	© ISO New England Inc. 2024	Procedure: Evaluate Resource Performance Post Disturbance
	Process Name: Perform Operations Administrative Tasks	
	Procedure Number: RTMKTS.0125.0090	Revision Number: 6.2
	Procedure Owner: Jaren Lutenege	Effective Date: May 1, 2024
	Approved By: Director, Operational Performance, Training and Integration	Review Due Date: May 1, 2026


SOP- RTMKTS.0125.0090

Evaluate Resource Performance Post Disturbance

Contents

1. Objective	2
2. Background	2
3. Responsibilities.....	3
4. Controls	3
5. Instructions.....	4
5.1 Evaluate Individual Dispatchable Resource Performance	4
5.2 Evaluate Aggregated Dispatchable Resource Performance.....	8
5.3 Record Retention	10
6. Performance Measures.....	11
7. References.....	11
8. Revision History	11
9. Attachments	12

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	© ISO New England Inc. 2024	Procedure: Evaluate Resource Performance Post Disturbance
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1. Objective

NOTE


When used in this System Operating Procedure (SOP), The term “Dispatchable Resource is defined in the *ISO New England Inc. Transmission, Markets, and Services Tariff, Section I – General Terms and Conditions* as “**Dispatchable Resource** is any Generator Asset, Dispatchable Asset Related Demand, Demand Response Resource, or, with respect to the Regulation Market only, Alternative Technology Regulation Resource, that, during the course of normal operation, is capable of receiving and responding to electronic Dispatch Instructions in accordance with the parameters contained in the Resource’s Supply Offer, Demand Bid, Demand Reduction Offer or Regulation Service Offer. A Resource that is normally classified as a Dispatchable Resource remains a Dispatchable Resource when it is temporarily not capable of receiving and responding to electronic Dispatch Instructions.” Dispatch Instructions include instructions issued through electronic means as well as verbal operating instructions. This procedure describes the ISO New England (ISO) process for evaluating the performance of Dispatchable Resources in response to Dispatch Instructions issued electronically only.

The objective of this procedure is to evaluate the response of each Dispatchable Resource following the activation of contingency dispatch. Each Dispatchable Resource whose response does **not** meet the expectations of ISO is handled on a case-by-case basis using the guidelines within this procedure.

2. Background

North American Electric Reliability Corporation (NERC) Reliability Standard BAL-002 - Disturbance Control Standard - Contingency Reserve for Recovery from a Balancing Contingency Event requires ISO to balance resources and demand to return its Reporting Area Control Error (ACE) to within defined criteria following a Reportable Balancing Contingency Event. Inadequate Dispatchable Resource response to Dispatch Instructions may result in the need for ISO System Operators to take emergency action(s) to meet the Disturbance Control Standard (DCS) requirement. Each Dispatchable Resource is required by NERC Reliability Standards to follow Reliability Coordinator or Transmission Operator operating instructions unless such actions would violate safety, equipment, regulatory or statutory requirements.

A Dispatchable Resource’s obligation to receive and respond to ISO Dispatch Instructions has been clearly defined by ISO New England Operating Procedures (OPs) as well as through a series of training events and materials provided to the Designated Entities (DEs) and Demand Designated Entities (DDEs) annually. These expectations must be followed for reliable operation of the Bulk Electric System (BES) and compliance with NERC Reliability Standards.


	© ISO New England Inc. 2024	Procedure: Evaluate Resource Performance Post Disturbance
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	Procedure Number: RTMKTS.0125.0090	
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3. Responsibilities

1. The Manager, Operations Analysis and Integration (OAI) (or designee) is responsible for:
 - A. Evaluating Dispatchable Resource's performance following the activation of a contingency dispatch.
 - B. Evaluating aggregated Dispatchable Resource performance.

4. Controls

1. Record retention in accordance with RSKMGT.0020.0010 - Manage Records Retention.

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5. Instructions

5.1 Evaluate Individual Dispatchable Resource Performance

NOTE


The triggering event for an individual Dispatchable Resource performance evaluation is the activation of a contingency dispatch [i.e., a contingency dispatch - scheduling, pricing and dispatching (CD-SPD)].

1. When contingency dispatch is activated, the Manager, OAI (or designee) shall perform the following actions:
 - A. Collect the following information for the event:
 - (1) Date and time that the CD-SPD case was approved
 - (2) SAR/MRA Event Report [if Simultaneous Activation of ten-minute Reserve (SAR) and or Mutual Reserve Assistance (MRA) was requested] as emailed by the OPTI Automated Notification tool (Notification Tracker)
 - (3) Missing CRITICALMESSAGEACK during CFE History Reviewer email provided by ISO Data Communications group
 - (4) AceDropRecoverTime email (with time series plot) provided by OPTI System Performance Engineer if the loss is 500 MW or more within 1 minute.
 - (5) Any and all other relevant information that may need to be referenced

NOTE

The time period surrounding the event is variable in order to fully evaluate the performance of each Dispatchable Resource.

- B. Collect the following time series information for each Dispatchable Resource for the time period surrounding the event:
 - (1) Desired Dispatch Point (DDP) MW
 - (2) Dispatchable Resource MW output
 - (3) Unit Control Mode (UCM)
 - (4) Economic Maximum (Eco Max), Maximum Reduction (Max Red), or Minimum Consumption (Min Cons) limit as appropriate
 - (5) Effective Claim10 (for offline Resources only)

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	Procedure Number: RTMKTS.0125.0090	
	Procedure Owner: Jaren Lutenege	
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(6) Manual Response Rate (MRR)

(7) Time Dispatch Received (if required to be acknowledged)

(8) Time Dispatch Acknowledged (if required to be acknowledged)

C. Evaluate the performance of each applicable Dispatchable Resource by performing the following:

(1) As applicable, verify each applicable Dispatchable Resource acknowledged its Dispatch Instructions within sixty (60) seconds of the receipt of the Dispatch Instructions (unless a waiver has been granted by ISO), as required by ISO New England Operating Procedure No. 14 - Technical Requirements for Generators, Demand Response Resources, Asset Related Demands and Alternative Technology Regulation Resources (OP-14), for the following types of electronically issued Dispatch Instructions

a. Emergency Dispatch Instructions

b. Dispatch Instructions issued to Fast Start Dispatchable Resources to Start Up or Shut Down

(2) Verify each applicable Dispatchable Resource followed its Dispatch Instructions in accordance with its Offer Data without delay.

NOTE


The term “Redeclaration” is defined in ISO Manual M-35 as “A restatement of a resource’s availability, limits, or other Offer Data, except price, submitted by a Market Participant to the ISO to reflect a change in the status or capability of the resource or changed by the ISO based upon the resource’s actual performance.”

a. Any Dispatchable Resource that demonstrates it is **not** capable of following its offer/bid parameters must submit a Redeclaration of the applicable parameters as soon as practicable.

2. For the first event and second event (if non-consecutive), over the course of the past 8 events in which a Dispatchable Resource:

- does **not** follow its Dispatch Instructions in accordance with its Offer Data or
- does **not** acknowledge an Emergency or Shut Down Dispatch Instruction within sixty (60) seconds of the receipt of the Dispatch Instruction that it is required to acknowledge

an OPTI Business Analyst shall determine and document, as applicable:


	© ISO New England Inc. 2024	Procedure: Evaluate Resource Performance Post Disturbance
	Process Name: Perform Operations Administrative Tasks	
	Procedure Number: RTMKTS.0125.0090	Revision Number: 6.2
	Procedure Owner: Jaren Lutenege	Effective Date: May 1, 2024
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- A. The time at which the Dispatch Instruction was issued by ISO and the time by which it was acknowledged by the DE or DDE
 - B. For any failure to follow Dispatch Instructions, the value of the Dispatchable Resource MW deficiency (Expected MW Output - Actual MW Output)
3. For the second event (if consecutive) and third event over the course of the past 8 events in which a Dispatchable Resource does **not** follow or acknowledge a Dispatch Instruction as described in Section 5.1.2, an OPTI Business Analyst shall:
- A. Contact the applicable DE or DDE Operations Management, via email, as indicated in the Customer and Asset Management System (CAMS) for the applicable Dispatchable Resource and provide the following information, for the first, second and third events:
 - (1) Date and time of the event
 - (2) Dispatchable Resource identifying information (Name and Asset ID)
 - (3) Description of what happened (including each DDP and the associated Dispatchable Resource response)
 - (4) Description of ISO expectations for Dispatchable Resource response and acknowledgement
 - B. Follow-up with the DE or DDE to determine corrective actions that will prevent future failures.
 - (1) Coordinate corrective actions with the DE or DDE and continue to follow-up on corrective actions until all corrective actions have been completed.


NOTE

Once a corrective action plan has been developed and agreed upon, the Dispatchable Resource will not be contacted or reported on for future failures related to the action plan, until after the action plan has been completed. The most common example of this an upcoming RTU replacement to resolve an Emergency Message Acknowledge issue.

4. For the fourth event over the course of the past 8 events in which a Dispatchable Resource does **not** follow or acknowledge a Dispatch Instruction as described in Section 5.1.2, the Manager, OAI (or designee) shall:
 - A. Contact the applicable DE or DDE Operations Management, via the email address as indicated in CAMS for the applicable Dispatchable Resource and provide the following information:

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	Procedure Number: RTMKTS.0125.0090	
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		Effective Date: May 1, 2024
		Review Due Date: May 1, 2026

- (1) Date and time of the event
- (2) Dispatchable Resource identifying information (Name and Asset ID)
- (3) Time series plot of the response from the Dispatchable Resource (if applicable)
- (4) Description of ISO expectations for Dispatchable Resource response and acknowledgement
- (5) An indication that this is the fourth such event (and attach email(s) sent to the DE or DDE pertaining to the third event, as applicable)
- B. Follow-up with the DE or DDE to determine corrective actions that will prevent future failures.
 - (1) Coordinate corrective actions with the DE or DDE and continue to follow-up on corrective actions until all corrective actions have been completed.
5. For the fifth event over the course of the past 8 events in which a Dispatchable Resource does **not** follow or acknowledge a Dispatch Instruction as described in Section 5.1.2, the Manager, OAI (or designee) shall:
 - A. Contact the applicable DE or DDE Operations Management, via the email address as indicated in CAMS for the applicable Dispatchable Resource and provide the following information:
 - (1) Date and time of the event
 - (2) Dispatchable Resource identifying information (Name and Asset ID)
 - (3) Time series plot of the response from the Dispatchable Resource (if applicable)
 - (4) Description of ISO expectations for Dispatchable Resource response and acknowledgement
 - (5) An indication that this is the fifth such event (and attach email(s) sent to the DE pertaining to the fourth event, as applicable)
 - (6) Request for meeting or conference call with ISO Operations Management
 - B. Follow-up with the DE or DDE to determine corrective actions that will prevent future failures.
 - (1) Coordinate corrective actions with the DE or DDE and continue to follow-up on corrective actions until all corrective actions have been completed.

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	Procedure Number: RTMKTS.0125.0090	
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5.2 Evaluate Aggregated Dispatchable Resource Performance

NOTE


The Aggregated Dispatchable Resource Performance evaluation period is defined as the 26 weeks prior to the date when the analysis is performed.

1. The Manager, OAI (or designee) shall perform this evaluation of aggregated Dispatchable Resource performance quarterly.


NOTE

Dispatch Instructions considered in the analysis described in this Section 5.2 are those resulting from activation of CD-SPD issued in response to Reportable Events initiated by a loss of a Supply Dispatchable Resource in the New England Reliability Coordinator Area/Balancing Authority Area (RCA/BAA).

2. The Manager, OAI (or designee) shall evaluate aggregated Dispatchable Resource response to all internal event-based CD-SPD cases for the evaluation period by performing the following actions:
 - A. Compare the total response of all Dispatchable Resources to the total additional MW dispatched to all Dispatchable Resources during the evaluation period
 - (1) Measure the response over the ten-minute period following the approval of the CD-SPD case or over the period beginning when the CD-SPD case is approved until a new set of Dispatch Instructions have been sent to Dispatchable Resources, if applicable, whichever is a shorter period.
 - (2) Evaluate each applicable offline Dispatchable Resource that was dispatched online.
 - (3) Evaluate each online Dispatchable Resource that was dispatched to raise its output, increase its demand reduction, or decrease its demand consumption.
 - B. Calculate the Ten-Minute Reserve non-performance factor as the total change in MWs dispatched divided by the total change in MWs produced and verify it corresponds to the bias on ten-minute reserves.
 - (1) Adjustments to the Ten-Minute Reserve non-performance factor may be necessary based upon extenuating circumstances surrounding the data collection or circumstances surrounding the reserve activation such as problems with the communication of DDPs.


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	Procedure Number: RTMKTS.0125.0090	
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		Effective Date: May 1, 2024
		Review Due Date: May 1, 2026

- C. Submit the Ten-Minute Reserve non-performance factor for review at least 5 business days prior to the first day of February, May, August, and November to the following groups:
- (1) System Operations & Market Administration
 - (2) Market Development & Settlements

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	Procedure Number: RTMKTS.0125.0090	
	Procedure Owner: Jaren Lutenegger	
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		Review Due Date: May 1, 2026

5.3 Record Retention

1. The Manager, OPTI (or designee) shall archive a record of the results of each Resource Performance Post Disturbance analysis in the OpsAnalysis fileshare in accordance with RSKMGT.0020.0010 - Manage Records Retention.
 - A. Once the record is archived in the OpsAnalysis fileshare, it is **not** to be removed or altered in any way
 - B. If the record needs to be changed, the Manager, OAI (or designee) shall create a new version with the necessary annotations and/or identifiable revisions and retain it in the OpsAnalysis fileshare.

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	Procedure Number: RTMKTS.0125.0090	
	Procedure Owner: Jaren Lutenege	
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6. Performance Measures

1. This procedure is properly followed as evidenced by the following:
 - Dispatchable Resource response is evaluated for each contingency dispatch activation.
 - Aggregated Dispatchable Resource response is evaluated quarterly, reporting on the first days of February, May, August, and November. The Ten-Minute Reserve non-performance factor is submitted for review at least 5 business days prior to implementation.

7. References

North American Electric Reliability Corporation (NERC) Reliability Standard BAL-002 - Disturbance Control Standard - Contingency Reserve for Recovery from a Balancing Contingency Event

NERC Glossary of Terms Used in NERC Reliability Standards

Northeast Power Coordinating Council, Inc. (NPCC) Regional Reliability Reference Directory #5 - Reserve (NPCC Directory #5)

ISO New England Inc. Transmission, Markets, and Services Tariff; Section I–General Terms and Conditions


ISO New England Manual for Definitions and Abbreviations Manual M-35 (Manual M-35)

ISO New England Operating Procedure No. 14 - Technical Requirements for Generators, Demand Response Resources, Asset Related Demands and Alternative Technology Regulation Resources (OP-14)

RSKMGT.0020.0010 - Manage Records Retention

8. Revision History

Rev. No.	Date	Reason	Contact
0	06/11/13	Initial procedure	Steve Weaver
1	09/18/13	Global, as applicable, defined acronyms; Section 5.1.1 NOTE, clarified that the triggering event is only for a resource loss in New England ; Section 5.1.2.1 (3) modified to remove condition where NE provides SAR/MRA since that trigger was removed; Step 5.1.2.1.A.(3), updated for change in SAR report name due to MRA; Section 5.1.2.2.A, changed CAPA to logserver to reflect where the documentation is now being maintained; Section 5.1.2.2.A.(1), modified grammar;	Steve Weaver

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2	12/16/14	Biennial review by procedure owner; Section 4, added step 4.1; Globally, eliminated the use of the term “shall” per ROC directive; Added Section 5.3; Section 7, added RSKMGT.0020.0010	Steve Weaver
3	08/29/16	Biennial review by procedure owner; Footers, added document classification of ISO-NE PUBLIC; Globally, editorial changes to make all directed actions present tense and to be consistent with current practices and management expectations; Steps 5.1.1 and 5.1.2, modified to change to how the SAR/MRA Event Report is evaluated and transmitted; Section 5.1.3 modified the evaluation and added additional communication to the DE for Generator non-performance;	Steve Weaver
4	08/11/17	Biennial review by procedure owner; Procedure Owner Revised; Globally, Changed term Supply loss to Disturbance, editorial changes to be consistent with current conditions, practices and management expectations; Step 5.1.1 B, modified to evaluate Time dispatch received and acknowledgement; Section 5 revised to show process of contacting DE Management for deficiencies in Generator Response; Section 5.2 revised to show current process for evaluating generator aggregate performance; Section 7, added NERC Glossary and Manual M-35, updated applicable titles;	Stephen George
5	05/17/18	Biennial review by procedure owner; Globally made editorial changes (including correcting document titles, spelling, grammar, etc.) to reflect current conditions, practices, and management expectations; Modified language throughout to align with NERC Standard BAL-002-2 revision (eff. 1/1/18); Added Step 5.1.2 , modified steps 5.1.3, 5.1.4, and 5.1.5 to reflect current practice for contacting DE Management for deficiencies in Generator Response; Step 5.2.2 Modified to revised to remove redundant information; Section 7 updated OP-14 title;	Stephen George
6	05/12/20	Biennial review by procedure owner; Added additional items to Step 5.1.1 for completeness; Modified steps 5.1.2 through 5.1.5 to reflect current practice for contacting DE Management for deficiencies in Dispatchable Resource Response;	Stephen George
6.1	05/05/22	Biennial review; Update to procedure owner, approver and responsibilities; Update of titles throughout the document and minor administrative cleanup of process details	Jaren Luteneegger
6.2	05/01/24	Biennial review performed by procedure owner requiring no changes.	Jaren Luteneegger

9. Attachments

None