (ISO to generator, generator to pipeline, etc.).

If conditions on either the regional electric power system or the regional natural gas grid are considered abnormal (i.e., severe weather, capacity deficiencies, energy emergencies, infrastructure failures, etc.), and these conditions are either declared in real-time or projected within a forecast, then the potential exists for additional or enhanced electric/gas communications.

	© ISO New England Inc. 2010	Procedure: Perform Cold Weather Condition Operations
	Process Name: Perform Reserve Adequacy Commitment	
	Procedure Number: RTMKTS.0050.0007	Revision Number: 10
	Procedure Owner: Steve Weaver	Effective Date: June 1, 2010
	Approved By: Director, Operations	Valid Through: October 27, 2010

During abnormal events on either system, communications will take place as needed (i.e. more than once) to ascertain the level of knowledge and understanding concerning system status, problem duration, and identification of remedial activities or mitigation methods.


The ISO can contact any regional gas delivery entity anytime it has questions regarding real-time or forecast conditions of the natural gas system. Natural gas delivery entities may also contact NGA of any key developments or of any prior communications they have had with ISO-NE. The status of individual interstate pipelines is routinely posted on their electronic bulletin boards (EBB). The information requested by ISO-NE and subsequently provided by the natural gas company will be the same level of information afforded to its own customers (i.e. public domain). The information discussed will only be publicly-available information and will comply with the mandates defined within with ISO-NE Information Policy ***and with NGA's and the gas industry's anti-trust and market confidentiality contractual agreements.

Another mechanism for industry coordination is the Electric/Gas Operations Committee (EGOC). The EGOC was jointly established by ISO-NE and NGA in 2004. It is comprised of representatives of the electric and natural gas delivery systems in the northeast; ISO-NE, on behalf of the bulk electric power industry, and NGA (interstate pipeline companies, the regional LNG importer, and local gas distribution companies), on behalf of the regional natural gas industry. The EGOC is jointly administered by ISO-NE and NGA. Throughout the year, the EGOC convenes on a periodic basis, through meetings and conference calls. The EGOC's purpose is to provide a forum for electric and natural gas representatives to learn more about each other's systems and share information on system operations, planning and procedures. The meetings and information-sharing abide by each industry's antitrust and information policies and only address publicly-available information. Meeting minutes are approved and publicly available.

Real-Time Communications

If the electric power system is currently experiencing an abnormal event or an event projected to occur near-term, or should there be a gas delivery interruption that would potentially impact fuel deliveries to gas-fired generating units, or even a projection of extreme weather, the level of coordination between the electric and gas industries will likely increase. ISO-NE has several procedures that, when implemented, may require increased communications between both parties:

- 1) Master/Local Control Center Procedure #2 (MLCC#2)
- 2) Operating Procedure No. 4 – Action During a Capacity Deficiency (OP4).
- 3) Operating Procedure No. 7 – Actions in an Emergency (OP7).
- 4) Appendix H of Market Rule No. 1 – Operations During Cold Weather Conditions.
- 5) Operating Procedure No. 21 – Action During an Energy Emergency (OP21).

	© ISO New England Inc. 2010	Procedure: Perform Cold Weather Condition Operations
	Process Name: Perform Reserve Adequacy Commitment	
	Procedure Number: RTMKTS.0050.0007	Revision Number: 10
	Procedure Owner: Steve Weaver	Effective Date: June 1, 2010
	Approved By: Director, Operations	Valid Through: October 27, 2010

The regional gas pipelines and LDCs also have procedures that, when implemented, may require increased communications between both parties (i.e. Critical and Non-Critical Notices). The interstate pipelines post relevant information on their EBBs. Interstate pipeline information may be accessed through the Informational Postings section of their EBBs. Relevant information includes both Critical and Non-Critical notices as well as Planned Service Outages and available capacity. If a gas supply situation emerges that has implications for the Northeast, a NGA member company can request that NGA convene its Gas Supply Task Force (GSTF) to assess the situation and consider remedial actions that may be taken by GSTF members to alleviate the situation. NGA will institute the procedures outlined in its GSTF charter.

One-Company To One-Company Communications

If either entity, the electric power grid or a natural gas pipeline/LDC is experiencing abnormal system conditions, (public domain) information will be shared on a one-company to one-company basis, either through an initial telephone call, an email message, or posting of relevant information on a respective web site or electronic bulletin board. (i.e. ISO-NE Control Room to individual pipeline or LDC Gas Control). Some interstate pipelines also offer subscription services that allow users to subscribe to e-mail messages for Critical and Non-Critical notices to be sent electronically to email inboxes.


Communication Between ISO-NE And NGA

NGA administers a long-established committee of gas supply officials through its Gas Supply Task Force (GSTF). The GSTF is comprised of representatives from the major LDCs in the Northeast, as well as from all the regional interstate pipelines and the regional LNG supplier. The GSTF was established to monitor and assess any regional gas supply or deliverability issue concerning the natural gas system in the greater Northeast. The GSTF may also be convened to address other non-regional issues, that may have the potential to impact the Northeast (i.e. gulf coast hurricanes damaging oil and gas infrastructure). The GSTF abides by NGA’s anti-trust guidelines in all its deliberations. Via telephone or email message, NGA will debrief ISO-NE of all meetings of the GSTF, as it also does for officials of state public utility commissions and energy agencies serving the northeast region. NGA has served as a liaison (conduit) between ISO-NE and the GSTF in the past and will continue to do so in the future.

Industry Contact And Coordination During Non-Business Hours

Should an emergency situation develop during non-business hours, i.e. in the middle of the night or a weekend, the primary contact will be between the control rooms of the electric grid operator (ISO-NE) and the natural gas pipeline(s) or LDCs. NGA has included contact information for ISO-NE, the New York ISO (NYISO), and PJM within their update to their emergency communication manual entitled, “*Gas Supply Information for the Northeast Gas Industry*,” as published annually by the GSTF of NGA. This contact information can be used by any entity to contact the other.


*ISO New England, an independent, not-for-profit corporation, helps promote the health of New England’s economy and protect the well-being of its people by ensuring the constant availability of electricity, today and for

	© ISO New England Inc. 2010	Procedure: Perform Cold Weather Condition Operations
	Process Name: Perform Reserve Adequacy Commitment	
	Procedure Number: RTMKTS.0050.0007	Revision Number: 10
	Procedure Owner: Steve Weaver	Effective Date: June 1, 2010
	Approved By: Director, Operations	Valid Through: October 27, 2010

future generations. ISO New England meets this obligation in three ways: by reliably operating New England's 32,000-megawatt bulk electric power generation and transmission system, by overseeing and ensuring the fair administration of the region's \$9 billion wholesale electricity markets, and by managing comprehensive regional electric power planning. Reference ISO-NE's web site located at: <http://www.iso-ne.com>.

** The Northeast Gas Association (NGA) is a regional trade association that focuses on education and training, technology research and development, operations, planning, and increasing public awareness of natural gas in the Northeast U.S. NGA represents natural gas distribution companies, transmission companies, liquefied natural gas importers, and associate member companies. These companies provide natural gas to over 9 million customers in eight states (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont). NGA was established on January 1, 2003. Its predecessor organizations were The New England Gas Association (founded in 1926) and the New York Gas Group (founded in 1973). Reference NGA's web site located at: <http://www.northeastgas.org>.

***ISO-NE's FERC Electric Tariff, Attachment D. Reference ISO-NE's web site located at: http://www.iso-ne.com/regulatory/tariff/attach_d/attach_d_info_policy_eff_11_17_06.pdf

	© <i>ISO New England Inc. 2010</i>	<i>Procedure: Perform Cold Weather Condition Operations</i>
	<i>Process Name: Perform Reserve Adequacy Commitment</i>	
	<i>Procedure Number: RTMKTS.0050.0007</i>	<i>Revision Number: 10</i>
	<i>Procedure Owner: Steve Weaver</i>	<i>Effective Date: June 1, 2010</i>
	<i>Approved By: Director, Operations</i>	<i>Valid Through: October 27, 2010</i>

Attachment B- Contact Information for Gas Operations (Confidential)