

ISO New England Manual for the  
**Regulation Market**  
Manual M-REG

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Prepared by  
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Regulation Market  
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## About This Manual

This is the *ISO New England Manual for the Regulation Market, M-REG*. The reader is referred first to Market Rule 1 for an explanation and information regarding the operation of the markets. Terms that are capitalized in this manual generally are defined in Section I.2.2 of the ISO Tariff or the *ISO New England Manual for Definitions and Abbreviations, M-35*.

## Section 1: Regulation Market Business Rules

### 1.1 Resource Criteria and Regulation Market Supply Offer Components

- (1) A Regulation Resource can be a dispatchable Generator Asset (other than one associated with a Continuous Storage Facility) that satisfies the requirements of Market Rule 1 Section III.14.2 or an ATRR that satisfies the requirements of Market Rule 1 Section III.14.2.
- (2) A Regulation Market Supply Offer must satisfy the requirements of Market Rule 1 Section III.14.3.
- (3) For Regulation Resources that are available to provide Regulation based on their Regulation Market Supply Offer submitted as of the close of the Re-Offer Period, the Regulation Resource status may be changed from available to unavailable only in the event the resource is experiencing a physical restriction that is preventing the resource from providing Regulation in accordance with its Regulation Market Supply Offer.
- (4) A Regulation Resource that is a Limited Energy Resource operating in the limited energy mode during a given hour will not be assigned Regulation in that hour.
- (5) A Regulation Resource is eligible to be selected to provide Regulation if, in addition to satisfying the requirements of Market Rule 1 Sections III.14.2, III.14.3, and III.14.5, all of the following criteria are met:
  - (a) the resource is online;
  - (b) the resource is not experiencing telemetry or other data quality problems; and
  - (c) if the resource is a Generator Asset, and the Generator Asset's MW output at the time of the Regulation selection process is outside of the range specified by its Regulation Low Limit plus its Regulation Capacity and its Regulation High Limit minus its Regulation Capacity, the Generator Asset must be capable of achieving an output level within this range based on its Manual Response Rate within a duration specified by the ISO.

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## 1.2 Regulation Requirement Determination

- (1) The Regulation Capacity Requirement and the Regulation Service Requirement are determined for each hour of the Operating Day and represent the amount of Regulation Capacity and estimated Regulation Service required in each hour of the Operating Day.
- (2) The Regulation requirements are determined based on historical control performance and are posted on the ISO's website based on month, day-type and hour. The requirements are selected by the ISO to meet ISO, NERC, and NPCC control standards. The requirements may be adjusted by the ISO as needed to assure continued compliance with these standards.
- (3) The ISO clears the Regulation Market and selects resources in Real-Time in order to satisfy the Regulation requirements.

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### 1.3 Offer Period for Regulation Market Supply Offers

Market Participants submit Regulation Market Supply Offers for Regulation Resources to provide Regulation. This offer information is submitted through eMKT.

- (1) A Regulation Market Supply Offer may be submitted at any time.
- (2) The default values for resources initially entering the Regulation Market will be the Regulation Resource status set to unavailable and the Regulation Capacity Offer (including estimated inter-temporal opportunity costs) and Regulation Service Offer prices set equal to zero. These default values will remain in effect until changed by the Market Participant associated with the resource. Regulation Market Supply Offer prices then carry forward on a day-to-day basis until changed by the Market Participant.
- (3) Market Participants must update a resource's physical operating limits and availability to reflect the resource's actual operating capability throughout the Operating Day; for Generator Assets, through communication to the ISO control room as a re-declaration and for ATRRs, through eMKT.

## **1.4 Resource Selection**

The ISO selects resources to provide Regulation in accordance with Market Rule 1 Section III.14.5.

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## **1.5 Calculation of Regulation Capacity and Regulation Service Clearing Prices**

The ISO calculates the Regulation clearing prices in accordance with Market Rule 1 Section III.14.8. The preliminary Regulation clearing prices are posted to the ISO's website. Final Regulation clearing prices will be posted in accordance with Market Rule 1 Section III.2.9A.



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## 1.6 Regulation Market Operations

- (1) The EMS sends AGC SetPoint signals to each resource assigned to provide Regulation.
- (2) Resources are generally selected to provide Regulation after the beginning of each hour to meet hourly Regulation Requirements and may also be selected during the hour to meet changing system conditions.
- (3) Resources assigned to provide Regulation are dispatched in accordance with Market Rule 1 Section III.14.6. Lead Market Participants may request changes to a non-generating unit's Regulation dispatch methodology through a request to ISO Customer Support.

## **Section 2: Performance and Settlement**

### **2.1 Performance and Settlement**

- (1) Regulation providers are compensated at the Regulation clearing prices for the performance-adjusted Regulation Capacity and Regulation Service provided in accordance with Market Rule 1 Section III.14.8. Compensation may also include a make-whole payment, in accordance with Market Rule 1 Section III.14.8(b)(iii). Regulation charges are allocated to Market Participants in accordance with Market Rule 1 Section III.14.8(d).
- (2) The performance of resources assigned to provide Regulation with respect to the AGC SetPoint instructions telemetered to the resource is continuously monitored in accordance with Market Rule 1 Section III.14.7.
- (3) Before participating in the Regulation Market, a resource must demonstrate its capability in accordance with Market Rule 1 Sections III.14.2(b)(vi)(2) and III.14.9.
- (4) Upon request, the Lead Market Participant will be provided a regulation performance report.

## Revision History

### *Approval*

Approval Date: June 27, 2013

Effective Date: July 1, 2013

### *Revision History*

Revision: 1 - Approval Dates: May 2, 2014 and January 9, 2015

Section No.    Revision Summary

Entire Manual revised to support the implementation of the FERC Order 775-compliant regulation market.

Revision: 2 - Approval Date: October 4, 2018

Section No.    Revision Summary

Globally.....Corrects capitalization of defined terms, specifies Market Rule 1 after section references where applicable, conforms to current style preferences, corrects small typographical errors.

1.1.....Clarifies title of section by renaming it to “Resource Criteria and Supply Offer Components” and adds an internal section reference for clarity on Regulation Supply Offers.

1.2.....Removes final paragraph discussing Market Participant’s estimation of hourly Regulation charges in advance of an hour.

1.3.....Replaces “availability” with “unit”.

1.5.....Removes “hourly” and corrects capitalization in the Tariff section reference.

1.6.....Simplifies title by removing “Real-Time”, streamlines reference to “Resources providing Regulation”, and updates reference to customer support.

2.2.....Adds clarify by adding “assigned to” and changes tense to “provide” to match the phrase in 1.6.

2.4.....Replaces “Designated Entities are” with “the Lead Market Participant will be” and removes “with”.

Revision: 3 - Approval Date: October 4, 2019

Section No.    Revision Summary

This revision is to conform with Enhanced Storage Participation project and includes clean up.

1.1.....Clarifies title of section by renaming it to “Resource Criteria and Regulation Market Supply Offer Components.”

1.1(1).....Adds Tariff references and clarifies that “A Regulation Resource can be a dispatchable Generator Asset (other than one associated with a Continuous Storage Facility) that satisfies the requirements of Market Rule 1 Section III.14.2”

1.1(2).....Replaces prior language which was redundant with Market Rule 1 provisions with the applicable citation. Renumbered sections to follow.

- 1.1(3).....Clarifies title to “Offer Period for Regulation Market Supply Offers.” Specifies defined term, “Regulation Resources” and adds “Regulation market” in two places for clarity, other phrasing changes for clarity. Removes, “through direct communication with the ISO” to ensure it is clear that resources can update their availability status through eMKT.
- 1.1(5).....Renumbered item (7) as (5), deleted items (a) and (b) which contain language which is repetitive with the Tariff. Replaces “capability” with “capacity”, capitalizes defined terms, specifies “output at the time of the Regulation selection process.” Removes sub-section (f), and includes tariff references in (5) instead.
- 1.3.....Adds “Regulation Market” before Supply Offers and specifies “Regulation Resources” throughout. In 1.3(3), adds detail that Market Participants must update a resource’s physical operating limits and availability to reflect the resource’s actual operating capability throughout the Operating Day; for Generator Assets through communication to the ISO control room as a re-declaration and for ATRRs, through eMKT.
- 1.5.....Adds specificity to Tariff reference III.2.9A.
- 1.6.....Cleans up capitalization and utilizes defined terms. Updates phrasing for clarity.
- 2.1.....Retitles section to “Performance and Settlement”, collapse sub-sections 2.2, 2.3 and 2.4 into items (2)-(4) of new provision 2.1. Added “performance-adjusted” to align with Tariff changes that clarified that the Regulation Capacity Payment would also be performance adjusted. Deletes language that repeats Tariff provisions. Corrected Tariff reference to align with new numbering of Market Rule 1 Section III.14.8(d).
- 2.3.....Collapsed language that repeats Tariff language and adds pointers to the relevant tariff sections III.14.2(b)(vi)(2) and III.14.9.