



January 17, 2014

**VIA E-TARIFF FILING**

Honorable Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, DC 20426

**Re: ISO New England Inc. and New England Power Pool, Docket No. ER13-1877-  
\_\_\_, Compliance Filing re Energy Market Offer Flexibility Changes**

Dear Secretary Bose:

ISO New England Inc. (the “ISO”) and the NEPOOL Participants Committee (“NEPOOL”) (together, the “Filing Parties”) hereby submit this transmittal letter and revised Tariff provisions to comply with the order that the Commission<sup>1</sup> issued in this proceeding on October 3, 2013 (the “Appendix A Compliance Changes”).<sup>2</sup> The October 3 Order accepted, subject to this compliance filing, energy market enhancements that will provide greater flexibility for Market Participants to structure and modify their Supply Offers in the day-ahead and real-time markets (the “Offer Flexibility Changes”). As discussed further in this filing, the compliance requirements relate to the mitigation rules that were revised as part of the Offer Flexibility Changes.

**I. BACKGROUND**

The ISO and NEPOOL jointly submitted the Offer Flexibility Changes on July 1, 2013. The Offer Flexibility Changes include several important enhancements, including the ability of Market Participants to submit Supply Offers that vary by hour (rather than being the same for all hours of an Operating Day), the ability to submit changes to Supply Offers in real-time to reflect updated market conditions and the ability to submit Supply Offers as low as negative \$150/MWh.

The Offer Flexibility Changes also included conforming changes that were required so that the mitigation rules in Appendix A of Market Rule 1 would continue to function as Market Participants are able to more frequently change their Supply Offers. Of significance to this

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<sup>1</sup> Capitalized terms used but not defined in this filing are intended to have the meaning given to such terms in the ISO New England Inc. Transmission, Markets and Services Tariff (the “Tariff”), the Second Restated New England Power Pool Agreement, and the Participants Agreement. Market Rule 1 is Section III of the Tariff.

<sup>2</sup> *ISO New England Inc. and New England Power Pool, Order Conditionally Accepting Tariff Revisions*, Docket No. ER13-1877-000,145 FERC ¶ 61,014 (Oct. 3, 2013) (the “October 3 Order”).

compliance filing, the new mitigation rules allow Market Participants to submit updated fuel price expectations to the ISO and to have those updated fuel prices automatically be reflected in the Reference Levels that are calculated for their resources as part of the market power mitigation structure without prior review by the Internal Market Monitor. Market Participants that utilize this mechanism must submit information after-the-fact to substantiate their fuel price adjustments. If Market Participants submit fuel price adjustments but fail to submit information to substantiate the adjustments, they are “locked-out” from using the automatic fuel price adjustment mechanism for a period of two to six months. The compliance directives of the October 3 Order generally concern how Market Participants that are locked-out of using the automatic fuel price adjustment mechanism may still submit verifiable fuel price information to update their Reference Levels.

## **II. THE OCTOBER 3 ORDER AND ITS COMPLIANCE DIRECTIVE**

The October 3 Order accepted the vast majority of the Offer Flexibility Changes as submitted by the Filing Parties, but required two revisions to the mitigation-related provisions of the changes.

The first compliance obligation requires that the market rules more clearly state that the Internal Market Monitor will use updated information when calculating hourly Reference Levels for Market Participants that are “locked-out” from using the automatic fuel price adjustment mechanism. Specifically, the Commission stated:

*We note, however, that there are a few potential inconsistencies between ISO-NE’s intended application of the proposed revisions, including the lock-out provisions, and the actual proposed Tariff language. Accordingly, our acceptance is conditioned upon ISO-NE submitting revised tariff records in a compliance filing that reconciles the proposed Tariff language with ISO-NE’s statements. In its answer, ISO-NE states that, during the lock-out period, “the Reference Levels for the resource would be determined by the IMM based on a published day-ahead fuel price index.” The proposed Tariff provisions, however, do not specify what type of pricing information the IMM will use to calculate the hourly Reference Levels for resources that are locked-out – i.e., whether the IMM would use a day-ahead price index or real-time (or operating day) price information. We find that, since the IMM will be calculating hourly Reference Levels that incorporate updated information, the IMM also should calculate the Reference Levels for locked-out resources based on updated information, instead of using the day-ahead price index. Accordingly, ISO-NE must submit clarifying Tariff revisions reflecting that approach.*

October 3 Order at P 35 (emphasis added and footnote omitted).

The compliance changes address this obligation by making clear that Market Participants that are subject to the lock-out provision may still use the consultation provisions of Section III.A.3.1 to provide updated fuel price information to the Internal Market Monitor and to have their Reference Levels updated to reflect that information. The compliance changes also allow more flexibility concerning when updated information may be submitted by changing the deadline for submitting updated fuel price information pursuant to the consultation process from

6:00 p.m. on the day prior to the Operating Day to anytime between 8:00 a.m. and 5:00 p.m. during the Operating Day and at least one hour prior to the close of the next hourly Supply Offer submittal period. Finally, a change is made to Section III.A.3.4(d) to clarify that the lock-out provision only applies to the submission of automatic fuel price updates and not to the consultation process contained in Section III.A.3.1.

The second compliance obligation involves language in Section III.A.3.3 that refers to making Reference Levels available on a “daily basis.” With respect to this provision, the October 3 order stated:

Further, while ISO-NE states that the IMM “must develop hourly Reference Levels rather than Reference Levels that are fixed for an Operating Day,” proposed Tariff section III.A.3.3 as drafted states that “Reference Levels will be made available on a daily basis.” ISO-NE must submit a compliance filing with Tariff language clarifying that the IMM will make the hourly Reference Levels available to individual resources. The proposed Tariff revisions, as modified, should use updated information for Reference Levels for locked-out resources to help prevent inaccurate market price signals.

October 3 Order at P 36 (footnote omitted).

The compliance changes address this issue by removing the language in Section III.A.3.3 referring to making Reference Levels available on a daily basis and instead stating: “Updated Reference Levels will be made available whenever calculated.” Thus, making clear that whenever new Reference Levels are calculated during the Operating Day pursuant to the consultation provisions of Section III.A.3.1 or the automatic fuel price adjustment mechanism in Section III.A.3.4, those new Reference Levels will be used and made available to the Market Participant.

During the stakeholder review process, there was discussion concerning the type of fuel price information that typically is available in real time. In implementing provisions of the mitigation rules requiring Market Participants to provide documentation supporting their fuel price adjustments, the IMM indicated that it recognizes the difficulties of procuring gas and that it may not be possible to obtain written quotes for such gas during non-business hours when reviewing the documentation submitted in support of fuel price adjustments.

### **III. STAKEHOLDER REVIEW OF THE COMPLIANCE CHANGES**

At its December 10-11, 2013 meeting, the NEPOOL Markets Committee voted to recommend that the NEPOOL Participants Committee support the Appendix A Compliance

Changes by a vote of 65.33% in favor.<sup>3</sup> At its January 10, 2014 meeting, the Participants Committee voted to support the compliance changes by a vote of 65.66% in favor.<sup>4</sup>

#### **IV. ADDITIONAL SUPPORTING INFORMATION**

The following materials are submitted herewith:

- Marked Section III.A of the ISO Tariff;
- Clean Section III.A of the ISO Tariff; and
- NEPOOL Participants Committee vote tabulation.

#### **V. CONCLUSION**

WHEREFORE, for the reasons stated above, the Filing Parties hereby request that the Commission accept the proposed revisions to Section III.A as submitted.

Respectfully submitted,

**ISO NEW ENGLAND INC.**

**NEW ENGLAND POWER POOL  
PARTICIPANTS COMMITTEE**

By: /s/ James H. Douglass

By: /s/ Sebastian M. Lombardi

James H. Douglass, Esq.  
ISO New England Inc.  
One Sullivan Road  
Holyoke, MA 01040-2841  
Tel: (413) 540-4559  
Fax: (413) 535-4379  
E-mail: [jdouglass@iso-ne.com](mailto:jdouglass@iso-ne.com)

Sebastian M. Lombardi, Esq.  
Day Pitney LLP  
242 Trumbull Street  
Hartford, CT 06103  
Tel: (860) 275-0663  
Fax: (860) 881-2493  
Email: [slombardi@daypitney.com](mailto:slombardi@daypitney.com)

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<sup>3</sup> The individual Sector votes at the Markets Committee were Generation (0% in favor, 19.6% opposed, 5 abstentions), Transmission (19.6% in favor, 0% opposed, 1 abstention), Supplier (6.53% in favor, 13.07% opposed, 14 abstentions), Alternative Resources (0% in favor, 0% opposed, 2 abstentions (12.17% reallocated to the other 5 Sectors)), Publicly Owned Entity (19.6% in favor, 0% opposed, 1 abstention), and End User (19.6% in favor, 0% opposed, 6 abstentions). All Sectors, except Alternative Resources, had a quorum.

<sup>4</sup> See the NEPOOL Participants Committee Vote Tabulation, attached hereto.

**CERTIFICATE OF SERVICE**

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Holyoke, MA this 17<sup>th</sup> day of January, 2014.

*/s/ Jane M. Desilets*

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Jane M. Desilets  
eTariff Coordinator  
ISO New England Inc.  
1 Sullivan Road  
Holyoke, MA  
413-540-4410

**SECTION III**

**MARKET RULE 1**

**APPENDIX A**

**MARKET MONITORING,  
REPORTING AND MARKET POWER MITIGATION**

**APPENDIX A**  
**MARKET MONITORING, REPORTING AND MARKET POWER MITIGATION**

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EXHIBIT 5 ISO NEW ENGLAND INC. CODE OF CONDUCT

## **MARKET MONITORING, REPORTING AND MARKET POWER MITIGATION**

### **III.A.1 Introduction and Purpose; Structure and Oversight: Independence.**

#### **III.A.1.1. Mission Statement.**

The mission of the Internal Market Monitor and External Market Monitor shall be (1) to protect both consumers and Market Participants by the identification and reporting of market design flaws and market power abuses; (2) to evaluate existing and proposed market rules, tariff provisions and market design elements to remove or prevent market design flaws and recommend proposed rule and tariff changes to the ISO; (3) to review and report on the performance of the New England Markets; (4) to identify and notify the Commission of instances in which a Market Participant's behavior, or that of the ISO, may require investigation; and (5) to carry out the mitigation functions set forth in this *Appendix A*.

#### **III.A.1.2. Structure and Oversight.**

The market monitoring and mitigation functions contained in this *Appendix A* shall be performed by the Internal Market Monitor, which shall report to the ISO Board of Directors and, for administrative purposes only, to the ISO Chief Executive Officer, and by an External Market Monitor selected by and reporting to the ISO Board of Directors. Members of the ISO Board of Directors who also perform management functions for the ISO shall be excluded from oversight and governance of the Internal Market Monitor and External Market Monitor. The ISO shall enter into a contract with the External Market Monitor addressing the roles and responsibilities of the External Market Monitor as detailed in this *Appendix A*. The ISO shall file its contract with the External Market Monitor with the Commission. In order to facilitate the performance of the External Market Monitor's functions, the External Market Monitor shall have, and the ISO's contract with the External Market Monitor shall provide for, access by the External Market Monitor to ISO data and personnel, including ISO management responsible for market monitoring, operations and billing and settlement functions. Any proposed termination of the contract with the External Market Monitor or modification of, or other limitation on, the External Market Monitor's scope of work shall be subject to prior Commission approval.

#### **III.A.1.3. Data Access and Information Sharing.**

The ISO shall provide the Internal Market Monitor and External Market Monitor with access to all market data, resources and personnel sufficient to enable the Internal Market Monitor and External Market

Monitor to perform the market monitoring and mitigation functions provided for in this *Appendix A*. This access shall include access to any confidential market information that the ISO receives from another independent system operator or regional transmission organization subject to the Commission's jurisdiction, or its market monitor, as part of an investigation to determine (a) if a Market Violation is occurring or has occurred, (b) if market power is being or has been exercised, or (c) if a market design flaw exists. In addition, the Internal Market Monitor and External Market Monitor shall have full access to the ISO's electronically generated information and databases and shall have exclusive control over any data created by the Internal Market Monitor or External Market Monitor. The Internal Market Monitor and External Market Monitor may share any data created by it with the ISO, which shall maintain the confidentiality of such data in accordance with the terms of the ISO New England Information Policy.

#### **III.A.1.4. Interpretation.**

In the event that any provision of any ISO New England Filed Document is inconsistent with the provisions of this *Appendix A*, the provisions of *Appendix A* shall control. Notwithstanding the foregoing, Sections III.A.1.2, III.A.2.2 (a)-(c), (e)-(h), Section III.A.2.3 (a)-(g), (i), (n) and Section III.A.17.3 are also part of the Participants Agreement and cannot be modified in either *Appendix A* or the Participants Agreement without a corresponding modification at the same time to the same language in the other document.

#### **III.A.1.5. Definitions.**

Capitalized terms not defined in this *Appendix A* are defined in the definitions section of Section I of the Tariff.

### **III.A.2. Functions of the Market Monitor.**

#### **III.A.2.1. Core Functions of the Internal Market Monitor and External Market Monitor.**

The Internal Market Monitor and External Market Monitor will perform the following core functions:

- (a) Evaluate existing and proposed market rules, tariff provisions and market design elements, and recommend proposed rule and tariff changes to the ISO, the Commission, Market Participants, public utility commissioners of the six New England states, and to other interested entities, with the understanding that the Internal Market Monitor and External Market Monitor are not to effectuate any proposed market designs (except as specifically provided in Section III.A.2.4.4, Section III.A.9 and Section III.A.10 of this *Appendix A*). In the event the Internal Market Monitor or External Market

Monitor believes broader dissemination could lead to exploitation, it shall limit distribution of its identifications and recommendations to the ISO and to the Commission, with an explanation of why broader dissemination should be avoided at that time. Nothing in this Section III.A.2.1 (a) shall prohibit or restrict the Internal Market Monitor and External Market Monitor from implementing Commission accepted rule and tariff provisions regarding market monitoring or mitigation functions that, according to the terms of the applicable rule or tariff language, are to be performed by the Internal Market Monitor or External Market Monitor.

- (b) Review and report on the performance of the New England Markets to the ISO, the Commission, Market Participants, the public utility commissioners of the six New England states, and to other interested entities.
- (c) Identify and notify the Commission's Office of Enforcement of instances in which a Market Participant's behavior, or that of the ISO, may require investigation, including suspected tariff violations, suspected violations of Commission-approved rules and regulations, suspected market manipulation, and inappropriate dispatch that creates substantial concerns regarding unnecessary market inefficiencies.

#### **III.A.2.2. Functions of the External Market Monitor.**

To accomplish the functions specified in Section III.A.2.1 of this *Appendix A*, the External Market Monitor shall perform the following functions:

- (a) Review the competitiveness of the New England Markets, the impact that the market rules and/or changes to the market rules will have on the New England Markets and the impact that the ISO's actions have had on the New England Markets. In the event that the External Market Monitor uncovers problems with the New England Markets, the External Market Monitor shall promptly inform the Commission, the Commission's Office of Energy Market Regulation staff, the ISO Board of Directors, the public utility commissions for each of the six New England states, and the Market Participants of its findings in accordance with the procedures outlined in Sections III.A.19 and III.A.20 of this *Appendix A*, provided that in the case of Market Participants and the public utility commissions, information in such findings shall be redacted as necessary to comply with the ISO New England Information Policy. Notwithstanding the foregoing, in the event the External Market Monitor believes broader dissemination could lead to exploitation, it shall limit distribution of its identifications to the ISO and to the Commission, with an explanation of why broader dissemination should be avoided at that time.

- (b) Perform independent evaluations and prepare annual and ad hoc reports on the overall competitiveness and efficiency of the New England Markets or particular aspects of the New England Markets, including the adequacy of this *Appendix A*, in accordance with the provisions of Section III.A.17 of this *Appendix A*.
- (c) Conduct evaluations and prepare reports on its own initiative or at the request of others.
- (d) Monitor and review the quality and appropriateness of the mitigation conducted by the Internal Market Monitor. In the event that the External Market Monitor discovers problems with the quality or appropriateness of such mitigation, the External Market Monitor shall promptly inform the Commission, the Commission's Office of Energy Market Regulation staff, the ISO Board of Directors, the public utility commissions for each of the six New England states, and the Market Participants of its findings in accordance with the procedures outlined in Sections III.A.19 and/or III.A.20 of this *Appendix A*, provided that in the case of Market Participants and the public utility commissions, information in such findings shall be redacted as necessary to comply with the ISO New England Information Policy. Notwithstanding the foregoing, in the event the External Market Monitor believes broader dissemination could lead to exploitation, it shall limit distribution of its identifications to the ISO and to the Commission, with an explanation of why broader dissemination should be avoided at that time.
- (e) Prepare recommendations to the ISO Board of Directors and the Market Participants on how to improve the overall competitiveness and efficiency of the New England Markets or particular aspects of the New England Markets, including improvements to this *Appendix A*.
- (f) Recommend actions to the ISO Board of Directors and the Market Participants to increase liquidity and efficient trade between regions and improve the efficiency of the New England Markets.
- (g) Review the ISO's filings with the Commission from the standpoint of the effects of any such filing on the competitiveness and efficiency of the New England Markets. The External Market Monitor will have the opportunity to comment on any filings under development by the ISO and may file comments with the Commission when the filings are made by the ISO. The subject of any such comments will be the External Market Monitor's assessment of the effects of any proposed filing on the competitiveness and efficiency of the New England Markets, or the effectiveness of this *Appendix A*, as appropriate.
- (h) Provide information to be directly included in the monthly market updates that are provided at the meetings of the Market Participants.

### **III.A.2.3. Functions of the Internal Market Monitor.**



To accomplish the functions specified in Section III.A.2.1 of this *Appendix A*, the Internal Market Monitor shall perform the following functions:

- (a) Maintain *Appendix A* and consider whether *Appendix A* requires amendment. Any amendments deemed to be necessary by the Internal Market Monitor shall be undertaken after consultation with Market Participants in accordance with Section 11 of the Participants Agreement.
- (b) Perform the day-to-day, real-time review of market behavior in accordance with the provisions of this *Appendix A*.
- (c) Consult with the External Market Monitor, as needed, with respect to implementing and applying the provisions of this *Appendix A*.
- (d) Identify and notify the Commission's Office of Enforcement staff of instances in which a Market Participant's behavior, or that of the ISO, may require investigation, including suspected Tariff violations, suspected violations of Commission-approved rules and regulations, suspected market manipulation, and inappropriate dispatch that creates substantial concerns regarding unnecessary market inefficiencies, in accordance with the procedures outlined in Section III.A.19 of this *Appendix A*.
- (e) Review the competitiveness of the New England Markets, the impact that the market rules and/or changes to the market rules will have on the New England Markets and the impact that ISO's actions have had on the New England Markets. In the event that the Internal Market Monitor uncovers problems with the New England Markets, the Internal Market Monitor shall promptly inform the Commission, the Commission's Office of Energy Market Regulation staff, the ISO Board of Directors, the public utility commissions for each of the six New England states, and the Market Participants of its findings in accordance with the procedures outlined in Sections III.A.19 and III.A.20 of this *Appendix A*, provided that in the case of Market Participants and the public utility commissions, information in such findings shall be redacted as necessary to comply with the ISO New England Information Policy. Notwithstanding the foregoing, in the event the Internal Market Monitor believes broader dissemination could lead to exploitation, it shall limit distribution of its identifications to the ISO and to the Commission, with an explanation of why broader dissemination should be avoided at that time.
- (f) Provide support and information to the ISO Board of Directors and the External Market Monitor consistent with the Internal Market Monitor's functions.
- (g) Prepare an annual state of the market report on market trends and the performance of the New England Markets, as well as less extensive quarterly reports, in accordance with the provisions of Section III.A.17 of this *Appendix A*.

- (h) Make one or more of the Internal Market Monitor staff members available for regular conference calls, which may be attended, telephonically or in person, by Commission and state commission staff, by representatives of the ISO, and by Market Participants. The information to be provided in the Internal Market Monitor conference calls is generally to consist of a review of market data and analyses of the type regularly gathered and prepared by the Internal Market Monitor in the course of its business, subject to appropriate confidentiality restrictions. This function may be performed through making a staff member of the Internal Market Monitor available for the monthly meetings of the Market Participants and inviting Commission staff and the staff of state public utility commissions to those monthly meetings.
- (i) Be primarily responsible for interaction with external Control Areas, the Commission, other regulators and Market Participants with respect to the matters addressed in this *Appendix A*.
- (j) Monitor for conduct whether by a single Market Participant or by multiple Market Participants acting in concert, including actions involving more than one Resource, that may cause a material effect on prices or other payments in the New England Markets if exercised from a position of market power, and impose appropriate mitigation measures if such conduct is detected and the other applicable conditions for the imposition of mitigation measures as set forth in this *Appendix A* are met. The categories of conduct for which the Internal Market Monitor shall perform monitoring for potential mitigation are:
  - (i) *Economic withholding*, that is, submitting a Supply Offer for a Resource that is unjustifiably high and violates the economic withholding criteria set forth in Section III.A.5 so that (i) the Resource is not or will not be dispatched or scheduled, or (ii) the bid or offer will set an unjustifiably high market clearing price.
  - (ii) *Uneconomic production from a Resource*, that is, increasing the output of a Resource to levels that would otherwise be uneconomic, absent an order of the ISO, in order to cause, and obtain benefits from, a transmission constraint.
  - (iii) *Anti-competitive Increment Offers and Decrement Bids*, which are bidding practices relating to Increment Offers and Decrement Bids that cause Day-Ahead LMPs not to achieve the degree of convergence with Real-Time LMPs that would be expected in a workably competitive market, more fully addressed in Section III.A.11 of this *Appendix A*.
  - (iv) *Anti-competitive Demand Bids*, which are addressed in Section III.A.10 of this *Appendix A*.

- (v) Other categories of conduct that have material effects on prices or NCPC payments in the New England Markets. The Internal Market Monitor, in consultation with the External Market Monitor, shall; (i) seek to amend *Appendix A* as may be appropriate to include any such conduct that would substantially distort or impair the competitiveness of any of the New England Markets; and (ii) seek such other authorization to mitigate the effects of such conduct from the Commission as may be appropriate.
- (k) Perform such additional monitoring as the Internal Market Monitor deems necessary, including without limitation, monitoring for:
- (i) Anti-competitive gaming of Resources;
  - (ii) Conduct and market outcomes that are inconsistent with competitive markets;
  - (iii) Flaws in market design or software or in the implementation of rules by the ISO that create inefficient incentives or market outcomes;
  - (iv) Actions in one market that affect price in another market;
  - (v) Other aspects of market implementation that prevent competitive market results, the extent to which market rules, including this *Appendix A*, interfere with efficient market operation, both short-run and long-run; and
  - (vi) Rules or conduct that creates barriers to entry into a market.

The Internal Market Monitor will include significant results of such monitoring in its reports under Section III.A.17 of this *Appendix A*. Monitoring under this Section III.A.2.3(k) cannot serve as a basis for mitigation under III.A.11 of this *Appendix A*. If the Internal Market Monitor concludes as a result of its monitoring that additional specific monitoring thresholds or mitigation remedies are necessary, it may proceed under Section III.A.20.

- (l) Propose to the ISO and Market Participants appropriate mitigation measures or market rule changes for conduct that departs significantly from the conduct that would be expected under competitive market conditions but does not rise to the thresholds specified in Sections III.A.5, III.A.10, or III.A.11. In considering whether to recommend such changes, the Internal Market Monitor shall evaluate whether the conduct has a significant effect on market prices or NCPC payments as specified below. The Internal Market Monitor will not recommend changes if it determines, from information provided by Market Participants (or parties that would be subject to mitigation) or from other

information available to the Internal Market Monitor, that the conduct and associated price or NCPC payments under investigation are attributable to legitimate competitive market forces or incentives.

- (m) Evaluate physical withholding of Supply Offers in accordance with Section III.A.4 below for referral to the Commission in accordance with *Appendix B* of this Market Rule 1.
- (n) If and when established, participate in a committee of regional market monitors to review issues associated with interregional transactions, including any barriers to efficient trade and competition.

#### **III.A.2.4. Overview of the Internal Market Monitor's Mitigation Functions.**

##### **III.A.2.4.1. Purpose.**

The mitigation measures set forth in this *Appendix A* for mitigation of market power are intended to provide the means for the Internal Market Monitor to mitigate the market effects of any actions or transactions that are without a legitimate business purpose and that are intended to or foreseeably could manipulate market prices, market conditions, or market rules for electric energy or electricity products. Actions or transactions undertaken by a Market Participant that are explicitly contemplated in Market Rule 1 (such as virtual supply or load bidding) or taken at the direction of the ISO are not in violation of this *Appendix A*. These mitigation measures are intended to minimize interference with open and competitive markets, and thus to permit to the maximum extent practicable, price levels to be determined by competitive forces under the prevailing market conditions. To that end, the mitigation measures authorize the mitigation of only specific conduct that exceeds well-defined thresholds specified below. When implemented, mitigation measures affecting the LMP or clearing prices in other markets will be applied *ex ante*. Nothing in this *Appendix A*, including the application of a mitigation measure, shall be deemed to be a limitation of the ISO's authority to evaluate Market Participant behavior for potential sanctions under *Appendix B* of this Market Rule 1.

##### **III.A.2.4.2. Conditions for the Imposition of Mitigation.**

- (a) Imposing Mitigation. To achieve the foregoing purpose and objectives, mitigation measures are imposed pursuant to Sections III.A.5, III.A.10, and III.A.11. below:
- (b) Notwithstanding the foregoing or any other provision of this *Appendix A*, and as more fully described in Section III.B.3.2.6 of *Appendix B* to this Market Rule 1, certain economic decisions shall not be deemed a form of withholding or otherwise inconsistent with competitive conduct.

#### **III.A.2.4.3 Applicability.**

Mitigation measures may be applied to Supply Offers, Increment Offers, Demand Bids, and Decrement Bids, as well as to the scheduling or operation of a generation unit or transmission facility.

#### **III.A.2.4.4 Mitigation Not Provided for Under This *Appendix A*.**

The Internal Market Monitor shall monitor the New England Markets for conduct that it determines constitutes an abuse of market power but does not trigger the thresholds specified below for the imposition of mitigation measures by the Internal Market Monitor. If the Internal Market Monitor identifies any such conduct, and in particular conduct exceeding the thresholds specified in this *Appendix A*, it may make a filing under §205 of the Federal Power Act (“§205”) with the Commission requesting authorization to apply appropriate mitigation measures. Any such filing shall identify the particular conduct the Internal Market Monitor believes warrants mitigation, shall propose a specific mitigation measure for the conduct, and shall set forth the Internal Market Monitor’s justification for imposing that mitigation measure.

#### **III.A.2.4.5 Duration of Mitigation.**

Any mitigation measure imposed on a specific Market Participant, as specified below, shall expire not later than six months after the occurrence of the conduct giving rise to the measure, or at such earlier time as may be specified by the Internal Market Monitor or as otherwise provided in this *Appendix A* or in *Appendix B* to this Market Rule 1.

### **III.A.3. Consultation Prior to Determination of Reference Levels for Physical and Financial Parameters of Resources; Fuel Price Adjustments.**

Upon request of a Market Participant or at the initiative of the Internal Market Monitor, the Internal Market Monitor shall consult with a Market Participant with respect to the information and analysis used to determine Reference Levels under Section III.A.7 for that Market Participant. In order for the Internal Market Monitor to revise Reference Levels or treat an offer as not violating applicable conduct tests specified in Section III.A.5.5 for an Operating Day for which the offer is submitted, all cost data and other information, other than automated index-based cost data received by the Internal Market Monitor from third party vendors, cost data and information calculated by the Internal Market Monitor, and cost data and information provided under the provisions of Section III.A.3.1 or Section III.A.3.2, must be submitted by a Market Participant, and all consultations must be completed, no later than 5:00 p.m. of the second business day prior to the Operating Day for which the Reference Level will be effective.

Adjustments to fuel prices after this time must be submitted in accordance with the fuel price adjustment provisions in Section A.3.4.

### **III.A.3.1. Consultation Prior to Offer.**

If an event occurs within the 24 hour period prior to the Operating Day that a Market Participant, including a Market Participant that is not permitted to submit a fuel price adjustment pursuant to Section III.A.3.4(e). believes will cause the operating cost of a Resource to exceed the level that would violate one of the conduct tests specified in Section III.A.5 of this *Appendix A*, the Market Participant may contact the Internal Market Monitor to provide an explanation of the increased cost. In order for the information to be considered for the purposes of the Day-Ahead Energy Market, the Market Participant must contact the Internal Market Monitor at least one hour prior to the close of the Day-Ahead Energy Market. In order for the information to be considered for purposes of the first commitment analysis performed following the close of the Re-Offer Period, the Market Participant must contact the Internal Market Monitor at least one hour prior to the close of the Re-Offer Period. Cost information submitted thereafter shall be considered in subsequent commitment and dispatch analyses if received by 6:00 p.m. the day prior to the Operating Day between 8:00 a.m. and 5:00 p.m. and at least one hour prior to the close of the next hourly Supply Offer submittal period. If the Internal Market Monitor determines that there is an increased cost, the Internal Market Monitor will either update the Reference Level or treat an offer as not violating applicable conduct tests specified in Section III.A.5.5 for the Operating Day for which the offer is submitted. Any request and all supporting cost data and other verifiable supporting information must be submitted to the Internal Market Monitor prior to the Market Participant's submission of the offer.

~~Any changes to fuel prices shall not be subject to the consultation provisions of this Section III.A.3.1.~~ If a Market Participant believes that the fuel price determined under Section III.A.7.5(e) should be modified, it may contact the Internal Market Monitor to request a change to the fuel price and provide an explanation of the basis for the change. Any request to change the fuel price determined under Section III.A.7.5(e) must be received between the hours of 8:00 a.m. and 5:00 p.m. on any day.

### **III.A.3.2. Dual Fuel Resources.**

In evaluating bids or offers under this *Appendix A* for dual fuel Resources, the Internal Market Monitor shall utilize the fuel type specified in the Supply Offer for the calculation of cost-based Reference Levels, pursuant to Section III.A.7.5 below, unless a Market Participant notifies the Internal Market Monitor that the Resource will be operating on the higher cost fuel type.

If a Market Participant provides such notification, the Internal Market Monitor will use the higher cost fuel type in the calculation of the cost-based Reference Levels for the resource. Within five business days of a request by the Internal Market Monitor, the Market Participant must:

- (a) provide the Internal Market Monitor with written verification as to the cause for the use of the higher cost fuel.
- (b) provide the Internal Market Monitor with evidence that the higher cost fuel was used.

If the Market Participant fails to provide supporting information within five business days of a request by the Internal Market Monitor, then the Reference Level based on the lower cost fuel will be used in place of the Supply Offer for settlement purposes.

#### **III.A.3.3. Market Participant Access to its Reference Levels.**

The Internal Market Monitor will make available to the Market Participant the Reference Levels applicable to that Market Participant's Supply Offers through the MUI. ~~The Updated~~ Reference Levels will be made available ~~on a daily basis~~ whenever calculated. The Market Participant shall not modify such Reference Levels in the ISO's or Internal Market Monitor's systems.

#### **III.A.3.4. Fuel Price Adjustments.**

(a) A Market Participant may submit a fuel price, to be used in calculating the Reference Levels for a Resource's Supply Offer, whenever the Market Participant's expected price to procure fuel for the Resource will be greater than that used by the Internal Market Monitor in calculating the Reference Levels for the Supply Offer. A fuel price may be submitted for Supply Offers entered in the Day-Ahead Energy Market, the Re-Offer Period, or for a Real-Time Offer Change. A fuel price is subject to the following conditions:

- (i) In order for the submitted fuel price to be utilized in calculating the Reference Levels for a Supply Offer, the fuel price must be submitted prior to the applicable Supply Offer deadline,
- (ii) The submitted fuel price must reflect the price at which the Market Participant expects to be able to procure fuel to supply energy under the terms of its Supply Offer, exclusive of resource-

specific transportation costs. Modifications to Reference Levels based on changes to transportation costs must be addressed through the consultation process specified in Section III.A.3.1.

(iii) The submitted fuel price may be no lower than the lesser of (1) 110% of the fuel price used by the Internal Market Monitor in calculating the Reference Levels for the Resource's Supply Offer or (2) the fuel price used by the Internal Market Monitor in calculating the Reference Levels for the Resource's Supply Offer plus \$2.50/MMbtu.

(b) Within five business days following submittal of a fuel price, a Market Participant must provide the Internal Market Monitor with (i) an invoice for the fuel utilized or (ii) a quote from a named supplier or (iii) a price from a publicly available trading platform or price reporting agency, demonstrating that the submitted fuel price reflects the cost at which the Market Participant expected to purchase fuel for the operating period covered by the Supply Offer, as of the time that the Supply Offer was submitted, under an arm's length fuel purchase transaction. Any amount to be added to the quote from a named supplier, or to a price from a publicly available trading platform or price reporting agency, must be submitted and approved using the provision for consultations prior to the determination of Reference Levels in Section III.A.3. The submitted fuel price may be no greater than 110% of the fuel price reflected on the submitted invoice for the fuel utilized, the quote from a named supplier or the price from a publicly available trading platform or price reporting agency, plus any approved adder.

(c) The Supply Offers for the associated Resource may be no greater than 110% and no less than 90% of the Reference Level calculated with the submitted fuel price.

(d) If, within a 12 month period, the requirements in sub-sections (b) or (c) are not met for a Resource, then a fuel price adjustment [pursuant to Section III.A.3.4](#) shall not be permitted for that Resource for up to six months. The following table specifies the number of months for which a Market Participant will be precluded from using the fuel price adjustment, based on the number of times the requirements in sub-sections (b) or (c) are not met within the 12 month period. The 12 month period excludes any previous days for which the Market Participant was precluded from using the fuel price adjustment. The period of time for which a Market Participant is precluded from using the fuel price adjustment begins two weeks after the most-recent incident occurs.

Number of Incidents	Months Precluded (starting from most-recent incident)
---------------------	---



1	2
2 or more	6

**III.A.4. Physical Withholding.**

**III.A.4.1. Identification of Conduct Inconsistent with Competition.**

This section defines thresholds used to identify possible instances of physical withholding. This section does not limit the Internal Market Monitor’s ability to refer potential instances of physical withholding to the Commission.

Generally, physical withholding involves not offering to sell or schedule the output of or services provided by a Resource capable of serving the New England Markets when it is economic to do so. Physical withholding may include, but is not limited to:

- (a) falsely declaring that a Resource has been forced out of service or otherwise become unavailable,
- (b) refusing to make a Supply Offer, or schedules for a Resource when it would be in the economic interest absent market power, of the withholding entity to do so,
- (c) operating a Resource in Real-Time to produce an output level that is less than the ISO Dispatch Rate, or
- (d) operating a transmission facility in a manner that is not economic, is not justified on the basis of legitimate safety or reliability concerns, and contributes to a binding transmission constraint.

**III.A.4.2. Thresholds for Identifying Physical Withholding.**

**III.A.4.2.1. Initial Thresholds.**

Except as specified in subsection III.A.4.2.4 below, the following initial thresholds will be employed by the Internal Market Monitor to identify physical withholding of a Resource:

- (a) Withholding that exceeds the lower of 10% or 100 MW of a Resource’s capacity;
- (b) Withholding that exceeds in the aggregate the lower of 5% or 200 MW of a Market Participant’s total capacity for Market Participants with more than one Resource; or

- (c) Operating a Resource in Real-Time at an output level that is less than 90% of the ISO's Dispatch Rate for the Resource.

#### **III.A.4.2.2. Adjustment to Generating Capacity.**

The amounts of generating capacity considered withheld for purposes of applying the foregoing thresholds shall include unjustified deratings, that is, falsely declaring a Resource derated, and the portions of a Resource's available output that are not offered. The amounts deemed withheld shall not include generating output that is subject to a forced outage or capacity that is out of service for maintenance in accordance with an ISO maintenance schedule, subject to verification by the Internal Market Monitor as may be appropriate that an outage was forced.

#### **III.A.4.2.3. Withholding of Transmission.**

A transmission facility shall be deemed physically withheld if it is not operated in accordance with ISO instructions and such failure to conform to ISO instructions causes transmission congestion. A transmission facility shall not be deemed withheld if it is subject to a forced outage or is out of service for maintenance in accordance with an ISO maintenance schedule, subject to verification by the Internal Market Monitor as may be appropriate that an outage was forced.

#### **III.A.4.2.4. Resources in Congestion Areas.**

Minimum quantity thresholds shall not be applicable to the identification of physical withholding by a Resource in an area the ISO has determined is congested.

#### **III.A.4.3. Hourly Market Impacts.**

Before evaluating possible instances of physical withholding for imposition of sanctions, the Internal Market Monitor shall investigate the reasons for the change in accordance with Section III.A.3. If the physical withholding in question is not explained to the satisfaction of the Internal Market Monitor, the Internal Market Monitor will determine whether the conduct in question causes a price impact in the New England Markets in excess of any of the thresholds specified in Section III.A.5, as appropriate.

#### **III.A.5. Mitigation.**

##### **III.A.5.1. Resources with Capacity Supply Obligations.**

Only Supply Offers associated with Resources with Capacity Supply Obligations will be evaluated for economic withholding in the Day-Ahead Energy Market. All Supply Offers will be evaluated for economic withholding in the Real-Time Energy Market.

#### **III.A.5.1.1. Resources with Partial Capacity Supply Obligations.**

Supply Offers associated with Resources with a Capacity Supply Obligation for less than their full capacity shall be evaluated for economic withholding and mitigation as follows:

- (a) all Supply Offer parameters shall be reviewed for economic withholding;
- (b) the energy price Supply Offer parameter shall be reviewed for economic withholding up to and including the higher of: (i) the block containing the Resource's Economic Minimum Limit, or; (ii) the highest block that includes any portion of the Capacity Supply Obligation;
- (c) if a Resource with a partial Capacity Supply Obligation consists of multiple assets, the offer blocks associated with the Resource that shall be evaluated for mitigation shall be determined by using each asset's Seasonal Claimed Capability value in proportion to the total of the Seasonal Claimed Capabilities for all of the assets that make up the Resource. The Lead Market Participant of a Resource with a partial Capacity Supply Obligation consisting of multiple assets may also propose to the Internal Market Monitor the offer blocks that shall be evaluated for mitigation based on an alternative allocation on a monthly basis. The proposal must be made at least five business days prior to the start of the month. A proposal shall be rejected by the Internal Market Monitor if the designation would be inconsistent with competitive behavior

#### **III.A.5.2. Structural Tests.**

There are two structural tests that determine which mitigation thresholds are applied to a Supply Offer:

- (a) if a supplier is determined to be pivotal according to the pivotal supplier test, then the thresholds in Section III.A.5.5.1 "General Threshold Energy Mitigation" and Section III.A.5.5.3 "General Threshold Commitment Mitigation" apply, and;
- (b) if a Resource is determined to be in a constrained area according to the constrained area test, then the thresholds in Section III.A.5.5.2 "Constrained Area Threshold Energy Mitigation" and Section III.A.5.5.4 "Constrained Area Threshold Commitment Mitigation" apply.

##### **III.A.5.2.1. Pivotal Supplier Test.**

The pivotal supplier test examines whether a Market Participant has aggregate energy Supply Offers (up to and including Economic Max) that exceed the supply margin. A Market Participant whose aggregate energy associated with Supply Offers exceeds the supply margin is a pivotal supplier.

The supply margin for an interval is the total energy Supply Offers from available Resources (up to and including Economic Max), less total system load (as adjusted for net interchange with other Control Areas, including Operating Reserve). Resources are considered available for an interval if they can provide energy within the interval. The applicable interval in the Day-Ahead Energy Market is any of the 24 hours for which pivotal supplier calculations are made. The applicable interval for the current operating plan in the Real-Time Energy Market is any of the hours in the plan. The applicable interval for UDS is the interval for which UDS issues instructions.

The pivotal supplier test shall be run prior to the clearing of the Day-Ahead Energy Market, prior to each determination of a new operating plan for the Operating Day, and prior to each execution of the UDS.

#### **III.A.5.2.2. Constrained Area Test.**

A Resource is considered to be within a constrained area if:

- (a) for purposes of the Real-Time Energy Market, the Resource is located on the import-constrained side of a binding constraint and there is a sensitivity to the binding constraint such that the UDS used to relieve transmission constraints would commit or dispatch the Resource in order to relieve that binding transmission constraint, or;
- (b) for purposes of the Day-Ahead Energy Market, the LMP at the Resource's Node exceeds the LMP at the Hub by more than \$25/MWh.

#### **III.A.5.3. Calculation of Impact Tests in the Day-Ahead Energy Market.**

The price impact for the purposes of Section III.A.5.5.1 "General Threshold Energy Mitigation" compares two LMPs at a Resource's Node. The first LMP is calculated based on the Supply Offers submitted for all Resources. The second LMP is calculated through a simulation of the Day-Ahead Energy Market with the offer blocks associated with conduct violations of the pivotal supplier's Resources set to their Reference Levels.

A Supply Offer shall be determined to have no price impact for the purposes of Section III.A.5.5.1 “General Threshold Energy Mitigation” if:

- (a) the first LMP at the Resource’s Node is less than the impact threshold, or;
- (b) the first LMP minus the Resource’s Reference Level for each offer block is less than the impact threshold.

The price impact for the purposes of Section III.A.5.5.2 “Constrained Area Energy Mitigation” is equal to the difference between the LMP at the Resource’s Node and the LMP at the Hub.

#### **III.A.5.4. Calculation of Impact Tests in the Real-Time Energy Market.**

The energy price impact test applied in the Real-Time Energy Market shall compare two LMPs at the Resource’s Node. The first LMP will be calculated based on the Supply Offers submitted for all Resources. If a Supply Offer has been mitigated in a prior interval, the calculation of the first LMP shall be based on the mitigated value. The second LMP shall be calculated substituting Reference Levels for Supply Offers that have failed the applicable conduct test. The difference between the two LMPs is the price impact of the conduct violation.

A Supply Offer shall be determined to have no price impact if the offer block that violates the conduct test is:

- (a) less than the LMP calculated using the submitted Supply Offers, and less than the LMP calculated using Reference Levels for Supply Offers that have failed the conduct test, or;
- (b) greater than the LMP calculated using the submitted Supply Offers, and greater than the LMP calculated using Reference Levels for Supply Offers that have failed the conduct test, and the Resource has not been dispatched into the offer block that exceeds the LMP.

#### **III.A.5.5. Mitigation by Type.**

##### **III.A.5.5.1. General Threshold Energy Mitigation.**

##### **III.A.5.5.1.1. Applicability.**

Mitigation pursuant to this section shall be applied to all Supply Offers submitted by a Lead Market Participant that is determined to be a pivotal supplier.

**III.A.5.5.1.2. Conduct Test.**

A Supply Offer fails the conduct test for general threshold energy mitigation if any offer block price exceeds the Reference Level by an amount greater than 300% or \$100/MWh, whichever is lower. Offer block prices below \$25/MWh are not subject to the conduct test.

**III.A.5.5.1.3. Impact Test.**

A Supply Offer that fails the conduct test for general threshold energy mitigation shall be evaluated against the impact test for general threshold energy mitigation. A Supply Offer fails the impact test for general threshold energy mitigation if there is an increase in the LMP greater than 200% or \$100/MWh, whichever is lower as determined by the day-ahead or real-time impact test.

**III.A.5.5.1.4. Consequence of Failing Both Conduct and Impact Test.**

If a Supply Offer fails the general threshold conduct and impact tests, then the financial parameters of the Supply Offer shall be set to their Reference Levels, including all energy offer block prices and all types of Start-Up Fees and the No-Load Fee.

**III.A.5.5.2. Constrained Area Energy Mitigation.**

**III.A.5.5.2.1. Applicability.**

Mitigation pursuant to this section shall be applied to Supply Offers associated with a Resource determined to be within a constrained area.

**III.A.5.5.2.2. Conduct Test.**

A Supply Offer fails the conduct test for constrained area energy mitigation if any offer block price exceeds the Reference Level by an amount greater than 50% or \$25/MWh, whichever is lower.

**III.A.5.5.2.3. Impact Test.**

A Supply Offer fails the impact test for constrained area energy mitigation if there is an increase greater than 50% or \$25/MWh, whichever is lower, in the LMP as determined by the day-ahead or real-time impact test.

**III.A.5.5.2.4. Consequence of Failing Both Conduct and Impact Test.**

If a Supply Offer fails the constrained area conduct and impact tests, then the financial parameters of the Supply Offer shall be set to their Reference Levels, including all energy offer blocks and all types of Start-Up Fees and the No-Load Fee.

**III.A.5.5.3. General Threshold Commitment Mitigation.**

**III.A.5.5.3.1. Applicability.**

Mitigation pursuant to this section shall be applied to any Resource whose Lead Market Participant is determined to be a pivotal supplier.

**III.A.5.5.3.2. Conduct Test.**

A Resource shall fail the conduct test for general threshold commitment mitigation if any Start-Up Fee or No-Load Fee exceeds the Reference Level for that fee by 200% or more.

**III.A.5.5.3.3. Consequence of Failing Conduct Test.**

If a Resource fails the general threshold commitment conduct test, it shall be evaluated for commitment based on an offer with all financial parameters of its Supply Offer set to their Reference Levels, including all offer blocks and all types of Start-Up Fees and the No-Load Fee. If a Resource is committed, then all financial parameters of its Supply Offer are set to their Reference Levels.

**III.A.5.5.4. Constrained Area Commitment Mitigation.**

**III.A.5.5.4.1. Applicability.**

Mitigation pursuant to this section shall be applied to any Resource determined to be within a constrained area in the Real-Time Energy Market.

**III.A.5.5.4.2. Conduct Test.**

A Resource shall fail the conduct test for constrained area commitment mitigation if any Start-Up Fee or the No-Load Fee is submitted with an increase greater than 25% above the Reference Level.

**III.A.5.5.4.3. Consequence of Failing Test.**

If a Supply Offer fails the constrained area commitment conduct test, it shall be evaluated for commitment based on an offer with all financial parameters set to their Reference Levels. This includes all energy offer blocks and all types of Start-Up Fees and the No-Load Fee. If a Resource is committed, then all financial parameters of its Supply Offer are set to their Reference Levels.

**III.A.5.5.5. Local Reliability Commitment Mitigation.**

**III.A.5.5.5.1. Applicability.**

Mitigation pursuant to this section shall be applied to Supply Offers for Resources that are committed to provide, or Resources that are required to remain online to provide, one or more of the following:

- (a) local first contingency protection or local second contingency protections;
- (b) VAR or voltage support; or
- (c) Special Constraint Resource Service

**III.A.5.5.5.2. Minimum Run Time Conduct Test.**

All financial parameters of Supply Offers will be evaluated using the following formula:  
(Low Load Cost Minimum Run Time at Offer – Low Load Cost Minimum Run Time at Reference Level) = < Commitment Cost Threshold

Where,

Commitment Cost Threshold = 0.1 times Low Load Cost at Reference Level.

Low Load Cost = the cost of operating the Resource at its Economic Minimum Limit calculated using the following formula:



$(\text{Cold Start-Up Fee} + (\text{No Load Fee} * \text{Minimum Run Time}) + (\text{Price of Energy at Economic Minimum Limit} * \text{Economic Minimum Limit} * \text{Minimum Run Time}))$

Low Load Cost Minimum Run Time at Offer = Low Load Cost calculated with financial parameters of the Supply Offer.

Low Load Cost Minimum Run Time at Reference Level = Low Load Cost calculated with the financial parameters of the Supply Offer set to Reference Levels.

Price of Energy at Economic Minimum Limit = the price for energy at the Resource's Economic Minimum Limit.

For Low Load Cost Minimum Run Time at Offer, the price for energy is the energy price parameter from the Supply Offer. For Low Load Cost Minimum Run Time at Reference Level, the Reference Level of the offer block at Economic Minimum Limit is used.

If a Resource's combined Minimum Run Time and Minimum Down Time exceed 24 hours, then the conduct test will use the greater of 24 hours or the Resource's Minimum Run Time for the Minimum Run Time.

If the (Low Load Cost Minimum Run Time at Offer – Low Load Cost Minimum Run Time at Reference Level) is greater than the Commitment Cost Threshold, then the conduct test is violated.

#### **III.A.5.5.5.3. Actual Run Time Conduct Test.**

If the Supply Offer for a Resource does not violate the conduct test in Section III.A.5.5.5.2, then all financial parameters of the Supply Offer will be evaluated using the following formula:

$(\text{Low Load Cost Actual Run Time at Offer} - \text{Low Load Cost Actual Run Time at Reference Level}) = < \text{Commitment Cost Threshold}$

Where,

Commitment Cost Threshold = 0.1 times Low Load Cost Actual Run Time at Reference Level.

Low Load Cost Actual Run Time = the cost of operating the Resource at its Economic Minimum Limit calculated using the following formula:

Cold Start-Up Fee + (No Load Fee \* actual local reliability run time) + (Price of Energy at Economic Minimum Limit \* Economic Minimum Limit \* actual local reliability run time), where

actual local reliability run time is the number of hours the Resource was operated in the Real-Time Energy Market to provide one or more of the services specified in Section III.A.5.5.5.1.

Low Load Cost Actual Run Time at Offer = Low Load Cost Actual Run Time calculated with financial parameters of the Supply Offer.

Low Load Cost Actual Run Time at Reference Level = Low Load Cost Actual Run Time calculated with the financial parameters of the Supply Offer set to Reference Levels.

Price of Energy at Economic Minimum Limit = the price for energy at the Resource's Economic Minimum Limit as reflected in the Supply Offer for the Resource.

For Low Load Cost Actual Run Time at Offer, the price for energy is the energy price parameter from the Supply Offer. For Low Load Cost Actual Run Time at Reference Level, the Reference Level of the offer block at Economic Minimum Limit is used.

If the (Low Load Cost Actual Run Time at Offer – Low Load Cost Actual Run Time at Reference Level) is greater than the Commitment Cost Threshold, then the conduct test is violated.

#### **III.A.5.5.5.4. Consequence of Failing Test.**

If a Supply Offer fails the local reliability commitment minimum run time conduct test specified in Section III.A.5.5.5.2, it shall be evaluated for commitment based on an offer with all financial parameters set to their Reference Levels. This includes all offer blocks and all types of Start-Up

Fees and the No-Load Fee. If a Resource is committed, then all financial parameters of its Supply Offer are set to their Reference Level.

If a Supply Offer fails the local reliability commitment actual run time conduct test specified in Section III.A.5.5.3, then all financial parameters of the Supply Offer are set to their Reference Level for purposes of calculating Day-Ahead Energy Market and Real-Time Energy Market revenues.

#### **III.A.5.6. Duration of Energy Threshold Mitigation.**

Any mitigation imposed pursuant to Sections III.A.5.5.1 “General Threshold Energy Mitigation” or III.A.5.5.2 “Constrained Area Threshold Energy Mitigation” is in effect for the following duration:

- (a) in the Real-Time Energy Market, mitigation starts when the impact test violation occurs and remains in effect until there is one complete hour in which:
  - (i) for general threshold mitigation, the Market Participant whose Supply Offer is subject to mitigation is not a pivotal supplier; or,
  - (ii) for constrained area energy mitigation, the Resource is not located within a constrained area.
- (b) in the Day-Ahead Energy Market, mitigation is in effect in each hour in which the impact test is violated.

#### **III.A.5.7. Duration of Commitment Mitigation.**

Any mitigation imposed pursuant to Sections III.A.5.5.3 “General Threshold Commitment Mitigation”, III.A.5.5.4 “Constrained Area Commitment Mitigation”, or III.A.5.5.5 “Local Reliability Commitment Mitigation” is in effect for the following duration:

- (a) in the Real-Time Energy Market, mitigation starts either;
  - a. on the first hour a Resource is directed to remain on-line by the ISO or;
  - b. in all other cases, at the time of the decision to commit the Resource.
- (b) in the Day-Ahead Energy Market, mitigation starts at the beginning of the Operating Day, and;
- (c) for both the Real-Time Energy Market and Day-Ahead Energy Market, mitigation remains in effect:
  - (i) for mitigation imposed pursuant to Sections III.A.5.5.3 or III.A.5.5.4, through the end of the Resource’s Minimum Run Time; and,

- (ii) for mitigation imposed pursuant to Section III.A.5.5.5, through the end of the Resource's Minimum Run Time or through the end of the period that the Resource is needed for reliability, whichever is later.

#### **III.A.5.8. Correction of Mitigation.**

If the Internal Market Monitor determines that there are one or more errors in the mitigation applied in an Operating Day due to data entry, system or software errors by the ISO or the Internal Market Monitor, the Internal Market Monitor shall notify the market monitoring contacts specified by the Lead Market Participant within five business days of the applicable Operating Day. The ISO shall correct the error as part of the Data Reconciliation Process by applying the correct values to the relevant Supply Offer in the settlement process.

The permissibility of correction of errors in mitigation, and the timeframes and procedures for permitted corrections, are addressed solely in this section and not in those sections of Market Rule 1 relating to settlement and billing processes.

#### **III.A.5.9. Delay of Day-Ahead Energy Market Due to Mitigation Process.**

The posting of the Day-Ahead Energy Market results may be delayed if necessary for the completion of mitigation procedures.

#### **III.A.6. Physical Parameter Offer Thresholds.**

Physical parameters of a Supply Offer are limited to thresholds specified in this section. Physical parameters are limited by the software accepting offers, except those that can be re-declared in real time during the Operating Day. Parameters that exceed the thresholds specified here but are not limited through the software accepting offers are subject to Internal Market Monitor review after the Operating Day and possible referral to the Commission under Section III.A.19 of this Appendix.

##### **III.A.6.1. Time-Based Offer Parameters.**

Supply Offer parameters that are expressed in time (i.e., minimum run time, minimum down time, start time, and notification time) shall have a threshold of two hours for an individual parameter or six hours for the combination of the time-based offer parameters compared to the Resource's Reference Levels. Offers may not exceed these thresholds in a manner that reduce the flexibility of the Resource. To determine if the six hour threshold is exceeded, all time-based offer parameters will be summed for each start-up state (hot, intermediate and cold). If the sum of the time-based offer parameters for a start-up

state exceeds six hours above the sum of the Reference Levels for those offer parameters, then the six hour threshold is exceeded.

**III.A.6.1.1. Other Offer Parameters.**

Non-financial or non-time-based offer parameters shall have a threshold of a 100% increase, or greater, for parameters that are minimum values, or a 50% decrease, or greater, for parameters that are maximum values (including, but not limited to, ramp rates, Economic Maximum Limits and maximum starts per day) compared to the Resource's Reference Levels.

Offer parameters that are limited by performance caps or audit values imposed by the ISO are not subject to the provisions of this section.

**III.A.7. Calculation of Resource Reference Levels for Physical Parameters and Financial Parameters of Resources.**

**III.A.7.1. Methods for Determining Reference Levels for Physical Parameters.**

The Internal Market Monitor will calculate a Reference Level for each element of a bid or offer that is expressed in units other than dollars (such as time-based or quantity level bid or offer parameters) on the basis of one or more of the following:

- (a) Original equipment manufacturer (OEM) operating recommendations and performance data for all Resource types in the New England Control Area, grouped by unit classes, physical parameters and fuel types.
- (b) Applicable environmental operating permit information currently on file with the issuing environmental regulatory body.
- (c) Verifiable Resource physical operating characteristic data, including but not limited to facility and/or Resource operating guides and procedures, historical operating data and any verifiable documentation related to the Resource, which will be reviewed in consultation with the Market Participant.

**III.A.7.2. Methods for Determining Reference Levels for Financial Parameters of Supply Offers.**

The Reference Levels for Start-Up Fees, No-Load Fees, and offer blocks will be calculated separately and assuming no costs from one component are included in another component.

### **III.A.7.2.1. Order of Reference Level Calculation.**

The Internal Market Monitor will calculate a Reference Level for each offer block of a Supply Offer according to the following hierarchy, under which the first method that can be calculated is used:

- (a) accepted offer-based Reference Levels pursuant to Section III.A.7.3;
- (b) LMP-based Reference Levels pursuant to Section III.A.7.4; and,
- (c) cost-based Reference Levels pursuant to Section III.A.7.5.

### **III.A.7.2.2. Circumstances in Which Cost-Based Reference Levels Supersede the Hierarchy of Reference Level Calculation.**

In the following circumstances, cost-based Reference Levels shall be used notwithstanding the hierarchy specified in Section III.A.7.2.1.

- (a) The cost-based Reference Level is higher than either the accepted offer-based or LMP-based Reference Level.
- (b) The Supply Offer parameter is a Start-Up Fee or the No-Load Fee.
- (c) The Lead Market Participant requests the cost-based Reference Level.
- (d) During the previous 90 days:
  - (i) the Resource has been flagged for VAR, SCR, or as a Local Second Contingency Protection Resource for any hour in the Day-Ahead Energy Market or the Real-Time Energy Market, and;
  - (ii) the ratio of the sum of the operating hours for days for which the Resource has been flagged during the previous 90 days in which the number of hours operated out of economic merit order in the Day-Ahead Energy Market and the Real-Time Energy Market exceed the number of hours operated in economic merit order in the Day-Ahead Energy Market and Real-Time Energy Market, to the total number of operating hours in the Day-Ahead Energy Market and Real-Time Energy Market during the previous 90 days is greater than or equal to 50 percent.

For the purposes of this subsection:

- i. A flagged day is any day in which the Resource has been flagged for VAR, SCR, or as a Local Second Contingency Protection Resource for any hour in either the Day-Ahead Energy Market or the Real-Time Energy Market.

- ii. Operating hours are the hours in the Day-Ahead Energy Market for which a Resource has cleared output (MW) greater than zero and hours in the Real-Time Energy Market for which a Resource has metered output (MW) greater than zero. For days for which Real-time Energy Market metered values are not yet available in the ISO's or the Internal Market Monitor's systems, telemetered values will be used.
- iii. Self-scheduled hours will be excluded from all of the calculations described in this subsection, including the determination of operating hours.
- iv. The determination as to whether a Resource operated in economic merit order during an hour will be based on the energy offer block within which the Resource is operating.

#### **III.A.7.3. Accepted Offer-Based Reference Level.**

The Internal Market Monitor shall calculate the accepted offer-based Reference Level as the lower of the mean or the median of a generating Resource's Supply Offers that have been accepted and are part of the seller's Day-Ahead Generation Obligation or Real-Time Generation Obligation in competitive periods over the previous 90 days, adjusted for changes in fuel prices utilizing fuel indices generally applicable for the location and type of Resource. For purposes of this section, a competitive period is an Operating Day in which the Resource is scheduled in economic merit order.

#### **III.A.7.4. LMP-Based Reference Level.**

The Internal Market Monitor shall calculate the LMP-based Reference Level as the mean of the LMP at the Resource's Node during the lowest-priced 25% of the hours that the Resource was dispatched over the previous 90 days for similar days (weekday or weekend day), adjusted for changes in fuel prices.

#### **III.A.7.5. Cost-Based Reference Level.**

The Internal Market Monitor shall calculate cost-based Reference Levels taking into account information on costs provided by the Market Participant through the consultation process prescribed in Section III.A.3.

The following criteria shall be applied to estimates of cost:

- (a) The provision of cost estimates by a Market Participant shall conform with the timing and requirements of Section III.A.3 "Consultation Prior to Determination of Reference Levels for Physical and Financial Parameters of Resources".

- (b) Costs must be documented.
- (c) All cost estimates shall be based on estimates of current market prices or replacement costs and not inventory costs wherever possible.
- (d) When market prices or replacement costs are unavailable, cost estimates shall identify whether the reported costs are the result of a product or service provided by an Affiliate of the Market Participant.
- (e) The Internal Market Monitor will evaluate cost information provided by the Market Participant in comparison to other information available to the Internal Market Monitor.

#### **III.A.7.5.1. Estimation of Incremental Operating Cost.**

The Internal Market Monitor's determination of a Resource's marginal costs shall include an assessment of the Resource's incremental operating costs in accordance with the following formulas,

Incremental Energy:

$(\text{incremental heat rate} * \text{fuel costs}) + (\text{emissions rate} * \text{emissions allowance price}) + \text{variable operating and maintenance costs} + \text{opportunity costs.}$

Opportunity costs may include, but are not limited to, economic costs associated with complying with:

- (a) emissions limits;
- (b) water storage limits; and,
- (c) other operating permits that limit production of energy.

No-Load:

$(\text{no-load fuel use} * \text{fuel costs}) + (\text{no-load emissions} * \text{emission allowance price})$   
+ no-load variable operating and maintenance costs + other no-load costs that are not fuel, emissions or variable and maintenance costs.

Start-Up:

$(\text{start-up fuel use} * \text{fuel costs}) + (\text{start-up emissions} * \text{emission allowance price}) + \text{start-up variable and maintenance costs} + \text{other start-up costs that are not fuel, emissions or variable and maintenance costs.}$



### **III.A.8. Determination of Offer Competitiveness During Shortage Event.**

The Internal Market Monitor shall evaluate the competitiveness of the Supply Offer of each Resource with a Capacity Supply Obligation that is off-line during a Shortage Event, as described below. The evaluation for competitiveness shall be performed on Supply Offers in the Day-Ahead Energy Market and Supply Offers made during the Re-Offer Period. A determination of non-competitiveness for a Day-Ahead Energy Market Supply Offer or a Supply Offer made during the Re-Offer Period which affects an hour shall constitute a finding of non-competitiveness for that hour.

- (a) The thresholds used for evaluation shall be the general thresholds in Sections III.A.5.5.1 and III.A.5.5.3 unless the constrained area mitigation thresholds apply in the Day-Ahead Energy Market or Real-Time Energy Market and the resource under evaluation could have fully or partially relieved the constraint during the applicable Shortage Event. If the constrained area mitigation thresholds apply, then the energy price Supply Offer parameter and the Start-Up Fee and No-Load Fee parameters shall be evaluated for competitiveness using the thresholds in Sections III.A.5.5.2 and III.A.5.5.4.
- (b) If the value of any of the following Supply Offer parameters for a resource exceeds the relevant thresholds for an hour, all MW for the resource for the hour shall be non-competitive:
  - (i) The Start-Up Fees and No-Load Fee;
  - (ii) Each time-based Supply Offer parameter;
  - (iii) The energy price Supply Offer parameter up to and including the Economic Minimum Limit.
- (c) If none of the parameters evaluated for competitiveness pursuant to Section III.A.8 (b) above are non-competitive for an hour, then the energy price parameter for each incremental Supply Offer block above the resource's Economic Minimum Limit shall be evaluated for competitiveness using the thresholds identified in Section III.A.8 (a) above, in order of lowest energy price to highest energy price. If any Supply Offer block is non-competitive, then that block and all blocks above it shall be non-competitive, and all blocks below it shall be competitive.

### **III.A.9. Regulation.**

The Internal Market Monitor will monitor the Regulation market for conduct that it determines constitutes an abuse of market power. If the Internal Market Monitor identifies any such conduct, it may make a filing under Section 205 of the Federal Power Act with the Commission requesting authorization to apply appropriate mitigation measures or to revise Market Rule 1 to address such conduct (or both). The Internal Market Monitor may make such a filing at any time it deems necessary, and may request expedited treatment from the Commission. Any such filing shall identify the particular conduct the

Internal Market Monitor believes warrants mitigation or revisions to Market Rule 1 (or both), shall propose a specific mitigation measure for the conduct or revision to Market Rule 1 (or both), and shall set forth the Internal Market Monitor's justification for imposing that mitigation measure or revision to Market Rule 1 (or both).

### **III.A.10. Demand Bids.**

The Internal Market Monitor will monitor Demand Resources as outlined below:

- (a) LMPs in the Day-Ahead Energy Market and Real-Time Energy Market shall be monitored to determine whether there is a persistent hourly deviation in any location that would not be expected in a workably competitive market.
- (b) The Internal Market Monitor shall compute the average hourly deviation between Day-Ahead Energy Market and Real-Time Energy Market LMPs, measured as:  $(LMP_{\text{real time}} / LMP_{\text{day ahead}}) - 1$ . The average hourly deviation shall be computed over a rolling four-week period or such other period determined by the Internal Market Monitor.
- (c) The Internal Market Monitor shall estimate and monitor the average percentage of each Market Participant's bid to serve load scheduled in the Day-Ahead Energy Market, using a methodology intended to identify a sustained pattern of under-bidding as accurately as deemed practicable. The average percentage will be computed over a specified time period determined by the Internal Market Monitor.

If the Internal Market Monitor determines that: (i) The average hourly deviation is greater than ten percent (10%) or less than negative ten percent (-10%), (ii) one or more Market Participants on behalf of one or more LSEs have been purchasing a substantial portion of their loads with purchases in the Real-Time Energy Market, (iii) this practice has contributed to an unwarranted divergence of LMPs between the two markets, and (iv) this practice has created operational problems, the Internal Market Monitor may make a filing under Section 205 of the Federal Power Act with the Commission requesting authorization to apply appropriate mitigation measures or to revise Market Rule 1 to address such conduct (or both). The thresholds identified above shall not limit the Internal Market Monitor's authority to make such a filing. The Internal Market Monitor may make such a filing at any time it deems necessary, and may request expedited treatment from the Commission. Any such filing shall identify the particular conduct that the Internal Market Monitor believes warrants mitigation or revisions to Market Rule 1 (or both), shall propose a specific mitigation measure for the conduct or revision to Market Rule 1 (or both), and

shall set forth the Internal Market Monitor's justification for imposing that mitigation measure or revision to Market Rule 1 (or both).

### **III.A.11. Mitigation of Increment Offers and Decrement Bids.**

#### **III.A.11.1. Purpose.**

The provisions of this section specify the market monitoring and mitigation measures applicable to Increment Offers and Decrement Bids. An Increment Offer is one to supply energy and a Decrement Bid is one to purchase energy, in either such case not being backed by physical load or generation and submitted in the Day-Ahead Energy Market in accordance with the procedures and requirements specified in Market Rule 1 and the ISO New England Manuals.

#### **III.A.11.2. Implementation.**

##### **III.A.11.2.1. Monitoring of Increment Offers and Decrement Bids.**

Day-Ahead LMPs and Real-Time LMPs in each Load Zone or Node, as applicable, shall be monitored to determine whether there is a persistent hourly deviation in the LMPs that would not be expected in a workably competitive market. The Internal Market Monitor shall compute the average hourly deviation between Day-Ahead LMPs and Real-Time LMPs, measured as:

$$(\text{LMP}_{\text{real time}} / \text{LMP}_{\text{day ahead}}) - 1.$$

The average hourly deviation shall be computed over a rolling four-week period or such other period determined by the Internal Market Monitor to be appropriate to achieve the purpose of this mitigation measure.

#### **III.A.11.3. Mitigation Measures.**

If the Internal Market Monitor determines that (i) the average hourly deviation computed over a rolling four week period is greater than ten percent (10%) or less than negative ten percent (-10%), and (ii) the bid and offer practices of one or more Market Participants has contributed to a divergence between LMPs in the Day-Ahead Energy Market and Real-Time Energy Market, then the following mitigation measure may be imposed:

The Internal Market Monitor may limit the hourly quantities of Increment Offers for supply or Decrement Bids for load that may be offered in a Location by a Market Participant, subject to the following provisions:

- (i) The Internal Market Monitor shall, when practicable, request explanations of the relevant bid and offer practices from any Market Participant submitting such bids.
- (ii) Prior to imposing a mitigation measure, the Internal Market Monitor shall notify the affected Market Participant of the limitation.
- (iii) The Internal Market Monitor, with the assistance of the ISO, will restrict the Market Participant for a period of six months from submitting any virtual transactions at the same Node(s), and/or electrically similar Nodes to, the Nodes where it had submitted the virtual transactions that contributed to the unwarranted divergence between the LMPs in the Day-Ahead Energy Market and Real-Time Energy Market.

#### **III.A.11.4. Monitoring and Analysis of Market Design and Rules.**

The Internal Market Monitor shall monitor and assess the impact of Increment Offers and Decrement Bids on the competitive structure and performance, and the economic efficiency of the New England Markets. Such monitoring and assessment shall include the effects, if any, on such bids and offers of any mitigation measures specified in this Market Rule 1.

#### **III.A.12. Cap on FTR Revenues.**

If a holder of an FTR between specified delivery and receipt Locations (i) had an Increment Offer and/or Decrement Bid that was accepted by the ISO for an applicable hour in the Day-Ahead Energy Market for delivery or receipt at or near delivery or receipt Locations of the FTR; and (ii) the result of the acceptance of such Increment Offer or Decrement Bid is that the difference in LMP in the Day-Ahead Energy Market between such delivery and receipt Locations is greater than the difference in LMP between such delivery and receipt Locations in the Real-Time Energy Market, then the Market Participant shall not receive any Transmission Congestion Credit associated with such FTR in such hour, in excess of one divided by the number of hours in the applicable month multiplied by the amount originally paid for the FTR in the FTR Auction. A Location shall be considered at or near the FTR delivery or receipt Location if seventy-five % or more of the energy injected or withdrawn at that Location and which is withdrawn or injected at another Location is reflected in the constrained path between the subject FTR delivery and receipt Locations that were acquired in the FTR Auction.

#### **III.A.13. Additional Internal Market Monitor Functions Specified in Tariff.**

##### **III.A.13.1. Review of Offers and Bids in the Forward Capacity Market.**

In accordance with the following provisions of Section III.13 of Market Rule 1, the Internal Market Monitor is responsible for reviewing certain bids and offers made in the Forward Capacity Market. Section III.13 of Market Rule 1 specifies the nature and detail of the Internal Market Monitor's review and the consequences that will result from the Internal Market Monitor's determination following such review.

- (a) [Reserved].
- (b) Section III.13.1.2.2.5.2 "Requirements for an Existing Generating Capacity Resource, Existing Demand Resource or Existing Import Capacity Resource Having a Higher Summer Qualified Capacity than Winter Qualified Capacity."
- (c) Section III.13.1.2.3.2 "Review by Internal Market Monitor of Bids from Existing Generating Capacity Resources."
- (d) Section III.13.1.3.5.6 "Review by Internal Market Monitor of Offers from New Import Capacity Resources and Existing Import Capacity."
- (e) Section III.13.1.7 "Internal Market Monitor Review of Offers and Bids."

**III.A.13.2. Supply Offers and Demand Bids Submitted for Reconfiguration Auctions in the Forward Capacity Market.**

Section III.13.4 of Market Rule 1 addresses reconfiguration auctions in the Forward Capacity Market. As addressed in Section III.13.4.2 of Market Rule 1, a supply offer or demand bid submitted for a reconfiguration auction shall not be subject to mitigation by the Internal Market Monitor.

**III.A.13.3. Monitoring of Transmission Facility Outage Scheduling.**

*Appendix G* of Market Rule 1 addresses the scheduling of outages for transmission facilities. The Internal Market Monitor shall monitor the outage scheduling activities of the Transmission Owners. The Internal Market Monitor shall have the right to request that each Transmission Owner provide information to the Internal Market Monitor concerning the Transmission Owner's scheduling of transmission facility outages, including the repositioning or cancellation of any interim approved or approved outage, and the Transmission Owner shall provide such information to the Internal Market Monitor in accordance with the ISO New England Information Policy.

**III.A.13.4. Monitoring of Forward Reserve Resources.**

The Internal Market Monitor will receive information that will identify Forward Reserve Resources, the Forward Reserve Threshold Price, and the assigned Forward Reserve Obligation. Prior to mitigation of

Supply Offers or Demand Bids associated with a Forward Reserve Resource, the Internal Market Monitor shall consult with the Market Participant in accordance with Section III.A.3 of this *Appendix A*. The Internal Market Monitor and the Market Participant shall consider the impact on meeting any Forward Reserve Obligations in those consultations. If mitigation is imposed, any mitigated offers shall be used in the calculation of qualifying megawatts under Section III.9.6.4 of Market Rule 1.

**III.A.13.5. Imposition of Sanctions.**

*Appendix B* of Market Rule 1 sets forth the procedures and standards under which sanctions may be imposed for certain violations of Market Participants' obligations under the ISO New England Filed Documents and other ISO New England System Rules. The Internal Market Monitor shall administer *Appendix B* in accordance with the provisions thereof.

**III.A.14. Treatment of Supply Offers for Resources Subject to a Cost-of-Service Agreement.**

Article 5 of the form of Cost-of-Service Agreement in *Appendix I* to Market Rule 1 addresses the monitoring of resources subject to a cost-of-service agreement by the Internal Market Monitor and External Market Monitor. Pursuant to Section 5.2 of Article 5 of the Form of Cost-of-Service Agreement, after consultation with the Lead Participant, Supply Offers that exceed Stipulated Variable Cost as determined in the agreement are subject to adjustment by the Internal Market Monitor to Stipulated Variable Cost.

**III.A.15. Request for Additional Cost Recovery.**

**III.A.15.1. Filing Right.**

If

- (a) mitigation has been applied to a Resource under this Appendix A for all or part of one or more Operating Days, or
- (b) in the absence of mitigation, a Market Participant submitted a Supply Offer at the energy offer cap specified in Section III.1.10.1.A(d) of Market Rule 1 for a Resource, or
- (c) at the direction of the ISO a Market Participant has adjusted the output of a Resource to an amount that exceeds the amount scheduled for the Resource in the Day-Ahead Energy

Market to address a critical reliability issue that has resulted in the ISO declaring an abnormal conditions alert for one of the reasons specified in Section III.A.15.1.1 below,

and as a result of the action in (a) or (c), or despite the action in (b), the Market Participant believes that it will not recover the fuel and variable operating and maintenance costs of the Resource for those Operating Days, the Market Participant may, within sixty days of the receipt of the first Invoice issued containing credits or charges for the applicable Operating Day, submit a filing to the Commission seeking recovery of those costs pursuant to Section 205 of the Federal Power Act.

A request under this Section III.A.15 may seek recovery of additional costs incurred during the following periods: (a) if as a result of mitigation, costs incurred for the duration of the mitigation event, (b) if as a result of having submitted a Supply Offer at the energy offer cap, costs incurred for the duration of the period of time for which the Resource was operated at the energy offer cap, and (c) if as a result of being operated to address a critical reliability issue that has resulted in the ISO declaring an abnormal conditions alert, for the duration of the period of time when the Resource was required to operate to address the critical reliability issue, but only for the amount by which the actual incremental costs of operating the Resource in excess of the amount scheduled in the Day-Ahead Energy Market exceeded the incremental costs as reflected in the Supply Offer.

**III.A.15.1.1. Basis for declaration of an abnormal conditions alert.**

- (a) Forecasted or actual deficiency of operating reserves requiring implementation of ISO New England Operating Procedure No. 4, Action During a Capacity Deficiency, or ISO New England Operating Procedure No. 7, Action in an Emergency.
- (b) The electric system in New England experiences low transmission voltages and/or low reactive reserves.
- (c) A solar magnetic disturbance occurs.
- (d) A cold weather event is declared.
- (e) Inability to provide first contingency protection when an undesirable post-contingency condition might result, such as load shedding.

- (f) A credible threat to power system reliability is made, such as sabotage or an approaching storm.
- (g) Operational staffing shortage impacting normal power system operations within New England occurs.
- (h) Any other condition that may cause a critical reliability issue as determined by the ISO's operations shift supervisor or the Local Control Center system operator.

For purposes of this Section III.A.15, declaring an action of ISO New England Operating Procedure No.4 or ISO New England Operating Procedure No. 7 shall be treated as declaring an abnormal conditions alert.

**III.A.15.2. Contents of Filing.**

Any Section 205 filing made pursuant to this section shall include: (i) the actual fuel and variable operating and maintenance costs for the Resource for the applicable Operating Days, with supporting data and calculations for those costs; (ii) an explanation of (a) why the actual costs of operating the Resource for the Operating Days exceeded the Reference Level costs or, (b) in the absence of mitigation, why the actual costs of operating the Resource for the Operating Days exceeded the costs as reflected in the Supply Offer at the energy offer cap; or, (c) why the actual incremental costs of operating the Resource in excess of the amount scheduled in the Day-Ahead Market, during the time period for which the ISO has declared an abnormal conditions alert for the Operating Day, exceeded in the incremental costs as reflected in the supply Offer; (iii) the Internal Market Monitor's written explanation provided pursuant to Section III.A.15.3; and (iv) all requested regulatory costs in connection with the filing.

**III.A.15.3. Review by Internal Market Monitor Prior to Filing.**

Within twenty days of the receipt of the first Invoice containing credits or charges for the applicable Operating Day, a Market Participant that intends to make a Section 205 filing pursuant to this Section III.A.15 shall submit to the Internal Market Monitor the information and explanation detailed in Section III.A.15.2 (i) and (ii) that is to be included in the Section 205 filing. Within twenty days of the receipt of a completed submittal, the Internal Market Monitor shall provide a written explanation of the events that resulted in the Section III.A.15 request for additional cost recovery. The Market Participant shall include the Internal Market Monitor's written explanation in the Section 205 filing made pursuant to this Section III A.15.



#### **III.A.15.4. Cost Allocation.**

In the event that the Commission accepts a Market Participant's filing for cost recovery under this section, the ISO shall allocate charges to Market Participants for payment of those costs in accordance with the cost allocation provisions of Market Rule 1 that otherwise would apply to payments for the services provided based on the Resource's actual dispatch for the Operating Days in question.

#### **III.A.16. ADR Review of Internal Market Monitor Mitigation Actions.**

##### **III.A.16.1. Actions Subject to Review.**

A Market Participant may obtain prompt Alternative Dispute Resolution ("ADR") review of any Internal Market Monitor mitigation imposed on a Resource as to which that Market Participant has bidding or operational authority. A Market Participant must seek review pursuant to the procedure set forth in *Appendix D* to this Market Rule 1, but in all cases within the time limits applicable to billing adjustment requests. These deadlines are currently specified in the ISO New England Manuals. Actions subject to review are:

- Imposition of a mitigation remedy.
- Continuation of a mitigation remedy as to which a Market Participant has submitted material evidence of changed facts or circumstances. (Thus, after a Market Participant has unsuccessfully challenged imposition of a mitigation remedy, it may challenge the continuation of that mitigation in a subsequent ADR review on a showing of material evidence of changed facts or circumstances.)

##### **III.A.16.2. Standard of Review.**

On the basis of the written record and the presentations of the Internal Market Monitor and the Market Participant, the ADR Neutral shall review the facts and circumstances upon which the Internal Market Monitor based its decision and the remedy imposed by the Internal Market Monitor. The ADR Neutral shall remove the Internal Market Monitor's mitigation only if it concludes that the Internal Market Monitor's application of the Internal Market Monitor mitigation policy was clearly erroneous. In considering the reasonableness of the Internal Market Monitor's action, the ADR Neutral shall consider whether adequate opportunity was given to the Market Participant to present information, any voluntary remedies proposed by the Market Participant, and the need of the Internal Market Monitor to act quickly to preserve competitive markets.

#### **III.A.17. Reporting.**

### **III.A.17.1. Data Collection and Retention.**

Market Participants shall provide the Internal Market Monitor and External Market Monitor with any and all information within their custody or control that the Internal Market Monitor or External Market Monitor deems necessary to perform its obligations under this *Appendix A*, subject to applicable confidentiality limitations contained in the ISO New England Information Policy. This would include a Market Participant's cost information if the Internal Market Monitor or External Market Monitor deems it necessary, including start up, no-load and all other actual marginal costs, when needed for monitoring or mitigation of that Market Participant. Additional data requirements may be specified in the ISO New England Manuals. If for any reason the requested explanation or data is unavailable, the Internal Market Monitor and External Market Monitor will use the best information available in carrying out their responsibilities. The Internal Market Monitor and External Market Monitor may use any and all information they receive in the course of carrying out their market monitor and mitigation functions to the extent necessary to fully perform those functions.

Market Participants must provide data and any other information requested by the Internal Market Monitor that the Internal Market Monitor requests to determine:

- (a) the opportunity costs associated with Demand Reduction Offers;
- (b) the accuracy of Demand Response Baselines;
- (c) the method used to achieve a demand reduction, and;
- (d) the accuracy of reported demand levels.

### **III.A.17.2. Periodic Reporting by the ISO and Internal Market Monitor.**

#### **III.A.17.2.1. Monthly Report.**

The ISO will prepare a monthly report, which will be available to the public both in printed form and electronically, containing an overview of the market's performance in the most recent period.

#### **III.A.17.2.2. Quarterly Report.**

The Internal Market Monitor will prepare a quarterly report consisting of market data regularly collected by the Internal Market Monitor in the course of carrying out its functions under this *Appendix A* and analysis of such market data. Final versions of such reports shall be disseminated contemporaneously to the Commission, the ISO Board of Directors, the Market

Participants, and state public utility commissions for each of the six New England states, provided that in the case of the Market Participants and public utility commissions, such information shall be redacted as necessary to comply with the ISO New England Information Policy. The format and content of the quarterly reports will be updated periodically through consensus of the Internal Market Monitor, the Commission, the ISO, the public utility commissions of the six New England States and Market Participants. The entire quarterly report will be subject to confidentiality protection consistent with the ISO New England Information Policy and the recipients will ensure the confidentiality of the information in accordance with state and federal laws and regulations. The Internal Market Monitor will make available to the public a redacted version of such quarterly reports. The Internal Market Monitor, subject to confidentiality restrictions, may decide whether and to what extent to share drafts of any report or portions thereof with the Commission, the ISO, one or more state public utility commission(s) in New England or Market Participants for input and verification before the report is finalized. The Internal Market Monitor shall keep the Market Participants informed of the progress of any report being prepared pursuant to the terms of this *Appendix A*.

#### **III.A.17.2.3. Reporting on General Performance of the Forward Capacity Market.**

The performance of the Forward Capacity Market, including reconfiguration auctions, shall be subject to the review of the Internal Market Monitor. No later than 180 days after the completion of the second Forward Capacity Auction, the Internal Market Monitor shall file with the Commission and post to the ISO's website a full report analyzing the operations and effectiveness of the Forward Capacity Market. Thereafter, the Internal Market Monitor shall report on the functioning of the Forward Capacity Market in its annual markets report in accordance with the provisions of Section III.A.17.2.4 of this *Appendix A*.

#### **III.A.17.2.4. Annual Review and Report by the Internal Market Monitor.**

The Internal Market Monitor will prepare an annual state of the market report on market trends and the performance of the New England Markets and will present an annual review of the operations of the New England Markets. The annual report and review will include an evaluation of the procedures for the determination of energy, reserve and regulation clearing prices, NCPC costs and the performance of the Forward Capacity Market and FTR Auctions. The review will include a public forum to discuss the performance of the New England Markets, the state of competition, and the ISO's priorities for the coming year. In addition, the Internal Market Monitor will arrange a non-public meeting open to appropriate state or federal government

agencies, including the Commission and state regulatory bodies, attorneys general, and others with jurisdiction over the competitive operation of electric power markets, subject to the confidentiality protections of the ISO New England Information Policy, to the greatest extent permitted by law.

### **III.A.17.3. Periodic Reporting by the External Market Monitor.**

The External Market Monitor will perform independent evaluations and prepare annual and ad hoc reports on the overall competitiveness and efficiency of the New England Markets or particular aspects of the New England Markets, including the adequacy of *Appendix A*. The External Market Monitor shall have the sole discretion to determine whether and when to prepare ad hoc reports and may prepare such reports on its own initiative or pursuant to requests by the ISO, state public utility commissions or one or more Market Participants. Final versions of such reports shall be disseminated contemporaneously to the Commission, the ISO Board of Directors, the Market Participants, and state public utility commissions for each of the six New England states, provided that in the case of the Market Participants and public utility commissions, such information shall be redacted as necessary to comply with the ISO New England Information Policy. Such reports shall, at a minimum, include:

- (i) Review and assessment of the practices, market rules, procedures, protocols and other activities of the ISO insofar as such activities, and the manner in which the ISO implements such activities, affect the competitiveness and efficiency of New England Markets.
- (ii) Review and assessment of the practices, procedures, protocols and other activities of any independent transmission company, transmission provider or similar entity insofar as its activities affect the competitiveness and efficiency of the New England Markets.
- (iii) Review and assessment of the activities of Market Participants insofar as these activities affect the competitiveness and efficiency of the New England Markets.
- (iv) Review and assessment of the effectiveness of *Appendix A* and the administration of *Appendix A* by the Internal Market Monitor for consistency and compliance with the terms of *Appendix A*.
- (v) Review and assessment of the relationship of the New England Markets with any independent transmission company and with adjacent markets.

The External Market Monitor, subject to confidentiality restrictions, may decide whether and to what extent to share drafts of any report or portions thereof with the Commission, the ISO, one or more state public utility commission(s) in New England or Market Participants for input and verification before the

report is finalized. The External Market Monitor shall keep the Market Participants informed of the progress of any report being prepared.

### **III.A.17.4. Other Internal Market Monitor or External Market Monitor Communications With Government Agencies.**

#### **III.A.17.4.1. Routine Communications.**

The periodic reviews are in addition to any routine communications the Internal Market Monitor or External Market Monitor may have with appropriate state or federal government agencies, including the Commission and state regulatory bodies, attorneys general, and others with jurisdiction over the competitive operation of electric power markets.

#### **III.A.17.4.2. Additional Communications.**

The Internal Market Monitor and External Market Monitor are not a regulatory or enforcement agency. However, they will monitor market trends, including changes in Resource ownership as well as market performance. In addition to the information on market performance and mitigation provided in the monthly, quarterly and annual reports the External Market Monitor or Internal Market Monitor shall:

- (a) Inform the jurisdictional state and federal regulatory agencies, as well as the Markets Committee, if the External Market Monitor or Internal Market Monitor determines that a market problem appears to be developing that will not be adequately remediable by existing market rules or mitigation measures;
- (b) If the External Market Monitor or Internal Market Monitor receives information from any entity regarding an alleged violation of law, refer the entity to the appropriate state or federal agencies;
- (c) If the External Market Monitor or Internal Market Monitor reasonably concludes, in the normal course of carrying out its monitoring and mitigation responsibilities, that certain market conduct constitutes a violation of law, report these matters to the appropriate state and federal agencies; and,
- (d) Provide the names of any companies subjected to mitigation under these procedures as well as a description of the behaviors subjected to mitigation and any mitigation remedies or sanctions applied.

#### **III.A.17.4.3. Confidentiality.**

Information identifying particular participants required or permitted to be disclosed to jurisdictional bodies under this section shall be provided in a confidential report filed under Section 388.112 of the Commission regulations and corresponding provisions of other jurisdictional agencies. The Internal Market Monitor will include the confidential report with the quarterly submission it provides to the Commission pursuant to Section III.A.17.2.2.

#### **III.A.17.5. Other Information Available from Internal Market Monitor and External Market Monitor on Request by Regulators.**

The Internal Market Monitor and External Market Monitor will normally make their records available as described in this paragraph to authorized state or federal agencies, including the Commission and state regulatory bodies, attorneys general and others with jurisdiction over the competitive operation of electric power markets (“authorized government agencies”). With respect to state regulatory bodies and state attorneys general (“authorized state agencies”), the Internal Market Monitor and External Market Monitor shall entertain information requests for information regarding general market trends and the performance of the New England Markets, but shall not entertain requests that are designed to aid enforcement actions of a state agency. The Internal Market Monitor and External Market Monitor shall promptly make available all requested data and information that they are permitted to disclose to authorized government agencies under the ISO New England Information Policy. Notwithstanding the foregoing, in the event an information request is unduly burdensome in terms of the demands it places on the time and/or resources of the Internal Market Monitor or External Market Monitor, the Internal Market Monitor or External Market Monitor shall work with the authorized government agency to modify the scope of the request or the time within which a response is required, and shall respond to the modified request.

The Internal Market Monitor and External Market Monitor also will comply with compulsory process, after first notifying the owner(s) of the items and information called for by the subpoena or civil investigative demand and giving them at least ten business days to seek to modify or quash the compulsory process. If an authorized government agency makes a request in writing, other than compulsory process, for information or data whose disclosure to authorized government agencies is not permitted by the ISO New England Information Policy, the Internal Market Monitor and External Market Monitor shall notify each party with an interest in the confidentiality of the information and shall process the request under the applicable provisions of the ISO New England Information Policy. Requests from the Commission for information or data whose disclosure is not permitted by the ISO New England Information Policy shall be processed under Section 3.2 of the ISO New England Information Policy.

Requests from authorized state agencies for information or data whose disclosure is not permitted by the ISO New England Information Policy shall be processed under Section 3.3 of the ISO New England Information Policy. In the event confidential information is ultimately released to an authorized state agency in accordance with Section 3.3 of the ISO New England Information Policy, any party with an interest in the confidentiality of the information shall be permitted to contest the factual content of the information, or to provide context to such information, through a written statement provided to the Internal Market Monitor or External Market Monitor and the authorized state agency that has received the information.

### **III.A.18. Ethical Conduct Standards.**

#### **III.A.18.1. Compliance with ISO New England Inc. Code of Conduct.**

The employees of the ISO that perform market monitoring and mitigation services for the ISO and the employees of the External Market Monitor that perform market monitoring and mitigation services for the ISO shall execute and shall comply with the terms of the ISO New England Inc. Code of Conduct attached hereto as *Exhibit 5*.

#### **III.A.18.2. Additional Ethical Conduct Standards.**

The employees of the ISO that perform market monitoring and mitigation services for the ISO and the employees of the External Market Monitor that perform market monitoring and mitigation services for the ISO shall also comply with the following additional ethical conduct standards. In the event of a conflict between one or more standards set forth below and one or more standards contained in the ISO New England Inc. Code of Conduct, the more stringent standard(s) shall control.

##### **III.A.18.2.1. Prohibition on Employment with a Market Participant.**

No such employee shall serve as an officer, director, employee or partner of a Market Participant.

##### **III.A.18.2.2. Prohibition on Compensation for Services.**

No such employee shall be compensated, other than by the ISO or, in the case of employees of the External Market Monitor, by the External Market Monitor, for any expert witness testimony or other commercial services, either to the ISO or to any other party, in connection with any legal or regulatory proceeding or commercial transaction relating to the ISO or the New England Markets.

### **III.A.18.2.3. Additional Standards Applicable to External Market Monitor.**

In addition to the standards referenced in the remainder of this Section 18 of *Appendix A*, the employees of the External Market Monitor that perform market monitoring and mitigation services for the ISO are subject to conduct standards set forth in the External Market Monitor Services Agreement entered into between the External Market Monitor and the ISO, as amended from time-to-time. In the event of a conflict between one or more standards set forth in the External Market Monitor Services Agreement and one or more standards set forth above or in the ISO New England Inc. Code of Conduct, the more stringent standard(s) shall control.

### **III.A.19. Protocols on Referral to the Commission of Suspected Violations.**

- (A) The Internal Market Monitor or External Market Monitor is to make a non-public referral to the Commission in all instances where the Internal Market Monitor or External Market Monitor has reason to believe that a Market Violation has occurred. While the Internal Market Monitor or External Market Monitor need not be able to prove that a Market Violation has occurred, the Internal Market Monitor or External Market Monitor is to provide sufficient credible information to warrant further investigation by the Commission. Once the Internal Market Monitor or External Market Monitor has obtained sufficient credible information to warrant referral to the Commission, the Internal Market Monitor or External Market Monitor is to immediately refer the matter to the Commission and desist from independent action related to the alleged Market Violation. This does not preclude the Internal Market Monitor or External Market Monitor from continuing to monitor for any repeated instances of the activity by the same or other entities, which would constitute new Market Violations. The Internal Market Monitor or External Market Monitor is to respond to requests from the Commission for any additional information in connection with the alleged Market Violation it has referred.
- (B) All referrals to the Commission of alleged Market Violations are to be in writing, whether transmitted electronically, by fax, mail or courier. The Internal Market Monitor or External Market Monitor may alert the Commission orally in advance of the written referral.
- (C) The referral is to be addressed to the Commission's Director of the Office of Enforcement, with a copy also directed to both the Director of the Office of Energy Market Regulation and the General Counsel.
- (D) The referral is to include, but need not be limited to, the following information
  - (1) The name(s) of and, if possible, the contact information for, the entity(ies) that allegedly took the action(s) that constituted the alleged Market Violation(s);



- (2) The date(s) or time period during which the alleged Market Violation(s) occurred and whether the alleged wrongful conduct is ongoing;
  - (3) The specific rule or regulation, and/or tariff provision, that was allegedly violated, or the nature of any inappropriate dispatch that may have occurred;
  - (4) The specific act(s) or conduct that allegedly constituted the Market Violation;
  - (5) The consequences to the market resulting from the acts or conduct, including, if known, an estimate of economic impact on the market;
  - (6) If the Internal Market Monitor or External Market Monitor believes that the act(s) or conduct constituted a violation of the anti-manipulation rule of Part 1c of the Commission's Rules and Regulations, 18 C.F.R. Part 1c, a description of the alleged manipulative effect on market prices, market conditions, or market rules;
  - (7) Any other information the Internal Market Monitor or External Market Monitor believes is relevant and may be helpful to the Commission.
- (E) Following a referral to the Commission, the Internal Market Monitor or External Market Monitor is to continue to notify and inform the Commission of any information that the Internal Market Monitor or External Market Monitor learns of that may be related to the referral, but the Internal Market Monitor or External Market Monitor is not to undertake any investigative steps regarding the referral except at the express direction of the Commission or Commission staff.

**III.A.20. Protocol on Referrals to the Commission of Perceived Market Design Flaws and Recommended Tariff Changes.**

- (A) The Internal Market Monitor or External Market Monitor is to make a referral to the Commission in all instances where the Internal Market Monitor or External Market Monitor has reason to believe market design flaws exist that it believes could effectively be remedied by rule or tariff changes. The Internal Market Monitor or External Market Monitor must limit distribution of its identifications and recommendations to the ISO and to the Commission in the event it believes broader dissemination could lead to exploitation, with an explanation of why further dissemination should be avoided at that time.
- (B) All referrals to the Commission relating to perceived market design flaws and recommended tariff changes are to be in writing, whether transmitted electronically, by fax, mail, or courier. The Internal Market Monitor or External Market Monitor may alert the Commission orally in advance of the written referral.

- (C) The referral should be addressed to the Commission’s Director of the Office of Energy Market Regulation, with copies directed to both the Director of the Office of Enforcement and the General Counsel.
- (D) The referral is to include, but need not be limited to, the following information.
- (1) A detailed narrative describing the perceived market design flaw(s);
  - (2) The consequences of the perceived market design flaw(s), including, if known, an estimate of economic impact on the market;
  - (3) The rule or tariff change(s) that the Internal Market Monitor or External Market Monitor believes could remedy the perceived market design flaw;
  - (4) Any other information the Internal Market Monitor or External Market Monitor believes is relevant and may be helpful to the Commission.
- (E) Following a referral to the Commission, the Internal Market Monitor or External Market Monitor is to continue to notify and inform the Commission of any additional information regarding the perceived market design flaw, its effects on the market, any additional or modified observations concerning the rule or tariff changes that could remedy the perceived design flaw, any recommendations made by the Internal Market Monitor or External Market Monitor to the regional transmission organization or independent system operator, stakeholders, market participants or state commissions regarding the perceived design flaw, and any actions taken by the regional transmission organization or independent system operator regarding the perceived design flaw.

### **III.A.21 Review of Offers From New Resources in the Forward Capacity Market.**

The Internal Market Monitor shall review offers from new resources in the Forward Capacity Auction as described in this Section III.A.21.

#### **III.A.21.1 Offer Review Trigger Prices.**

For each new technology type, the Internal Market Monitor shall establish an Offer Review Trigger Price. Offers in the Forward Capacity Auction at prices that are equal to or above the relevant Offer Review Trigger Price will not be subject to further review by the Internal Market Monitor. A request to submit offers in the Forward Capacity Auction at prices that are below the relevant Offer Review Trigger Price must be submitted in advance of the Forward Capacity Auction as described in Sections III.13.1.1.2.2.3 or III.13.1.4.2.4 and shall be reviewed by the Internal Market Monitor as described in this Section III.A.21.

##### **III.A.21.1.1 Offer Review Trigger Prices for the Ninth Forward Capacity Auction.**



Where a new resource is composed of assets having different technology types, the resource shall have an Offer Review Trigger Price equal to the highest of the applicable Offer Review Trigger Prices.

For a New Import Capacity Resource that is backed by a single new External Resource and that is associated with an investment in transmission that increases New England's import capability, the Offer Review Trigger Prices in the table above shall apply, based on the technology type of the External Resource.

For any other New Import Capacity Resource, the Offer Review Trigger Price shall be \$0.00/kW-month.

### **III.A.21.1.2 Calculation of Offer Review Trigger Prices.**

(a) The Offer Review Trigger Price for each of the technology types listed above shall be recalculated using updated data no less often than once every three years. Where any Offer Review Trigger Price is recalculated, the Internal Market Monitor will review the results of the recalculation with stakeholders and the new Offer Review Trigger Price shall be filed with the Commission prior to the Forward Capacity Auction in which the Offer Review Trigger Price is to apply.

(b) For new generation resources, the methodology used to develop the Offer Review Trigger Price is as follows. Capital costs, expected non-capacity revenues and operating costs, assumptions regarding depreciation, taxes and discount rate are input into a capital budgeting model which is used to calculate the break-even contribution required from the Forward Capacity Market to yield a discounted cash flow with a net present value of zero for the project. The Offer Review Trigger Price is set equal to the year-one capacity price output from the model. The model looks at 20 years of real-dollar cash flows discounted at a rate (Weighted Average Cost of Capital) consistent with that expected of a project whose output is under contract (i.e., a contract negotiated at arm's length between two unrelated parties).

(c) For new energy efficiency Demand Resources, the methodology used to develop the Offer Review Trigger Price shall be the same as that used for new generation resources, with the following exceptions. First, the model takes account of all costs incurred by the utility and end-use customer to deploy the efficiency measure. Second, rather than energy revenues, the model recognizes end-use customer savings associated with the efficiency programs. Third, the model assumes that all costs are expensed as incurred. Fourth, the benefits realized by end-use customers are assumed to have no tax implications for the utility. Fifth, the model discounts

cash flows over the Measure Life of the energy efficiency measure.

(d) For new Demand Resources other than energy efficiency Demand Resources, the methodology used to develop the Offer Review Trigger Price is the same as that used for new generation resources, except that the model discounts cash flows over the contract life. For Demand Resources (other than those using energy efficiency) that are composed primarily of large commercial or industrial customers that use pre-existing equipment or strategies, incremental costs include new equipment costs and annual operating costs such as customer incentives and sales representative commissions. For Demand Resources (other than energy efficiency Demand Resources) primarily composed of residential or small commercial customers that do not use pre-existing equipment or strategies, incremental costs include equipment costs, customer incentives, marketing, sales, and recruitment costs, operations and maintenance costs, and software and network infrastructure costs.

(e) For years in which no full recalculation is performed pursuant to subsection (a) above, the Offer Review Trigger Prices will be adjusted as follows:

(1) Each line item associated with capital costs that is included in the capital budgeting model will be associated with the indices included in the table below:

<b>Cost Component</b>	<b>Index</b>
Gas Turbines	BLS-PPI "Turbines and Turbine Generator Sets"
Steam Turbines	BLS-PPI "Turbines and Turbine Generator Sets"
Wind Turbines	Bloomberg Wind Turbine Price Index
Other Equipment	BLS-PPI "General Purpose Machinery and Equipment"
Construction Labor	BLS "Quarterly Census of Employment and Wages" 2371 Utility System Construction Average Annual Pay: <ul style="list-style-type: none"> <li>- Combustion Turbine and Combined Cycle Gas Turbine costs to be indexed to values corresponding to the location of Hampden County, Massachusetts</li> <li>- On-shore Wind costs to be indexed to values corresponding to the location of Cumberland County, Maine</li> </ul>
Other Labor	BLS "Quarterly Census of Employment and Wages" 2211 Power Generation and Supply Average Annual Pay: <ul style="list-style-type: none"> <li>- Combustion Turbine and Combined Cycle Gas Turbine costs to be indexed to values corresponding to the location of Hampden County, Massachusetts</li> <li>- On-Shore Wind costs to be indexed to values corresponding to the location of Cumberland County, Maine</li> </ul>
Materials	BLS-PPI "Materials and Components for Construction"
Electric Interconnection	BLS - PPI "Electric Power Transmission, Control, and Distribution"
Gas Interconnection	BLS - PPI "Natural Gas Distribution: Delivered to ultimate

	consumers for the account of others (transportation only)”
Fuel Inventories	Federal Reserve Bank of St. Louis “Gross Domestic Product: Implicit Price Deflator (GDPDEF)”

(2) Each line item associated with fixed operating and maintenance costs that is included in the capital budgeting model will be associated with the indices included in the table below:

<b>Cost Component</b>	<b>Index</b>
Labor, Administrative and General	BLS “Quarterly Census of Employment and Wages” 2211 Power Generation and Supply Average Annual Pay: <ul style="list-style-type: none"> <li>- Combustion Turbine and Combined Cycle Gas Turbine costs to be indexed to values corresponding to the location of Hampden County, Massachusetts</li> <li>- On-Shore Wind costs to be indexed to values corresponding to the location of Cumberland County, Maine</li> </ul>
Materials and Contract Services	BLS-PPI "Materials and Components for Construction"
Site Leasing Costs	Federal Reserve Bank of St. Louis “Gross Domestic Product: Implicit Price Deflator (GDPDEF)”

(3) For each line item in (1) and (2) above, the ISO shall calculate a multiplier that is equal to the average of values published during the most recent twelve month period available at the time of making the adjustment divided by the average of the most recent twelve month period available at the time of establishing the Offer Review Trigger Prices for the ninth FCA reflected in the table in Section III.A.21.1.1 above. The value of each line item associated with capital costs and fixed operating and maintenance costs included in the capital budgeting model for the ninth FCA will be adjusted by the relevant multiplier.

(4) The energy and ancillary services offset values for each technology type in the capital budgeting model shall be adjusted by inputting to the capital budgeting model the most recent Henry Hub natural gas futures prices from the time of the update through the end of the Capacity Commitment Period associated with the relevant FCA, and the Massachusetts Hub On-Peak electricity prices and the Algonquin City Gates natural gas prices for the twelve months following the time of the update, as published by the CME Group.

(5) Renewable Energy Credit values in the capital budgeting model shall be updated based on the most recent MA Class 1 REC price for the vintage closest to the first year of the Capacity Commitment Period associated with the relevant FCA as published by SNL Financial.

(6) The capital budgeting model and the Offer Review Trigger Prices adjusted pursuant to this subsection (e) will be published on the ISO's web site.

(7) If any of the values required for the calculations described in this subsection (e) are unavailable, then comparable values, prices or sources shall be used.

### **III.A.21.2 New Resource Offer Floor Prices.**

For every new resource participating in a Forward Capacity Auction, the Internal Market Monitor shall determine a New Resource Offer Floor Price, as described in this Section III.A.21.2.

(a) For a new capacity resource that does not submit a request to submit offers in the Forward Capacity Auction at prices that are below the relevant Offer Review Trigger Price as described in Sections III.13.1.1.2.2.3 or III.13.1.4.2.4, the New Resource Offer Floor Price shall be equal to the Offer Review Trigger Price applicable to the relevant technology type.

(b) For a new capacity resource that does submit a request to submit offers in the Forward Capacity Auction at prices that are below the relevant Offer Review Trigger Price as described in Sections III.13.1.1.2.2.3 and III.13.1.4.2.4, the Internal Market Monitor shall enter all relevant resource costs and non-capacity revenue data, as well as assumptions regarding depreciation, taxes, and discount rate into the capital budgeting model used to develop the relevant Offer Review Trigger Price and shall calculate the break-even contribution required from the Forward Capacity Market to yield a discounted cash flow with a net present value of zero for the project. The Internal Market Monitor shall compare the requested offer price to this capacity price estimate.

(i) The Internal Market Monitor will exclude any out-of-market revenue sources from the cash flows used to evaluate the requested offer price. Out-of-market revenues are any revenues that are: (a) not tradable throughout the New England Control Area or that are restricted to resources within a particular state or other geographic sub-region; or (b) not available to all resources of the same physical type within the New England Control Area, regardless of the resource owner. Expected revenues associated with economic development incentives that are offered broadly by state or local government and that are not expressly intended to reduce prices in the Forward Capacity Market are not considered out-of-market revenues for this purpose. In submitting its requested offer price, the Project Sponsor shall indicate whether and which project cash flows are

supported by a regulated rate, charge, or other regulated cost recovery mechanism. If the project is supported by a regulated rate, charge, or other regulated cost recovery mechanism, then that rate will be replaced with the Internal Market Monitor estimate of energy revenues. Where possible, the Internal Market Monitor will use like-unit historical production, revenue, and fuel cost data. Where such information is not available (e.g., there is no resource of that type in service), the Internal Market Monitor will use a forecast provided by a credible third party source. The Internal Market Monitor will review capital costs, discount rates, depreciation and tax treatment to ensure that it is consistent with overall market conditions. Any assumptions that are clearly inconsistent with prevailing market conditions will be adjusted.

(ii) For a new Demand Resource, the resource's costs shall include all expenses, including incentive payments, equipment costs, marketing and selling and administrative and general costs incurred by the Demand Response provider and end-use customers to acquire the Demand Resource. Revenues shall include all non-capacity payments expected from the ISO-administered markets made for services delivered from the Demand Resource, and expected costs avoided by the end-use customer as a direct result of the installation or implementation of the Demand Resource.

(iii) For a new capacity resource that has achieved commercial operation prior to the New Capacity Qualification Deadline for the Forward Capacity Auction in which it seeks to participate, the relevant capital costs to be entered into the capital budgeting model will be the undepreciated original capital costs adjusted for inflation. For any such resource, the prevailing market conditions will be those that were in place at the time of the decision to construct the resource.

(iv) Sufficient documentation and information must be included in the resource's qualification package to allow the Internal Market Monitor to make the determinations described in this subsection (b). Such documentation should include all relevant financial estimates and cost projections for the project, including the project's pro-forma financing support data. For a new capacity resource that has achieved commercial operation prior to the New Capacity Qualification Deadline, such documentation should also include all relevant financial data of actual incurred capital costs, actual operating costs, and actual revenues since the date of commercial operation. If the supporting documentation and information required by this subsection (b) is deficient, the Internal Market Monitor, at its sole discretion, may consult with



the Project Sponsor to gather further information as necessary to complete its analysis. If after consultation, the Project Sponsor does not provide sufficient documentation and information for the Internal Market Monitor to complete its analysis, then the resource's New Resource Offer Floor Price shall be equal to the Offer Review Trigger Price.

(v) If the Internal Market Monitor determines that the requested offer price is consistent with the Internal Market Monitor's capacity price estimate, then the resource's New Resource Offer Floor Price shall be equal to the requested offer price.

(vi) If the Internal Market Monitor determines that the requested offer price is not consistent with the Internal Market Monitor's capacity price estimate, then the resource's New Resource Offer Floor Price shall be set to a level that is consistent with the capacity price estimate, as determined by the Internal Market Monitor. Any such determination will be explained in the resource's qualification determination notification and will be filed with the Commission as part of the filing described in Section III.13.8.1.

### **III.A.21.3 Special Treatment of Certain Out-of-Market Capacity Resources in the Eighth Forward Capacity Auction.**

For the eighth Forward Capacity Auction (for the Capacity Commitment Period beginning on June 1, 2017), the provisions of Sections III.A.21.1 and III.A.21.2 shall also apply to certain resources that cleared in the sixth Forward Capacity Auction (for the Capacity Commitment Period beginning on June 1, 2015) and/or the seventh Forward Capacity Auction (for the Capacity Commitment Period beginning on June 1, 2016), as follows:

(a) This Section III.A.21.3 shall apply to: (i) any capacity clearing in the sixth or seventh Forward Capacity Auction as a New Generating Capacity Resource or New Import Capacity Resource designated as a Self-Supplied FCA Resource; and (ii) any capacity clearing in the sixth or seventh Forward Capacity Auction from a New Generating Capacity Resource, New Import Capacity Resource, or New Demand Resource at prices found by the Internal Market Monitor to be not consistent with either: (a) the resource's long run average costs net of expected net revenues other than capacity revenues for a New Generating Capacity Resource and a New Demand Resource or (b) opportunity costs for a New Import Capacity Resource.

(b) For the eighth Forward Capacity Auction, the capacity described in subsection (a) above shall receive

Offer Review Trigger Prices as described in Section III.A.21.1 and New Resource Offer Floor Prices as described in Section III.A.21.2. These values will apply to such capacity in the conduct of the eighth Forward Capacity Auction as described in Section III.13.2.3.2.

(c) For the eighth Forward Capacity Auction, the Project Sponsor or Lead Market Participant for such capacity may be required to comply with some or all of the qualification provisions applicable to new resources described in Section III.13.1. These requirements will be determined by the ISO on a case-by-case basis in consultation with the Project Sponsor or Lead Market Participant.

(d) For any capacity described in subsection (a) above that does not clear in the eighth Forward Capacity Auction:

(i) any prior election to have a Capacity Clearing Price and Capacity Supply Obligation continue to apply for more than one Capacity Commitment Period made pursuant to Section III.13.1.1.2.2.4 or Section III.13.1.4.2.2.5 shall be terminated as of the beginning of the Capacity Commitment Period associated with the eighth FCA (beginning June 1, 2017); and

(ii) after the eighth Forward Capacity Auction, such capacity will be deemed to have never been previously counted as capacity, such that it meets the definition, and must meet the requirements, of a new capacity resource for the subsequent Forward Capacity Auction in which it seeks to participate.

**SECTION III**

**MARKET RULE 1**

**APPENDIX A**

**MARKET MONITORING,  
REPORTING AND MARKET POWER MITIGATION**

**APPENDIX A**  
**MARKET MONITORING, REPORTING AND MARKET POWER MITIGATION**

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EXHIBIT 1 [Reserved]

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EXHIBIT 3 [Reserved]

EXHIBIT 4 [Reserved]

EXHIBIT 5 ISO NEW ENGLAND INC. CODE OF CONDUCT

## **MARKET MONITORING, REPORTING AND MARKET POWER MITIGATION**

### **III.A.1 Introduction and Purpose; Structure and Oversight: Independence.**

#### **III.A.1.1. Mission Statement.**

The mission of the Internal Market Monitor and External Market Monitor shall be (1) to protect both consumers and Market Participants by the identification and reporting of market design flaws and market power abuses; (2) to evaluate existing and proposed market rules, tariff provisions and market design elements to remove or prevent market design flaws and recommend proposed rule and tariff changes to the ISO; (3) to review and report on the performance of the New England Markets; (4) to identify and notify the Commission of instances in which a Market Participant's behavior, or that of the ISO, may require investigation; and (5) to carry out the mitigation functions set forth in this *Appendix A*.

#### **III.A.1.2. Structure and Oversight.**

The market monitoring and mitigation functions contained in this *Appendix A* shall be performed by the Internal Market Monitor, which shall report to the ISO Board of Directors and, for administrative purposes only, to the ISO Chief Executive Officer, and by an External Market Monitor selected by and reporting to the ISO Board of Directors. Members of the ISO Board of Directors who also perform management functions for the ISO shall be excluded from oversight and governance of the Internal Market Monitor and External Market Monitor. The ISO shall enter into a contract with the External Market Monitor addressing the roles and responsibilities of the External Market Monitor as detailed in this *Appendix A*. The ISO shall file its contract with the External Market Monitor with the Commission. In order to facilitate the performance of the External Market Monitor's functions, the External Market Monitor shall have, and the ISO's contract with the External Market Monitor shall provide for, access by the External Market Monitor to ISO data and personnel, including ISO management responsible for market monitoring, operations and billing and settlement functions. Any proposed termination of the contract with the External Market Monitor or modification of, or other limitation on, the External Market Monitor's scope of work shall be subject to prior Commission approval.

#### **III.A.1.3. Data Access and Information Sharing.**

The ISO shall provide the Internal Market Monitor and External Market Monitor with access to all market data, resources and personnel sufficient to enable the Internal Market Monitor and External Market

Monitor to perform the market monitoring and mitigation functions provided for in this *Appendix A*. This access shall include access to any confidential market information that the ISO receives from another independent system operator or regional transmission organization subject to the Commission's jurisdiction, or its market monitor, as part of an investigation to determine (a) if a Market Violation is occurring or has occurred, (b) if market power is being or has been exercised, or (c) if a market design flaw exists. In addition, the Internal Market Monitor and External Market Monitor shall have full access to the ISO's electronically generated information and databases and shall have exclusive control over any data created by the Internal Market Monitor or External Market Monitor. The Internal Market Monitor and External Market Monitor may share any data created by it with the ISO, which shall maintain the confidentiality of such data in accordance with the terms of the ISO New England Information Policy.

#### **III.A.1.4. Interpretation.**

In the event that any provision of any ISO New England Filed Document is inconsistent with the provisions of this *Appendix A*, the provisions of *Appendix A* shall control. Notwithstanding the foregoing, Sections III.A.1.2, III.A.2.2 (a)-(c), (e)-(h), Section III.A.2.3 (a)-(g), (i), (n) and Section III.A.17.3 are also part of the Participants Agreement and cannot be modified in either *Appendix A* or the Participants Agreement without a corresponding modification at the same time to the same language in the other document.

#### **III.A.1.5. Definitions.**

Capitalized terms not defined in this *Appendix A* are defined in the definitions section of Section I of the Tariff.

### **III.A.2. Functions of the Market Monitor.**

#### **III.A.2.1. Core Functions of the Internal Market Monitor and External Market Monitor.**

The Internal Market Monitor and External Market Monitor will perform the following core functions:

- (a) Evaluate existing and proposed market rules, tariff provisions and market design elements, and recommend proposed rule and tariff changes to the ISO, the Commission, Market Participants, public utility commissioners of the six New England states, and to other interested entities, with the understanding that the Internal Market Monitor and External Market Monitor are not to effectuate any proposed market designs (except as specifically provided in Section III.A.2.4.4, Section III.A.9 and Section III.A.10 of this *Appendix A*). In the event the Internal Market Monitor or External Market

Monitor believes broader dissemination could lead to exploitation, it shall limit distribution of its identifications and recommendations to the ISO and to the Commission, with an explanation of why broader dissemination should be avoided at that time. Nothing in this Section III.A.2.1 (a) shall prohibit or restrict the Internal Market Monitor and External Market Monitor from implementing Commission accepted rule and tariff provisions regarding market monitoring or mitigation functions that, according to the terms of the applicable rule or tariff language, are to be performed by the Internal Market Monitor or External Market Monitor.

- (b) Review and report on the performance of the New England Markets to the ISO, the Commission, Market Participants, the public utility commissioners of the six New England states, and to other interested entities.
- (c) Identify and notify the Commission's Office of Enforcement of instances in which a Market Participant's behavior, or that of the ISO, may require investigation, including suspected tariff violations, suspected violations of Commission-approved rules and regulations, suspected market manipulation, and inappropriate dispatch that creates substantial concerns regarding unnecessary market inefficiencies.

#### **III.A.2.2. Functions of the External Market Monitor.**

To accomplish the functions specified in Section III.A.2.1 of this *Appendix A*, the External Market Monitor shall perform the following functions:

- (a) Review the competitiveness of the New England Markets, the impact that the market rules and/or changes to the market rules will have on the New England Markets and the impact that the ISO's actions have had on the New England Markets. In the event that the External Market Monitor uncovers problems with the New England Markets, the External Market Monitor shall promptly inform the Commission, the Commission's Office of Energy Market Regulation staff, the ISO Board of Directors, the public utility commissions for each of the six New England states, and the Market Participants of its findings in accordance with the procedures outlined in Sections III.A.19 and III.A.20 of this *Appendix A*, provided that in the case of Market Participants and the public utility commissions, information in such findings shall be redacted as necessary to comply with the ISO New England Information Policy. Notwithstanding the foregoing, in the event the External Market Monitor believes broader dissemination could lead to exploitation, it shall limit distribution of its identifications to the ISO and to the Commission, with an explanation of why broader dissemination should be avoided at that time.

- (b) Perform independent evaluations and prepare annual and ad hoc reports on the overall competitiveness and efficiency of the New England Markets or particular aspects of the New England Markets, including the adequacy of this *Appendix A*, in accordance with the provisions of Section III.A.17 of this *Appendix A*.
- (c) Conduct evaluations and prepare reports on its own initiative or at the request of others.
- (d) Monitor and review the quality and appropriateness of the mitigation conducted by the Internal Market Monitor. In the event that the External Market Monitor discovers problems with the quality or appropriateness of such mitigation, the External Market Monitor shall promptly inform the Commission, the Commission's Office of Energy Market Regulation staff, the ISO Board of Directors, the public utility commissions for each of the six New England states, and the Market Participants of its findings in accordance with the procedures outlined in Sections III.A.19 and/or III.A.20 of this *Appendix A*, provided that in the case of Market Participants and the public utility commissions, information in such findings shall be redacted as necessary to comply with the ISO New England Information Policy. Notwithstanding the foregoing, in the event the External Market Monitor believes broader dissemination could lead to exploitation, it shall limit distribution of its identifications to the ISO and to the Commission, with an explanation of why broader dissemination should be avoided at that time.
- (e) Prepare recommendations to the ISO Board of Directors and the Market Participants on how to improve the overall competitiveness and efficiency of the New England Markets or particular aspects of the New England Markets, including improvements to this *Appendix A*.
- (f) Recommend actions to the ISO Board of Directors and the Market Participants to increase liquidity and efficient trade between regions and improve the efficiency of the New England Markets.
- (g) Review the ISO's filings with the Commission from the standpoint of the effects of any such filing on the competitiveness and efficiency of the New England Markets. The External Market Monitor will have the opportunity to comment on any filings under development by the ISO and may file comments with the Commission when the filings are made by the ISO. The subject of any such comments will be the External Market Monitor's assessment of the effects of any proposed filing on the competitiveness and efficiency of the New England Markets, or the effectiveness of this *Appendix A*, as appropriate.
- (h) Provide information to be directly included in the monthly market updates that are provided at the meetings of the Market Participants.

### **III.A.2.3. Functions of the Internal Market Monitor.**

To accomplish the functions specified in Section III.A.2.1 of this *Appendix A*, the Internal Market Monitor shall perform the following functions:

- (a) Maintain *Appendix A* and consider whether *Appendix A* requires amendment. Any amendments deemed to be necessary by the Internal Market Monitor shall be undertaken after consultation with Market Participants in accordance with Section 11 of the Participants Agreement.
- (b) Perform the day-to-day, real-time review of market behavior in accordance with the provisions of this *Appendix A*.
- (c) Consult with the External Market Monitor, as needed, with respect to implementing and applying the provisions of this *Appendix A*.
- (d) Identify and notify the Commission's Office of Enforcement staff of instances in which a Market Participant's behavior, or that of the ISO, may require investigation, including suspected Tariff violations, suspected violations of Commission-approved rules and regulations, suspected market manipulation, and inappropriate dispatch that creates substantial concerns regarding unnecessary market inefficiencies, in accordance with the procedures outlined in Section III.A.19 of this *Appendix A*.
- (e) Review the competitiveness of the New England Markets, the impact that the market rules and/or changes to the market rules will have on the New England Markets and the impact that ISO's actions have had on the New England Markets. In the event that the Internal Market Monitor uncovers problems with the New England Markets, the Internal Market Monitor shall promptly inform the Commission, the Commission's Office of Energy Market Regulation staff, the ISO Board of Directors, the public utility commissions for each of the six New England states, and the Market Participants of its findings in accordance with the procedures outlined in Sections III.A.19 and III.A.20 of this *Appendix A*, provided that in the case of Market Participants and the public utility commissions, information in such findings shall be redacted as necessary to comply with the ISO New England Information Policy. Notwithstanding the foregoing, in the event the Internal Market Monitor believes broader dissemination could lead to exploitation, it shall limit distribution of its identifications to the ISO and to the Commission, with an explanation of why broader dissemination should be avoided at that time.
- (f) Provide support and information to the ISO Board of Directors and the External Market Monitor consistent with the Internal Market Monitor's functions.
- (g) Prepare an annual state of the market report on market trends and the performance of the New England Markets, as well as less extensive quarterly reports, in accordance with the provisions of Section III.A.17 of this *Appendix A*.

- (h) Make one or more of the Internal Market Monitor staff members available for regular conference calls, which may be attended, telephonically or in person, by Commission and state commission staff, by representatives of the ISO, and by Market Participants. The information to be provided in the Internal Market Monitor conference calls is generally to consist of a review of market data and analyses of the type regularly gathered and prepared by the Internal Market Monitor in the course of its business, subject to appropriate confidentiality restrictions. This function may be performed through making a staff member of the Internal Market Monitor available for the monthly meetings of the Market Participants and inviting Commission staff and the staff of state public utility commissions to those monthly meetings.
- (i) Be primarily responsible for interaction with external Control Areas, the Commission, other regulators and Market Participants with respect to the matters addressed in this *Appendix A*.
- (j) Monitor for conduct whether by a single Market Participant or by multiple Market Participants acting in concert, including actions involving more than one Resource, that may cause a material effect on prices or other payments in the New England Markets if exercised from a position of market power, and impose appropriate mitigation measures if such conduct is detected and the other applicable conditions for the imposition of mitigation measures as set forth in this *Appendix A* are met. The categories of conduct for which the Internal Market Monitor shall perform monitoring for potential mitigation are:
  - (i) *Economic withholding*, that is, submitting a Supply Offer for a Resource that is unjustifiably high and violates the economic withholding criteria set forth in Section III.A.5 so that (i) the Resource is not or will not be dispatched or scheduled, or (ii) the bid or offer will set an unjustifiably high market clearing price.
  - (ii) *Uneconomic production from a Resource*, that is, increasing the output of a Resource to levels that would otherwise be uneconomic, absent an order of the ISO, in order to cause, and obtain benefits from, a transmission constraint.
  - (iii) *Anti-competitive Increment Offers and Decrement Bids*, which are bidding practices relating to Increment Offers and Decrement Bids that cause Day-Ahead LMPs not to achieve the degree of convergence with Real-Time LMPs that would be expected in a workably competitive market, more fully addressed in Section III.A.11 of this *Appendix A*.
  - (iv) *Anti-competitive Demand Bids*, which are addressed in Section III.A.10 of this *Appendix A*.

- (v) Other categories of conduct that have material effects on prices or NCPC payments in the New England Markets. The Internal Market Monitor, in consultation with the External Market Monitor, shall; (i) seek to amend *Appendix A* as may be appropriate to include any such conduct that would substantially distort or impair the competitiveness of any of the New England Markets; and (ii) seek such other authorization to mitigate the effects of such conduct from the Commission as may be appropriate.
- (k) Perform such additional monitoring as the Internal Market Monitor deems necessary, including without limitation, monitoring for:
- (i) Anti-competitive gaming of Resources;
  - (ii) Conduct and market outcomes that are inconsistent with competitive markets;
  - (iii) Flaws in market design or software or in the implementation of rules by the ISO that create inefficient incentives or market outcomes;
  - (iv) Actions in one market that affect price in another market;
  - (v) Other aspects of market implementation that prevent competitive market results, the extent to which market rules, including this *Appendix A*, interfere with efficient market operation, both short-run and long-run; and
  - (vi) Rules or conduct that creates barriers to entry into a market.

The Internal Market Monitor will include significant results of such monitoring in its reports under Section III.A.17 of this *Appendix A*. Monitoring under this Section III.A.2.3(k) cannot serve as a basis for mitigation under III.A.11 of this *Appendix A*. If the Internal Market Monitor concludes as a result of its monitoring that additional specific monitoring thresholds or mitigation remedies are necessary, it may proceed under Section III.A.20.

- (l) Propose to the ISO and Market Participants appropriate mitigation measures or market rule changes for conduct that departs significantly from the conduct that would be expected under competitive market conditions but does not rise to the thresholds specified in Sections III.A.5, III.A.10, or III.A.11. In considering whether to recommend such changes, the Internal Market Monitor shall evaluate whether the conduct has a significant effect on market prices or NCPC payments as specified below. The Internal Market Monitor will not recommend changes if it determines, from information provided by Market Participants (or parties that would be subject to mitigation) or from other



information available to the Internal Market Monitor, that the conduct and associated price or NCPC payments under investigation are attributable to legitimate competitive market forces or incentives.

- (m) Evaluate physical withholding of Supply Offers in accordance with Section III.A.4 below for referral to the Commission in accordance with *Appendix B* of this Market Rule 1.
- (n) If and when established, participate in a committee of regional market monitors to review issues associated with interregional transactions, including any barriers to efficient trade and competition.

#### **III.A.2.4. Overview of the Internal Market Monitor's Mitigation Functions.**

##### **III.A.2.4.1. Purpose.**

The mitigation measures set forth in this *Appendix A* for mitigation of market power are intended to provide the means for the Internal Market Monitor to mitigate the market effects of any actions or transactions that are without a legitimate business purpose and that are intended to or foreseeably could manipulate market prices, market conditions, or market rules for electric energy or electricity products. Actions or transactions undertaken by a Market Participant that are explicitly contemplated in Market Rule 1 (such as virtual supply or load bidding) or taken at the direction of the ISO are not in violation of this *Appendix A*. These mitigation measures are intended to minimize interference with open and competitive markets, and thus to permit to the maximum extent practicable, price levels to be determined by competitive forces under the prevailing market conditions. To that end, the mitigation measures authorize the mitigation of only specific conduct that exceeds well-defined thresholds specified below. When implemented, mitigation measures affecting the LMP or clearing prices in other markets will be applied *ex ante*. Nothing in this *Appendix A*, including the application of a mitigation measure, shall be deemed to be a limitation of the ISO's authority to evaluate Market Participant behavior for potential sanctions under *Appendix B* of this Market Rule 1.

##### **III.A.2.4.2. Conditions for the Imposition of Mitigation.**

- (a) Imposing Mitigation. To achieve the foregoing purpose and objectives, mitigation measures are imposed pursuant to Sections III.A.5, III.A.10, and III.A.11. below:
- (b) Notwithstanding the foregoing or any other provision of this *Appendix A*, and as more fully described in Section III.B.3.2.6 of *Appendix B* to this Market Rule 1, certain economic decisions shall not be deemed a form of withholding or otherwise inconsistent with competitive conduct.

#### **III.A.2.4.3 Applicability.**

Mitigation measures may be applied to Supply Offers, Increment Offers, Demand Bids, and Decrement Bids, as well as to the scheduling or operation of a generation unit or transmission facility.

#### **III.A.2.4.4 Mitigation Not Provided for Under This *Appendix A*.**

The Internal Market Monitor shall monitor the New England Markets for conduct that it determines constitutes an abuse of market power but does not trigger the thresholds specified below for the imposition of mitigation measures by the Internal Market Monitor. If the Internal Market Monitor identifies any such conduct, and in particular conduct exceeding the thresholds specified in this *Appendix A*, it may make a filing under §205 of the Federal Power Act (“§205”) with the Commission requesting authorization to apply appropriate mitigation measures. Any such filing shall identify the particular conduct the Internal Market Monitor believes warrants mitigation, shall propose a specific mitigation measure for the conduct, and shall set forth the Internal Market Monitor’s justification for imposing that mitigation measure.

#### **III.A.2.4.5 Duration of Mitigation.**

Any mitigation measure imposed on a specific Market Participant, as specified below, shall expire not later than six months after the occurrence of the conduct giving rise to the measure, or at such earlier time as may be specified by the Internal Market Monitor or as otherwise provided in this *Appendix A* or in *Appendix B* to this Market Rule 1.

### **III.A.3. Consultation Prior to Determination of Reference Levels for Physical and Financial Parameters of Resources; Fuel Price Adjustments.**

Upon request of a Market Participant or at the initiative of the Internal Market Monitor, the Internal Market Monitor shall consult with a Market Participant with respect to the information and analysis used to determine Reference Levels under Section III.A.7 for that Market Participant. In order for the Internal Market Monitor to revise Reference Levels or treat an offer as not violating applicable conduct tests specified in Section III.A.5.5 for an Operating Day for which the offer is submitted, all cost data and other information, other than automated index-based cost data received by the Internal Market Monitor from third party vendors, cost data and information calculated by the Internal Market Monitor, and cost data and information provided under the provisions of Section III.A.3.1 or Section III.A.3.2, must be submitted by a Market Participant, and all consultations must be completed, no later than 5:00 p.m. of the second business day prior to the Operating Day for which the Reference Level will be effective.

Adjustments to fuel prices after this time must be submitted in accordance with the fuel price adjustment provisions in Section A.3.4.

### **III.A.3.1. Consultation Prior to Offer.**

If an event occurs within the 24 hour period prior to the Operating Day that a Market Participant, including a Market Participant that is not permitted to submit a fuel price adjustment pursuant to Section III.A.3.4(e), believes will cause the operating cost of a Resource to exceed the level that would violate one of the conduct tests specified in Section III.A.5 of this *Appendix A*, the Market Participant may contact the Internal Market Monitor to provide an explanation of the increased cost. In order for the information to be considered for the purposes of the Day-Ahead Energy Market, the Market Participant must contact the Internal Market Monitor at least one hour prior to the close of the Day-Ahead Energy Market. In order for the information to be considered for purposes of the first commitment analysis performed following the close of the Re-Offer Period, the Market Participant must contact the Internal Market Monitor at least one hour prior to the close of the Re-Offer Period. Cost information submitted thereafter shall be considered in subsequent commitment and dispatch analyses if received between 8:00 a.m. and 5:00 p.m. and at least one hour prior to the close of the next hourly Supply Offer submittal period. If the Internal Market Monitor determines that there is an increased cost, the Internal Market Monitor will either update the Reference Level or treat an offer as not violating applicable conduct tests specified in Section III.A.5.5 for the Operating Day for which the offer is submitted. Any request and all supporting cost data and other verifiable supporting information must be submitted to the Internal Market Monitor prior to the Market Participant's submission of the offer.

If a Market Participant believes that the fuel price determined under Section III.A.7.5(e) should be modified, it may contact the Internal Market Monitor to request a change to the fuel price and provide an explanation of the basis for the change. Any request to change the fuel price determined under Section III.A.7.5(e) must be received between the hours of 8:00 a.m. and 5:00 p.m. on any day.

### **III.A.3.2. Dual Fuel Resources.**

In evaluating bids or offers under this *Appendix A* for dual fuel Resources, the Internal Market Monitor shall utilize the fuel type specified in the Supply Offer for the calculation of cost-based Reference Levels, pursuant to Section III.A.7.5 below, unless a Market Participant notifies the Internal Market Monitor that the Resource will be operating on the higher cost fuel type.

If a Market Participant provides such notification, the Internal Market Monitor will use the higher cost fuel type in the calculation of the cost-based Reference Levels for the resource. Within five business days of a request by the Internal Market Monitor, the Market Participant must:

- (a) provide the Internal Market Monitor with written verification as to the cause for the use of the higher cost fuel.
- (b) provide the Internal Market Monitor with evidence that the higher cost fuel was used.

If the Market Participant fails to provide supporting information within five business days of a request by the Internal Market Monitor, then the Reference Level based on the lower cost fuel will be used in place of the Supply Offer for settlement purposes.

#### **III.A.3.3. Market Participant Access to its Reference Levels.**

The Internal Market Monitor will make available to the Market Participant the Reference Levels applicable to that Market Participant's Supply Offers through the MUI. Updated Reference Levels will be made available whenever calculated. The Market Participant shall not modify such Reference Levels in the ISO's or Internal Market Monitor's systems.

#### **III.A.3.4. Fuel Price Adjustments.**

(a) A Market Participant may submit a fuel price, to be used in calculating the Reference Levels for a Resource's Supply Offer, whenever the Market Participant's expected price to procure fuel for the Resource will be greater than that used by the Internal Market Monitor in calculating the Reference Levels for the Supply Offer. A fuel price may be submitted for Supply Offers entered in the Day-Ahead Energy Market, the Re-Offer Period, or for a Real-Time Offer Change. A fuel price is subject to the following conditions:

(i) In order for the submitted fuel price to be utilized in calculating the Reference Levels for a Supply Offer, the fuel price must be submitted prior to the applicable Supply Offer deadline,

(ii) The submitted fuel price must reflect the price at which the Market Participant expects to be able to procure fuel to supply energy under the terms of its Supply Offer, exclusive of resource-specific transportation costs. Modifications to Reference Levels based on changes to transportation costs must be addressed through the consultation process specified in Section III.A.3.1.

(iii) The submitted fuel price may be no lower than the lesser of (1) 110% of the fuel price used by the Internal Market Monitor in calculating the Reference Levels for the Resource's Supply Offer or (2) the fuel price used by the Internal Market Monitor in calculating the Reference Levels for the Resource's Supply Offer plus \$2.50/MMbtu.

(b) Within five business days following submittal of a fuel price, a Market Participant must provide the Internal Market Monitor with (i) an invoice for the fuel utilized or (ii) a quote from a named supplier or (iii) a price from a publicly available trading platform or price reporting agency, demonstrating that the submitted fuel price reflects the cost at which the Market Participant expected to purchase fuel for the operating period covered by the Supply Offer, as of the time that the Supply Offer was submitted, under an arm's length fuel purchase transaction. Any amount to be added to the quote from a named supplier, or to a price from a publicly available trading platform or price reporting agency, must be submitted and approved using the provision for consultations prior to the determination of Reference Levels in Section III.A.3. The submitted fuel price may be no greater than 110% of the fuel price reflected on the submitted invoice for the fuel utilized, the quote from a named supplier or the price from a publicly available trading platform or price reporting agency, plus any approved adder.

(c) The Supply Offers for the associated Resource may be no greater than 110% and no less than 90% of the Reference Level calculated with the submitted fuel price.

(d) If, within a 12 month period, the requirements in sub-sections (b) or (c) are not met for a Resource, then a fuel price adjustment pursuant to Section III.A.3.4 shall not be permitted for that Resource for up to six months. The following table specifies the number of months for which a Market Participant will be precluded from using the fuel price adjustment, based on the number of times the requirements in sub-sections (b) or (c) are not met within the 12 month period. The 12 month period excludes any previous days for which the Market Participant was precluded from using the fuel price adjustment. The period of time for which a Market Participant is precluded from using the fuel price adjustment begins two weeks after the most-recent incident occurs.

Number of Incidents	Months Precluded (starting from most-recent incident)
1	2
2 or more	6

#### **III.A.4. Physical Withholding.**

##### **III.A.4.1. Identification of Conduct Inconsistent with Competition.**

This section defines thresholds used to identify possible instances of physical withholding. This section does not limit the Internal Market Monitor's ability to refer potential instances of physical withholding to the Commission.

Generally, physical withholding involves not offering to sell or schedule the output of or services provided by a Resource capable of serving the New England Markets when it is economic to do so. Physical withholding may include, but is not limited to:

- (a) falsely declaring that a Resource has been forced out of service or otherwise become unavailable,
- (b) refusing to make a Supply Offer, or schedules for a Resource when it would be in the economic interest absent market power, of the withholding entity to do so,
- (c) operating a Resource in Real-Time to produce an output level that is less than the ISO Dispatch Rate, or
- (d) operating a transmission facility in a manner that is not economic, is not justified on the basis of legitimate safety or reliability concerns, and contributes to a binding transmission constraint.

##### **III.A.4.2. Thresholds for Identifying Physical Withholding.**

###### **III.A.4.2.1. Initial Thresholds.**

Except as specified in subsection III.A.4.2.4 below, the following initial thresholds will be employed by the Internal Market Monitor to identify physical withholding of a Resource:

- (a) Withholding that exceeds the lower of 10% or 100 MW of a Resource's capacity;
- (b) Withholding that exceeds in the aggregate the lower of 5% or 200 MW of a Market Participant's total capacity for Market Participants with more than one Resource; or
- (c) Operating a Resource in Real-Time at an output level that is less than 90% of the ISO's Dispatch Rate for the Resource.

#### **III.A.4.2.2. Adjustment to Generating Capacity.**

The amounts of generating capacity considered withheld for purposes of applying the foregoing thresholds shall include unjustified deratings, that is, falsely declaring a Resource derated, and the portions of a Resource's available output that are not offered. The amounts deemed withheld shall not include generating output that is subject to a forced outage or capacity that is out of service for maintenance in accordance with an ISO maintenance schedule, subject to verification by the Internal Market Monitor as may be appropriate that an outage was forced.

#### **III.A.4.2.3. Withholding of Transmission.**

A transmission facility shall be deemed physically withheld if it is not operated in accordance with ISO instructions and such failure to conform to ISO instructions causes transmission congestion. A transmission facility shall not be deemed withheld if it is subject to a forced outage or is out of service for maintenance in accordance with an ISO maintenance schedule, subject to verification by the Internal Market Monitor as may be appropriate that an outage was forced.

#### **III.A.4.2.4. Resources in Congestion Areas.**

Minimum quantity thresholds shall not be applicable to the identification of physical withholding by a Resource in an area the ISO has determined is congested.

#### **III.A.4.3. Hourly Market Impacts.**

Before evaluating possible instances of physical withholding for imposition of sanctions, the Internal Market Monitor shall investigate the reasons for the change in accordance with Section III.A.3. If the physical withholding in question is not explained to the satisfaction of the Internal Market Monitor, the Internal Market Monitor will determine whether the conduct in question causes a price impact in the New England Markets in excess of any of the thresholds specified in Section III.A.5, as appropriate.

#### **III.A.5. Mitigation.**

##### **III.A.5.1. Resources with Capacity Supply Obligations.**

Only Supply Offers associated with Resources with Capacity Supply Obligations will be evaluated for economic withholding in the Day-Ahead Energy Market. All Supply Offers will be evaluated for economic withholding in the Real-Time Energy Market.

##### **III.A.5.1.1. Resources with Partial Capacity Supply Obligations.**

Supply Offers associated with Resources with a Capacity Supply Obligation for less than their full capacity shall be evaluated for economic withholding and mitigation as follows:

- (a) all Supply Offer parameters shall be reviewed for economic withholding;
- (b) the energy price Supply Offer parameter shall be reviewed for economic withholding up to and including the higher of: (i) the block containing the Resource's Economic Minimum Limit, or; (ii) the highest block that includes any portion of the Capacity Supply Obligation;
- (c) if a Resource with a partial Capacity Supply Obligation consists of multiple assets, the offer blocks associated with the Resource that shall be evaluated for mitigation shall be determined by using each asset's Seasonal Claimed Capability value in proportion to the total of the Seasonal Claimed Capabilities for all of the assets that make up the Resource. The Lead Market Participant of a Resource with a partial Capacity Supply Obligation consisting of multiple assets may also propose to the Internal Market Monitor the offer blocks that shall be evaluated for mitigation based on an alternative allocation on a monthly basis. The proposal must be made at least five business days prior to the start of the month. A proposal shall be rejected by the Internal Market Monitor if the designation would be inconsistent with competitive behavior

### **III.A.5.2. Structural Tests.**

There are two structural tests that determine which mitigation thresholds are applied to a Supply Offer:

- (a) if a supplier is determined to be pivotal according to the pivotal supplier test, then the thresholds in Section III.A.5.5.1 "General Threshold Energy Mitigation" and Section III.A.5.5.3 "General Threshold Commitment Mitigation" apply, and;
- (b) if a Resource is determined to be in a constrained area according to the constrained area test, then the thresholds in Section III.A.5.5.2 "Constrained Area Threshold Energy Mitigation" and Section III.A.5.5.4 "Constrained Area Threshold Commitment Mitigation" apply.

#### **III.A.5.2.1. Pivotal Supplier Test.**

The pivotal supplier test examines whether a Market Participant has aggregate energy Supply Offers (up to and including Economic Max) that exceed the supply margin. A Market Participant whose aggregate energy associated with Supply Offers exceeds the supply margin is a pivotal supplier.



The supply margin for an interval is the total energy Supply Offers from available Resources (up to and including Economic Max), less total system load (as adjusted for net interchange with other Control Areas, including Operating Reserve). Resources are considered available for an interval if they can provide energy within the interval. The applicable interval in the Day-Ahead Energy Market is any of the 24 hours for which pivotal supplier calculations are made. The applicable interval for the current operating plan in the Real-Time Energy Market is any of the hours in the plan. The applicable interval for UDS is the interval for which UDS issues instructions.

The pivotal supplier test shall be run prior to the clearing of the Day-Ahead Energy Market, prior to each determination of a new operating plan for the Operating Day, and prior to each execution of the UDS.

#### **III.A.5.2.2. Constrained Area Test.**

A Resource is considered to be within a constrained area if:

- (a) for purposes of the Real-Time Energy Market, the Resource is located on the import-constrained side of a binding constraint and there is a sensitivity to the binding constraint such that the UDS used to relieve transmission constraints would commit or dispatch the Resource in order to relieve that binding transmission constraint, or;
- (b) for purposes of the Day-Ahead Energy Market, the LMP at the Resource's Node exceeds the LMP at the Hub by more than \$25/MWh.

#### **III.A.5.3. Calculation of Impact Tests in the Day-Ahead Energy Market.**

The price impact for the purposes of Section III.A.5.5.1 "General Threshold Energy Mitigation" compares two LMPs at a Resource's Node. The first LMP is calculated based on the Supply Offers submitted for all Resources. The second LMP is calculated through a simulation of the Day-Ahead Energy Market with the offer blocks associated with conduct violations of the pivotal supplier's Resources set to their Reference Levels.

A Supply Offer shall be determined to have no price impact for the purposes of Section III.A.5.5.1 "General Threshold Energy Mitigation" if:

- (a) the first LMP at the Resource's Node is less than the impact threshold, or;

- (b) the first LMP minus the Resource's Reference Level for each offer block is less than the impact threshold.

The price impact for the purposes of Section III.A.5.5.2 "Constrained Area Energy Mitigation" is equal to the difference between the LMP at the Resource's Node and the LMP at the Hub.

#### **III.A.5.4. Calculation of Impact Tests in the Real-Time Energy Market.**

The energy price impact test applied in the Real-Time Energy Market shall compare two LMPs at the Resource's Node. The first LMP will be calculated based on the Supply Offers submitted for all Resources. If a Supply Offer has been mitigated in a prior interval, the calculation of the first LMP shall be based on the mitigated value. The second LMP shall be calculated substituting Reference Levels for Supply Offers that have failed the applicable conduct test. The difference between the two LMPs is the price impact of the conduct violation.

A Supply Offer shall be determined to have no price impact if the offer block that violates the conduct test is:

- (a) less than the LMP calculated using the submitted Supply Offers, and less than the LMP calculated using Reference Levels for Supply Offers that have failed the conduct test, or;
- (b) greater than the LMP calculated using the submitted Supply Offers, and greater than the LMP calculated using Reference Levels for Supply Offers that have failed the conduct test, and the Resource has not been dispatched into the offer block that exceeds the LMP.

#### **III.A.5.5. Mitigation by Type.**

##### **III.A.5.5.1. General Threshold Energy Mitigation.**

###### **III.A.5.5.1.1. Applicability.**

Mitigation pursuant to this section shall be applied to all Supply Offers submitted by a Lead Market Participant that is determined to be a pivotal supplier.

###### **III.A.5.5.1.2. Conduct Test.**

A Supply Offer fails the conduct test for general threshold energy mitigation if any offer block price exceeds the Reference Level by an amount greater than 300% or \$100/MWh, whichever is lower. Offer block prices below \$25/MWh are not subject to the conduct test.

**III.A.5.5.1.3. Impact Test.**

A Supply Offer that fails the conduct test for general threshold energy mitigation shall be evaluated against the impact test for general threshold energy mitigation. A Supply Offer fails the impact test for general threshold energy mitigation if there is an increase in the LMP greater than 200% or \$100/MWh, whichever is lower as determined by the day-ahead or real-time impact test.

**III.A.5.5.1.4. Consequence of Failing Both Conduct and Impact Test.**

If a Supply Offer fails the general threshold conduct and impact tests, then the financial parameters of the Supply Offer shall be set to their Reference Levels, including all energy offer block prices and all types of Start-Up Fees and the No-Load Fee.

**III.A.5.5.2. Constrained Area Energy Mitigation.**

**III.A.5.5.2.1. Applicability.**

Mitigation pursuant to this section shall be applied to Supply Offers associated with a Resource determined to be within a constrained area.

**III.A.5.5.2.2. Conduct Test.**

A Supply Offer fails the conduct test for constrained area energy mitigation if any offer block price exceeds the Reference Level by an amount greater than 50% or \$25/MWh, whichever is lower.

**III.A.5.5.2.3. Impact Test.**

A Supply Offer fails the impact test for constrained area energy mitigation if there is an increase greater than 50% or \$25/MWh, whichever is lower, in the LMP as determined by the day-ahead or real-time impact test.

**III.A.5.5.2.4. Consequence of Failing Both Conduct and Impact Test.**

If a Supply Offer fails the constrained area conduct and impact tests, then the financial parameters of the Supply Offer shall be set to their Reference Levels, including all energy offer blocks and all types of Start-Up Fees and the No-Load Fee.

### **III.A.5.5.3. General Threshold Commitment Mitigation.**

#### **III.A.5.5.3.1. Applicability.**

Mitigation pursuant to this section shall be applied to any Resource whose Lead Market Participant is determined to be a pivotal supplier.

#### **III.A.5.5.3.2. Conduct Test.**

A Resource shall fail the conduct test for general threshold commitment mitigation if any Start-Up Fee or No-Load Fee exceeds the Reference Level for that fee by 200% or more.

#### **III.A.5.5.3.3. Consequence of Failing Conduct Test.**

If a Resource fails the general threshold commitment conduct test, it shall be evaluated for commitment based on an offer with all financial parameters of its Supply Offer set to their Reference Levels, including all offer blocks and all types of Start-Up Fees and the No-Load Fee. If a Resource is committed, then all financial parameters of its Supply Offer are set to their Reference Levels.

### **III.A.5.5.4. Constrained Area Commitment Mitigation.**

#### **III.A.5.5.4.1. Applicability.**

Mitigation pursuant to this section shall be applied to any Resource determined to be within a constrained area in the Real-Time Energy Market.

#### **III.A.5.5.4.2. Conduct Test.**

A Resource shall fail the conduct test for constrained area commitment mitigation if any Start-Up Fee or the No-Load Fee is submitted with an increase greater than 25% above the Reference Level.

#### **III.A.5.5.4.3. Consequence of Failing Test.**

If a Supply Offer fails the constrained area commitment conduct test, it shall be evaluated for commitment based on an offer with all financial parameters set to their Reference Levels. This includes all energy offer blocks and all types of Start-Up Fees and the No-Load Fee. If a Resource is committed, then all financial parameters of its Supply Offer are set to their Reference Levels.

### **III.A.5.5.5. Local Reliability Commitment Mitigation.**

#### **III.A.5.5.5.1. Applicability.**

Mitigation pursuant to this section shall be applied to Supply Offers for Resources that are committed to provide, or Resources that are required to remain online to provide, one or more of the following:

- (a) local first contingency protection or local second contingency protections;
- (b) VAR or voltage support; or
- (c) Special Constraint Resource Service

#### **III.A.5.5.5.2. Minimum Run Time Conduct Test.**

All financial parameters of Supply Offers will be evaluated using the following formula:  
(Low Load Cost Minimum Run Time at Offer – Low Load Cost Minimum Run Time at Reference Level) = < Commitment Cost Threshold

Where,

Commitment Cost Threshold = 0.1 times Low Load Cost at Reference Level.

Low Load Cost = the cost of operating the Resource at its Economic Minimum Limit calculated using the following formula:

(Cold Start-Up Fee + (No Load Fee \* Minimum Run Time) + (Price of Energy at Economic Minimum Limit \* Economic Minimum Limit \* Minimum Run Time))

Low Load Cost Minimum Run Time at Offer = Low Load Cost calculated with financial parameters of the Supply Offer.

Low Load Cost Minimum Run Time at Reference Level = Low Load Cost calculated with the financial parameters of the Supply Offer set to Reference Levels.

Price of Energy at Economic Minimum Limit = the price for energy at the Resource's Economic Minimum Limit.

For Low Load Cost Minimum Run Time at Offer, the price for energy is the energy price parameter from the Supply Offer. For Low Load Cost Minimum Run Time at Reference Level, the Reference Level of the offer block at Economic Minimum Limit is used.

If a Resource's combined Minimum Run Time and Minimum Down Time exceed 24 hours, then the conduct test will use the greater of 24 hours or the Resource's Minimum Run Time for the Minimum Run Time.

If the (Low Load Cost Minimum Run Time at Offer – Low Load Cost Minimum Run Time at Reference Level) is greater than the Commitment Cost Threshold, then the conduct test is violated.

#### **III.A.5.5.5.3. Actual Run Time Conduct Test.**

If the Supply Offer for a Resource does not violate the conduct test in Section III.A.5.5.5.2, then all financial parameters of the Supply Offer will be evaluated using the following formula:

(Low Load Cost Actual Run Time at Offer – Low Load Cost Actual Run Time at Reference Level) = < Commitment Cost Threshold

Where,

Commitment Cost Threshold = 0.1 times Low Load Cost Actual Run Time at Reference Level.

Low Load Cost Actual Run Time = the cost of operating the Resource at its Economic Minimum Limit calculated using the following formula:

Cold Start-Up Fee + (No Load Fee \* actual local reliability run time) + (Price of Energy at Economic Minimum Limit \* Economic Minimum Limit \* actual local reliability run time), where

actual local reliability run time is the number of hours the Resource was operated in the Real-Time Energy Market to provide one or more of the services specified in Section III.A.5.5.5.1.

Low Load Cost Actual Run Time at Offer = Low Load Cost Actual Run Time calculated with financial parameters of the Supply Offer.

Low Load Cost Actual Run Time at Reference Level = Low Load Cost Actual Run Time calculated with the financial parameters of the Supply Offer set to Reference Levels.

Price of Energy at Economic Minimum Limit = the price for energy at the Resource's Economic Minimum Limit as reflected in the Supply Offer for the Resource.

For Low Load Cost Actual Run Time at Offer, the price for energy is the energy price parameter from the Supply Offer. For Low Load Cost Actual Run Time at Reference Level, the Reference Level of the offer block at Economic Minimum Limit is used.

If the (Low Load Cost Actual Run Time at Offer – Low Load Cost Actual Run Time at Reference Level) is greater than the Commitment Cost Threshold, then the conduct test is violated.

#### **III.A.5.5.5.4. Consequence of Failing Test.**

If a Supply Offer fails the local reliability commitment minimum run time conduct test specified in Section III.A.5.5.5.2, it shall be evaluated for commitment based on an offer with all financial parameters set to their Reference Levels. This includes all offer blocks and all types of Start-Up Fees and the No-Load Fee. If a Resource is committed, then all financial parameters of its Supply Offer are set to their Reference Level.

If a Supply Offer fails the local reliability commitment actual run time conduct test specified in Section III.A.5.5.5.3, then all financial parameters of the Supply Offer are set

to their Reference Level for purposes of calculating Day-Ahead Energy Market and Real-Time Energy Market revenues.

**III.A.5.6. Duration of Energy Threshold Mitigation.**

Any mitigation imposed pursuant to Sections III.A.5.5.1 “General Threshold Energy Mitigation” or III.A.5.5.2 “Constrained Area Threshold Energy Mitigation” is in effect for the following duration:

- (a) in the Real-Time Energy Market, mitigation starts when the impact test violation occurs and remains in effect until there is one complete hour in which:
  - (i) for general threshold mitigation, the Market Participant whose Supply Offer is subject to mitigation is not a pivotal supplier; or,
  - (ii) for constrained area energy mitigation, the Resource is not located within a constrained area.
- (b) in the Day-Ahead Energy Market, mitigation is in effect in each hour in which the impact test is violated.

**III.A.5.7. Duration of Commitment Mitigation.**

Any mitigation imposed pursuant to Sections III.A.5.5.3 “General Threshold Commitment Mitigation”, III.A.5.5.4 “Constrained Area Commitment Mitigation”, or III.A.5.5.5 “Local Reliability Commitment Mitigation” is in effect for the following duration:

- (a) in the Real-Time Energy Market, mitigation starts either;
  - a. on the first hour a Resource is directed to remain on-line by the ISO or;
  - b. in all other cases, at the time of the decision to commit the Resource.
- (b) in the Day-Ahead Energy Market, mitigation starts at the beginning of the Operating Day, and;
- (c) for both the Real-Time Energy Market and Day-Ahead Energy Market, mitigation remains in effect:
  - (i) for mitigation imposed pursuant to Sections III.A.5.5.3 or III.A.5.5.4, through the end of the Resource’s Minimum Run Time; and,
  - (ii) for mitigation imposed pursuant to Section III.A.5.5.5, through the end of the Resource’s Minimum Run Time or through the end of the period that the Resource is needed for reliability, whichever is later.

**III.A.5.8. Correction of Mitigation.**

If the Internal Market Monitor determines that there are one or more errors in the mitigation applied in an Operating Day due to data entry, system or software errors by the ISO or the Internal Market Monitor, the



Internal Market Monitor shall notify the market monitoring contacts specified by the Lead Market Participant within five business days of the applicable Operating Day. The ISO shall correct the error as part of the Data Reconciliation Process by applying the correct values to the relevant Supply Offer in the settlement process.

The permissibility of correction of errors in mitigation, and the timeframes and procedures for permitted corrections, are addressed solely in this section and not in those sections of Market Rule 1 relating to settlement and billing processes.

#### **III.A.5.9. Delay of Day-Ahead Energy Market Due to Mitigation Process.**

The posting of the Day-Ahead Energy Market results may be delayed if necessary for the completion of mitigation procedures.

#### **III.A.6. Physical Parameter Offer Thresholds.**

Physical parameters of a Supply Offer are limited to thresholds specified in this section. Physical parameters are limited by the software accepting offers, except those that can be re-declared in real time during the Operating Day. Parameters that exceed the thresholds specified here but are not limited through the software accepting offers are subject to Internal Market Monitor review after the Operating Day and possible referral to the Commission under Section III.A.19 of this Appendix.

##### **III.A.6.1. Time-Based Offer Parameters.**

Supply Offer parameters that are expressed in time (i.e., minimum run time, minimum down time, start time, and notification time) shall have a threshold of two hours for an individual parameter or six hours for the combination of the time-based offer parameters compared to the Resource's Reference Levels. Offers may not exceed these thresholds in a manner that reduce the flexibility of the Resource. To determine if the six hour threshold is exceeded, all time-based offer parameters will be summed for each start-up state (hot, intermediate and cold). If the sum of the time-based offer parameters for a start-up state exceeds six hours above the sum of the Reference Levels for those offer parameters, then the six hour threshold is exceeded.

##### **III.A.6.1.1. Other Offer Parameters.**

Non-financial or non-time-based offer parameters shall have a threshold of a 100% increase, or greater, for parameters that are minimum values, or a 50% decrease, or greater, for parameters

that are maximum values (including, but not limited to, ramp rates, Economic Maximum Limits and maximum starts per day) compared to the Resource's Reference Levels.

Offer parameters that are limited by performance caps or audit values imposed by the ISO are not subject to the provisions of this section.

### **III.A.7. Calculation of Resource Reference Levels for Physical Parameters and Financial Parameters of Resources.**

#### **III.A.7.1. Methods for Determining Reference Levels for Physical Parameters.**

The Internal Market Monitor will calculate a Reference Level for each element of a bid or offer that is expressed in units other than dollars (such as time-based or quantity level bid or offer parameters) on the basis of one or more of the following:

- (a) Original equipment manufacturer (OEM) operating recommendations and performance data for all Resource types in the New England Control Area, grouped by unit classes, physical parameters and fuel types.
- (b) Applicable environmental operating permit information currently on file with the issuing environmental regulatory body.
- (c) Verifiable Resource physical operating characteristic data, including but not limited to facility and/or Resource operating guides and procedures, historical operating data and any verifiable documentation related to the Resource, which will be reviewed in consultation with the Market Participant.

#### **III.A.7.2. Methods for Determining Reference Levels for Financial Parameters of Supply Offers.**

The Reference Levels for Start-Up Fees, No-Load Fees, and offer blocks will be calculated separately and assuming no costs from one component are included in another component.

##### **III.A.7.2.1. Order of Reference Level Calculation.**

The Internal Market Monitor will calculate a Reference Level for each offer block of a Supply Offer according to the following hierarchy, under which the first method that can be calculated is used:

- (a) accepted offer-based Reference Levels pursuant to Section III.A.7.3;

- (b) LMP-based Reference Levels pursuant to Section III.A.7.4; and,
- (c) cost-based Reference Levels pursuant to Section III.A.7.5.

**III.A.7.2.2. Circumstances in Which Cost-Based Reference Levels Supersede the Hierarchy of Reference Level Calculation.**

In the following circumstances, cost-based Reference Levels shall be used notwithstanding the hierarchy specified in Section III.A.7.2.1.

- (a) The cost-based Reference Level is higher than either the accepted offer-based or LMP-based Reference Level.
- (b) The Supply Offer parameter is a Start-Up Fee or the No-Load Fee.
- (c) The Lead Market Participant requests the cost-based Reference Level.
- (d) During the previous 90 days:
  - (i) the Resource has been flagged for VAR, SCR, or as a Local Second Contingency Protection Resource for any hour in the Day-Ahead Energy Market or the Real-Time Energy Market, and;
  - (ii) the ratio of the sum of the operating hours for days for which the Resource has been flagged during the previous 90 days in which the number of hours operated out of economic merit order in the Day-Ahead Energy Market and the Real-Time Energy Market exceed the number of hours operated in economic merit order in the Day-Ahead Energy Market and Real-Time Energy Market, to the total number of operating hours in the Day-Ahead Energy Market and Real-Time Energy Market during the previous 90 days is greater than or equal to 50 percent.

For the purposes of this subsection:

- i. A flagged day is any day in which the Resource has been flagged for VAR, SCR, or as a Local Second Contingency Protection Resource for any hour in either the Day-Ahead Energy Market or the Real-Time Energy Market.
- ii. Operating hours are the hours in the Day-Ahead Energy Market for which a Resource has cleared output (MW) greater than zero and hours in the Real-Time Energy Market for which a Resource has metered output (MW) greater than zero. For days for which Real-time Energy Market metered values are not yet available in the ISO's or the Internal Market Monitor's systems, telemetered values will be used.

- iii. Self-scheduled hours will be excluded from all of the calculations described in this subsection, including the determination of operating hours.
- iv. The determination as to whether a Resource operated in economic merit order during an hour will be based on the energy offer block within which the Resource is operating.

**III.A.7.3. Accepted Offer-Based Reference Level.**

The Internal Market Monitor shall calculate the accepted offer-based Reference Level as the lower of the mean or the median of a generating Resource's Supply Offers that have been accepted and are part of the seller's Day-Ahead Generation Obligation or Real-Time Generation Obligation in competitive periods over the previous 90 days, adjusted for changes in fuel prices utilizing fuel indices generally applicable for the location and type of Resource. For purposes of this section, a competitive period is an Operating Day in which the Resource is scheduled in economic merit order.

**III.A.7.4. LMP-Based Reference Level.**

The Internal Market Monitor shall calculate the LMP-based Reference Level as the mean of the LMP at the Resource's Node during the lowest-priced 25% of the hours that the Resource was dispatched over the previous 90 days for similar days (weekday or weekend day), adjusted for changes in fuel prices.

**III.A.7.5. Cost-Based Reference Level.**

The Internal Market Monitor shall calculate cost-based Reference Levels taking into account information on costs provided by the Market Participant through the consultation process prescribed in Section III.A.3.

The following criteria shall be applied to estimates of cost:

- (a) The provision of cost estimates by a Market Participant shall conform with the timing and requirements of Section III.A.3 "Consultation Prior to Determination of Reference Levels for Physical and Financial Parameters of Resources".
- (b) Costs must be documented.
- (c) All cost estimates shall be based on estimates of current market prices or replacement costs and not inventory costs wherever possible.
- (d) When market prices or replacement costs are unavailable, cost estimates shall identify whether the reported costs are the result of a product or service provided by an Affiliate of the Market Participant.

- (e) The Internal Market Monitor will evaluate cost information provided by the Market Participant in comparison to other information available to the Internal Market Monitor.

**III.A.7.5.1. Estimation of Incremental Operating Cost.**

The Internal Market Monitor's determination of a Resource's marginal costs shall include an assessment of the Resource's incremental operating costs in accordance with the following formulas,

Incremental Energy:

$(\text{incremental heat rate} * \text{fuel costs}) + (\text{emissions rate} * \text{emissions allowance price}) + \text{variable operating and maintenance costs} + \text{opportunity costs}.$

Opportunity costs may include, but are not limited to, economic costs associated with complying with:

- (a) emissions limits;
- (b) water storage limits; and,
- (c) other operating permits that limit production of energy.

No-Load:

$(\text{no-load fuel use} * \text{fuel costs}) + (\text{no-load emissions} * \text{emission allowance price})$   
+ no-load variable operating and maintenance costs + other no-load costs that are not fuel, emissions or variable and maintenance costs.

Start-Up:

$(\text{start-up fuel use} * \text{fuel costs}) + (\text{start-up emissions} * \text{emission allowance price}) + \text{start-up variable and maintenance costs} + \text{other start-up costs that are not fuel, emissions or variable and maintenance costs}.$

**III.A.8. Determination of Offer Competitiveness During Shortage Event.**

The Internal Market Monitor shall evaluate the competitiveness of the Supply Offer of each Resource with a Capacity Supply Obligation that is off-line during a Shortage Event, as described below. The evaluation for competitiveness shall be performed on Supply Offers in the Day-Ahead Energy Market and Supply Offers made during the Re-Offer Period. A determination of non-competitiveness for a Day-

Ahead Energy Market Supply Offer or a Supply Offer made during the Re-Offer Period which affects an hour shall constitute a finding of non-competitiveness for that hour.

- (a) The thresholds used for evaluation shall be the general thresholds in Sections III.A.5.5.1 and III.A.5.5.3 unless the constrained area mitigation thresholds apply in the Day-Ahead Energy Market or Real-Time Energy Market and the resource under evaluation could have fully or partially relieved the constraint during the applicable Shortage Event. If the constrained area mitigation thresholds apply, then the energy price Supply Offer parameter and the Start-Up Fee and No-Load Fee parameters shall be evaluated for competitiveness using the thresholds in Sections III.A.5.5.2 and III.A.5.5.4.
- (b) If the value of any of the following Supply Offer parameters for a resource exceeds the relevant thresholds for an hour, all MW for the resource for the hour shall be non-competitive:
  - (i) The Start-Up Fees and No-Load Fee;
  - (ii) Each time-based Supply Offer parameter;
  - (iii) The energy price Supply Offer parameter up to and including the Economic Minimum Limit.
- (c) If none of the parameters evaluated for competitiveness pursuant to Section III.A.8 (b) above are non-competitive for an hour, then the energy price parameter for each incremental Supply Offer block above the resource's Economic Minimum Limit shall be evaluated for competitiveness using the thresholds identified in Section III.A.8 (a) above, in order of lowest energy price to highest energy price. If any Supply Offer block is non-competitive, then that block and all blocks above it shall be non-competitive, and all blocks below it shall be competitive.

### **III.A.9. Regulation.**

The Internal Market Monitor will monitor the Regulation market for conduct that it determines constitutes an abuse of market power. If the Internal Market Monitor identifies any such conduct, it may make a filing under Section 205 of the Federal Power Act with the Commission requesting authorization to apply appropriate mitigation measures or to revise Market Rule 1 to address such conduct (or both). The Internal Market Monitor may make such a filing at any time it deems necessary, and may request expedited treatment from the Commission. Any such filing shall identify the particular conduct the Internal Market Monitor believes warrants mitigation or revisions to Market Rule 1 (or both), shall propose a specific mitigation measure for the conduct or revision to Market Rule 1 (or both), and shall set forth the Internal Market Monitor's justification for imposing that mitigation measure or revision to Market Rule 1 (or both).

### **III.A.10. Demand Bids.**

The Internal Market Monitor will monitor Demand Resources as outlined below:

- (a) LMPs in the Day-Ahead Energy Market and Real-Time Energy Market shall be monitored to determine whether there is a persistent hourly deviation in any location that would not be expected in a workably competitive market.
- (b) The Internal Market Monitor shall compute the average hourly deviation between Day-Ahead Energy Market and Real-Time Energy Market LMPs, measured as:  $(LMP_{\text{real time}} / LMP_{\text{day ahead}}) - 1$ . The average hourly deviation shall be computed over a rolling four-week period or such other period determined by the Internal Market Monitor.
- (c) The Internal Market Monitor shall estimate and monitor the average percentage of each Market Participant's bid to serve load scheduled in the Day-Ahead Energy Market, using a methodology intended to identify a sustained pattern of under-bidding as accurately as deemed practicable. The average percentage will be computed over a specified time period determined by the Internal Market Monitor.

If the Internal Market Monitor determines that: (i) The average hourly deviation is greater than ten percent (10%) or less than negative ten percent (-10%), (ii) one or more Market Participants on behalf of one or more LSEs have been purchasing a substantial portion of their loads with purchases in the Real-Time Energy Market, (iii) this practice has contributed to an unwarranted divergence of LMPs between the two markets, and (iv) this practice has created operational problems, the Internal Market Monitor may make a filing under Section 205 of the Federal Power Act with the Commission requesting authorization to apply appropriate mitigation measures or to revise Market Rule 1 to address such conduct (or both). The thresholds identified above shall not limit the Internal Market Monitor's authority to make such a filing. The Internal Market Monitor may make such a filing at any time it deems necessary, and may request expedited treatment from the Commission. Any such filing shall identify the particular conduct that the Internal Market Monitor believes warrants mitigation or revisions to Market Rule 1 (or both), shall propose a specific mitigation measure for the conduct or revision to Market Rule 1 (or both), and shall set forth the Internal Market Monitor's justification for imposing that mitigation measure or revision to Market Rule 1 (or both).

### **III.A.11. Mitigation of Increment Offers and Decrement Bids.**

#### **III.A.11.1. Purpose.**

The provisions of this section specify the market monitoring and mitigation measures applicable to Increment Offers and Decrement Bids. An Increment Offer is one to supply energy and a Decrement Bid is one to purchase energy, in either such case not being backed by physical load or generation and submitted in the Day-Ahead Energy Market in accordance with the procedures and requirements specified in Market Rule 1 and the ISO New England Manuals.

### **III.A.11.2. Implementation.**

#### **III.A.11.2.1. Monitoring of Increment Offers and Decrement Bids.**

Day-Ahead LMPs and Real-Time LMPs in each Load Zone or Node, as applicable, shall be monitored to determine whether there is a persistent hourly deviation in the LMPs that would not be expected in a workably competitive market. The Internal Market Monitor shall compute the average hourly deviation between Day-Ahead LMPs and Real-Time LMPs, measured as:

$$(\text{LMP}_{\text{real time}} / \text{LMP}_{\text{day ahead}}) - 1.$$

The average hourly deviation shall be computed over a rolling four-week period or such other period determined by the Internal Market Monitor to be appropriate to achieve the purpose of this mitigation measure.

### **III.A.11.3. Mitigation Measures.**

If the Internal Market Monitor determines that (i) the average hourly deviation computed over a rolling four week period is greater than ten percent (10%) or less than negative ten percent (-10%), and (ii) the bid and offer practices of one or more Market Participants has contributed to a divergence between LMPs in the Day-Ahead Energy Market and Real-Time Energy Market, then the following mitigation measure may be imposed:

The Internal Market Monitor may limit the hourly quantities of Increment Offers for supply or Decrement Bids for load that may be offered in a Location by a Market Participant, subject to the following provisions:

- (i) The Internal Market Monitor shall, when practicable, request explanations of the relevant bid and offer practices from any Market Participant submitting such bids.
- (ii) Prior to imposing a mitigation measure, the Internal Market Monitor shall notify the affected Market Participant of the limitation.



- (iii) The Internal Market Monitor, with the assistance of the ISO, will restrict the Market Participant for a period of six months from submitting any virtual transactions at the same Node(s), and/or electrically similar Nodes to, the Nodes where it had submitted the virtual transactions that contributed to the unwarranted divergence between the LMPs in the Day-Ahead Energy Market and Real-Time Energy Market.

#### **III.A.11.4. Monitoring and Analysis of Market Design and Rules.**

The Internal Market Monitor shall monitor and assess the impact of Increment Offers and Decrement Bids on the competitive structure and performance, and the economic efficiency of the New England Markets. Such monitoring and assessment shall include the effects, if any, on such bids and offers of any mitigation measures specified in this Market Rule 1.

#### **III.A.12. Cap on FTR Revenues.**

If a holder of an FTR between specified delivery and receipt Locations (i) had an Increment Offer and/or Decrement Bid that was accepted by the ISO for an applicable hour in the Day-Ahead Energy Market for delivery or receipt at or near delivery or receipt Locations of the FTR; and (ii) the result of the acceptance of such Increment Offer or Decrement Bid is that the difference in LMP in the Day-Ahead Energy Market between such delivery and receipt Locations is greater than the difference in LMP between such delivery and receipt Locations in the Real-Time Energy Market, then the Market Participant shall not receive any Transmission Congestion Credit associated with such FTR in such hour, in excess of one divided by the number of hours in the applicable month multiplied by the amount originally paid for the FTR in the FTR Auction. A Location shall be considered at or near the FTR delivery or receipt Location if seventy-five % or more of the energy injected or withdrawn at that Location and which is withdrawn or injected at another Location is reflected in the constrained path between the subject FTR delivery and receipt Locations that were acquired in the FTR Auction.

#### **III.A.13. Additional Internal Market Monitor Functions Specified in Tariff.**

##### **III.A.13.1. Review of Offers and Bids in the Forward Capacity Market.**

In accordance with the following provisions of Section III.13 of Market Rule 1, the Internal Market Monitor is responsible for reviewing certain bids and offers made in the Forward Capacity Market. Section III.13 of Market Rule 1 specifies the nature and detail of the Internal Market Monitor's review and the consequences that will result from the Internal Market Monitor's determination following such review.

- (a) [Reserved].
- (b) Section III.13.1.2.2.5.2 “Requirements for an Existing Generating Capacity Resource, Existing Demand Resource or Existing Import Capacity Resource Having a Higher Summer Qualified Capacity than Winter Qualified Capacity.”
- (c) Section III.13.1.2.3.2 “Review by Internal Market Monitor of Bids from Existing Generating Capacity Resources.”
- (d) Section III.13.1.3.5.6 “Review by Internal Market Monitor of Offers from New Import Capacity Resources and Existing Import Capacity.”
- (e) Section III.13.1.7 “Internal Market Monitor Review of Offers and Bids.”

**III.A.13.2. Supply Offers and Demand Bids Submitted for Reconfiguration Auctions in the Forward Capacity Market.**

Section III.13.4 of Market Rule 1 addresses reconfiguration auctions in the Forward Capacity Market. As addressed in Section III.13.4.2 of Market Rule 1, a supply offer or demand bid submitted for a reconfiguration auction shall not be subject to mitigation by the Internal Market Monitor.

**III.A.13.3. Monitoring of Transmission Facility Outage Scheduling.**

*Appendix G* of Market Rule 1 addresses the scheduling of outages for transmission facilities. The Internal Market Monitor shall monitor the outage scheduling activities of the Transmission Owners. The Internal Market Monitor shall have the right to request that each Transmission Owner provide information to the Internal Market Monitor concerning the Transmission Owner’s scheduling of transmission facility outages, including the repositioning or cancellation of any interim approved or approved outage, and the Transmission Owner shall provide such information to the Internal Market Monitor in accordance with the ISO New England Information Policy.

**III.A.13.4. Monitoring of Forward Reserve Resources.**

The Internal Market Monitor will receive information that will identify Forward Reserve Resources, the Forward Reserve Threshold Price, and the assigned Forward Reserve Obligation. Prior to mitigation of Supply Offers or Demand Bids associated with a Forward Reserve Resource, the Internal Market Monitor shall consult with the Market Participant in accordance with Section III.A.3 of this *Appendix A*. The Internal Market Monitor and the Market Participant shall consider the impact on meeting any Forward Reserve Obligations in those consultations. If mitigation is imposed, any mitigated offers shall be used in the calculation of qualifying megawatts under Section III.9.6.4 of Market Rule 1.

**III.A.13.5. Imposition of Sanctions.**

*Appendix B* of Market Rule 1 sets forth the procedures and standards under which sanctions may be imposed for certain violations of Market Participants' obligations under the ISO New England Filed Documents and other ISO New England System Rules. The Internal Market Monitor shall administer *Appendix B* in accordance with the provisions thereof.

**III.A.14. Treatment of Supply Offers for Resources Subject to a Cost-of-Service Agreement.**

Article 5 of the form of Cost-of-Service Agreement in *Appendix I* to Market Rule 1 addresses the monitoring of resources subject to a cost-of-service agreement by the Internal Market Monitor and External Market Monitor. Pursuant to Section 5.2 of Article 5 of the Form of Cost-of-Service Agreement, after consultation with the Lead Participant, Supply Offers that exceed Stipulated Variable Cost as determined in the agreement are subject to adjustment by the Internal Market Monitor to Stipulated Variable Cost.

**III.A.15. Request for Additional Cost Recovery.**

**III.A.15.1. Filing Right.**

If

- (a) mitigation has been applied to a Resource under this Appendix A for all or part of one or more Operating Days, or
- (b) in the absence of mitigation, a Market Participant submitted a Supply Offer at the energy offer cap specified in Section III.1.10.1.A(d) of Market Rule 1 for a Resource, or
- (c) at the direction of the ISO a Market Participant has adjusted the output of a Resource to an amount that exceeds the amount scheduled for the Resource in the Day-Ahead Energy Market to address a critical reliability issue that has resulted in the ISO declaring an abnormal conditions alert for one of the reasons specified in Section III.A.15.1.1 below,

and as a result of the action in (a) or (c), or despite the action in (b), the Market Participant believes that it will not recover the fuel and variable operating and maintenance costs of the Resource for those Operating Days, the Market Participant may, within sixty days of the receipt of the first Invoice issued

containing credits or charges for the applicable Operating Day, submit a filing to the Commission seeking recovery of those costs pursuant to Section 205 of the Federal Power Act.

A request under this Section III.A.15 may seek recovery of additional costs incurred during the following periods: (a) if as a result of mitigation, costs incurred for the duration of the mitigation event, (b) if as a result of having submitted a Supply Offer at the energy offer cap, costs incurred for the duration of the period of time for which the Resource was operated at the energy offer cap, and (c) if as a result of being operated to address a critical reliability issue that has resulted in the ISO declaring an abnormal conditions alert, for the duration of the period of time when the Resource was required to operate to address the critical reliability issue, but only for the amount by which the actual incremental costs of operating the Resource in excess of the amount scheduled in the Day-Ahead Energy Market exceeded the incremental costs as reflected in the Supply Offer.

**III.A.15.1.1. Basis for declaration of an abnormal conditions alert.**

- (a) Forecasted or actual deficiency of operating reserves requiring implementation of ISO New England Operating Procedure No. 4, Action During a Capacity Deficiency, or ISO New England Operating Procedure No. 7, Action in an Emergency.
- (b) The electric system in New England experiences low transmission voltages and/or low reactive reserves.
- (c) A solar magnetic disturbance occurs.
- (d) A cold weather event is declared.
- (e) Inability to provide first contingency protection when an undesirable post-contingency condition might result, such as load shedding.
- (f) A credible threat to power system reliability is made, such as sabotage or an approaching storm.
- (g) Operational staffing shortage impacting normal power system operations within New England occurs.

(h) Any other condition that may cause a critical reliability issue as determined by the ISO's operations shift supervisor or the Local Control Center system operator.

For purposes of this Section III.A.15, declaring an action of ISO New England Operating Procedure No.4 or ISO New England Operating Procedure No. 7 shall be treated as declaring an abnormal conditions alert.

**III.A.15.2. Contents of Filing.**

Any Section 205 filing made pursuant to this section shall include: (i) the actual fuel and variable operating and maintenance costs for the Resource for the applicable Operating Days, with supporting data and calculations for those costs; (ii) an explanation of (a) why the actual costs of operating the Resource for the Operating Days exceeded the Reference Level costs or, (b) in the absence of mitigation, why the actual costs of operating the Resource for the Operating Days exceeded the costs as reflected in the Supply Offer at the energy offer cap; or, (c) why the actual incremental costs of operating the Resource in excess of the amount scheduled in the Day-Ahead Market, during the time period for which the ISO has declared an abnormal conditions alert for the Operating Day, exceeded in the incremental costs as reflected in the supply Offer; (iii) the Internal Market Monitor's written explanation provided pursuant to Section III.A.15.3; and (iv) all requested regulatory costs in connection with the filing.

**III.A.15.3. Review by Internal Market Monitor Prior to Filing.**

Within twenty days of the receipt of the first Invoice containing credits or charges for the applicable Operating Day, a Market Participant that intends to make a Section 205 filing pursuant to this Section III.A.15 shall submit to the Internal Market Monitor the information and explanation detailed in Section III.A.15.2 (i) and (ii) that is to be included in the Section 205 filing. Within twenty days of the receipt of a completed submittal, the Internal Market Monitor shall provide a written explanation of the events that resulted in the Section III.A.15 request for additional cost recovery. The Market Participant shall include the Internal Market Monitor's written explanation in the Section 205 filing made pursuant to this Section III A.15.

**III.A.15.4. Cost Allocation.**

In the event that the Commission accepts a Market Participant's filing for cost recovery under this section, the ISO shall allocate charges to Market Participants for payment of those costs in accordance with the cost allocation provisions of Market Rule 1 that otherwise would apply to payments for the services provided based on the Resource's actual dispatch for the Operating Days in question.

### **III.A.16. ADR Review of Internal Market Monitor Mitigation Actions.**

#### **III.A.16.1. Actions Subject to Review.**

A Market Participant may obtain prompt Alternative Dispute Resolution (“ADR”) review of any Internal Market Monitor mitigation imposed on a Resource as to which that Market Participant has bidding or operational authority. A Market Participant must seek review pursuant to the procedure set forth in *Appendix D* to this Market Rule 1, but in all cases within the time limits applicable to billing adjustment requests. These deadlines are currently specified in the ISO New England Manuals. Actions subject to review are:

- Imposition of a mitigation remedy.
- Continuation of a mitigation remedy as to which a Market Participant has submitted material evidence of changed facts or circumstances. (Thus, after a Market Participant has unsuccessfully challenged imposition of a mitigation remedy, it may challenge the continuation of that mitigation in a subsequent ADR review on a showing of material evidence of changed facts or circumstances.)

#### **III.A.16.2. Standard of Review.**

On the basis of the written record and the presentations of the Internal Market Monitor and the Market Participant, the ADR Neutral shall review the facts and circumstances upon which the Internal Market Monitor based its decision and the remedy imposed by the Internal Market Monitor. The ADR Neutral shall remove the Internal Market Monitor’s mitigation only if it concludes that the Internal Market Monitor’s application of the Internal Market Monitor mitigation policy was clearly erroneous. In considering the reasonableness of the Internal Market Monitor’s action, the ADR Neutral shall consider whether adequate opportunity was given to the Market Participant to present information, any voluntary remedies proposed by the Market Participant, and the need of the Internal Market Monitor to act quickly to preserve competitive markets.

### **III.A.17. Reporting.**

#### **III.A.17.1. Data Collection and Retention.**

Market Participants shall provide the Internal Market Monitor and External Market Monitor with any and all information within their custody or control that the Internal Market Monitor or External Market Monitor deems necessary to perform its obligations under this *Appendix A*, subject to applicable confidentiality limitations contained in the ISO New England Information Policy. This would include a

Market Participant's cost information if the Internal Market Monitor or External Market Monitor deems it necessary, including start up, no-load and all other actual marginal costs, when needed for monitoring or mitigation of that Market Participant. Additional data requirements may be specified in the ISO New England Manuals. If for any reason the requested explanation or data is unavailable, the Internal Market Monitor and External Market Monitor will use the best information available in carrying out their responsibilities. The Internal Market Monitor and External Market Monitor may use any and all information they receive in the course of carrying out their market monitor and mitigation functions to the extent necessary to fully perform those functions.

Market Participants must provide data and any other information requested by the Internal Market Monitor that the Internal Market Monitor requests to determine:

- (a) the opportunity costs associated with Demand Reduction Offers;
- (b) the accuracy of Demand Response Baselines;
- (c) the method used to achieve a demand reduction, and;
- (d) the accuracy of reported demand levels.

### **III.A.17.2. Periodic Reporting by the ISO and Internal Market Monitor.**

#### **III.A.17.2.1. Monthly Report.**

The ISO will prepare a monthly report, which will be available to the public both in printed form and electronically, containing an overview of the market's performance in the most recent period.

#### **III.A.17.2.2. Quarterly Report.**

The Internal Market Monitor will prepare a quarterly report consisting of market data regularly collected by the Internal Market Monitor in the course of carrying out its functions under this *Appendix A* and analysis of such market data. Final versions of such reports shall be disseminated contemporaneously to the Commission, the ISO Board of Directors, the Market Participants, and state public utility commissions for each of the six New England states, provided that in the case of the Market Participants and public utility commissions, such information shall be redacted as necessary to comply with the ISO New England Information Policy. The format and content of the quarterly reports will be updated periodically through consensus of the Internal Market Monitor, the Commission, the ISO, the public utility commissions of the six New England States and Market Participants. The entire quarterly report

will be subject to confidentiality protection consistent with the ISO New England Information Policy and the recipients will ensure the confidentiality of the information in accordance with state and federal laws and regulations. The Internal Market Monitor will make available to the public a redacted version of such quarterly reports. The Internal Market Monitor, subject to confidentiality restrictions, may decide whether and to what extent to share drafts of any report or portions thereof with the Commission, the ISO, one or more state public utility commission(s) in New England or Market Participants for input and verification before the report is finalized. The Internal Market Monitor shall keep the Market Participants informed of the progress of any report being prepared pursuant to the terms of this *Appendix A*.

**III.A.17.2.3. Reporting on General Performance of the Forward Capacity Market.**

The performance of the Forward Capacity Market, including reconfiguration auctions, shall be subject to the review of the Internal Market Monitor. No later than 180 days after the completion of the second Forward Capacity Auction, the Internal Market Monitor shall file with the Commission and post to the ISO's website a full report analyzing the operations and effectiveness of the Forward Capacity Market. Thereafter, the Internal Market Monitor shall report on the functioning of the Forward Capacity Market in its annual markets report in accordance with the provisions of Section III.A.17.2.4 of this *Appendix A*.

**III.A.17.2.4. Annual Review and Report by the Internal Market Monitor.**

The Internal Market Monitor will prepare an annual state of the market report on market trends and the performance of the New England Markets and will present an annual review of the operations of the New England Markets. The annual report and review will include an evaluation of the procedures for the determination of energy, reserve and regulation clearing prices, NCPC costs and the performance of the Forward Capacity Market and FTR Auctions. The review will include a public forum to discuss the performance of the New England Markets, the state of competition, and the ISO's priorities for the coming year. In addition, the Internal Market Monitor will arrange a non-public meeting open to appropriate state or federal government agencies, including the Commission and state regulatory bodies, attorneys general, and others with jurisdiction over the competitive operation of electric power markets, subject to the confidentiality protections of the ISO New England Information Policy, to the greatest extent permitted by law.

**III.A.17.3. Periodic Reporting by the External Market Monitor.**



The External Market Monitor will perform independent evaluations and prepare annual and ad hoc reports on the overall competitiveness and efficiency of the New England Markets or particular aspects of the New England Markets, including the adequacy of *Appendix A*. The External Market Monitor shall have the sole discretion to determine whether and when to prepare ad hoc reports and may prepare such reports on its own initiative or pursuant to requests by the ISO, state public utility commissions or one or more Market Participants. Final versions of such reports shall be disseminated contemporaneously to the Commission, the ISO Board of Directors, the Market Participants, and state public utility commissions for each of the six New England states, provided that in the case of the Market Participants and public utility commissions, such information shall be redacted as necessary to comply with the ISO New England Information Policy. Such reports shall, at a minimum, include:

- (i) Review and assessment of the practices, market rules, procedures, protocols and other activities of the ISO insofar as such activities, and the manner in which the ISO implements such activities, affect the competitiveness and efficiency of New England Markets.
- (ii) Review and assessment of the practices, procedures, protocols and other activities of any independent transmission company, transmission provider or similar entity insofar as its activities affect the competitiveness and efficiency of the New England Markets.
- (iii) Review and assessment of the activities of Market Participants insofar as these activities affect the competitiveness and efficiency of the New England Markets.
- (iv) Review and assessment of the effectiveness of *Appendix A* and the administration of *Appendix A* by the Internal Market Monitor for consistency and compliance with the terms of *Appendix A*.
- (v) Review and assessment of the relationship of the New England Markets with any independent transmission company and with adjacent markets.

The External Market Monitor, subject to confidentiality restrictions, may decide whether and to what extent to share drafts of any report or portions thereof with the Commission, the ISO, one or more state public utility commission(s) in New England or Market Participants for input and verification before the report is finalized. The External Market Monitor shall keep the Market Participants informed of the progress of any report being prepared.

#### **III.A.17.4. Other Internal Market Monitor or External Market Monitor Communications With Government Agencies.**

##### **III.A.17.4.1. Routine Communications.**

The periodic reviews are in addition to any routine communications the Internal Market Monitor or External Market Monitor may have with appropriate state or federal government agencies, including the Commission and state regulatory bodies, attorneys general, and others with jurisdiction over the competitive operation of electric power markets.

**III.A.17.4.2. Additional Communications.**

The Internal Market Monitor and External Market Monitor are not a regulatory or enforcement agency. However, they will monitor market trends, including changes in Resource ownership as well as market performance. In addition to the information on market performance and mitigation provided in the monthly, quarterly and annual reports the External Market Monitor or Internal Market Monitor shall:

- (a) Inform the jurisdictional state and federal regulatory agencies, as well as the Markets Committee, if the External Market Monitor or Internal Market Monitor determines that a market problem appears to be developing that will not be adequately remediable by existing market rules or mitigation measures;
- (b) If the External Market Monitor or Internal Market Monitor receives information from any entity regarding an alleged violation of law, refer the entity to the appropriate state or federal agencies;
- (c) If the External Market Monitor or Internal Market Monitor reasonably concludes, in the normal course of carrying out its monitoring and mitigation responsibilities, that certain market conduct constitutes a violation of law, report these matters to the appropriate state and federal agencies; and,
- (d) Provide the names of any companies subjected to mitigation under these procedures as well as a description of the behaviors subjected to mitigation and any mitigation remedies or sanctions applied.

**III.A.17.4.3. Confidentiality.**

Information identifying particular participants required or permitted to be disclosed to jurisdictional bodies under this section shall be provided in a confidential report filed under Section 388.112 of the Commission regulations and corresponding provisions of other jurisdictional agencies. The Internal Market Monitor will include the confidential report with the quarterly submission it provides to the Commission pursuant to Section III.A.17.2.2.

**III.A.17.5. Other Information Available from Internal Market Monitor and External Market Monitor on Request by Regulators.**

The Internal Market Monitor and External Market Monitor will normally make their records available as described in this paragraph to authorized state or federal agencies, including the Commission and state regulatory bodies, attorneys general and others with jurisdiction over the competitive operation of electric power markets (“authorized government agencies”). With respect to state regulatory bodies and state attorneys general (“authorized state agencies”), the Internal Market Monitor and External Market Monitor shall entertain information requests for information regarding general market trends and the performance of the New England Markets, but shall not entertain requests that are designed to aid enforcement actions of a state agency. The Internal Market Monitor and External Market Monitor shall promptly make available all requested data and information that they are permitted to disclose to authorized government agencies under the ISO New England Information Policy. Notwithstanding the foregoing, in the event an information request is unduly burdensome in terms of the demands it places on the time and/or resources of the Internal Market Monitor or External Market Monitor, the Internal Market Monitor or External Market Monitor shall work with the authorized government agency to modify the scope of the request or the time within which a response is required, and shall respond to the modified request.

The Internal Market Monitor and External Market Monitor also will comply with compulsory process, after first notifying the owner(s) of the items and information called for by the subpoena or civil investigative demand and giving them at least ten business days to seek to modify or quash the compulsory process. If an authorized government agency makes a request in writing, other than compulsory process, for information or data whose disclosure to authorized government agencies is not permitted by the ISO New England Information Policy, the Internal Market Monitor and External Market Monitor shall notify each party with an interest in the confidentiality of the information and shall process the request under the applicable provisions of the ISO New England Information Policy. Requests from the Commission for information or data whose disclosure is not permitted by the ISO New England Information Policy shall be processed under Section 3.2 of the ISO New England Information Policy. Requests from authorized state agencies for information or data whose disclosure is not permitted by the ISO New England Information Policy shall be processed under Section 3.3 of the ISO New England Information Policy. In the event confidential information is ultimately released to an authorized state agency in accordance with Section 3.3 of the ISO New England Information Policy, any party with an interest in the confidentiality of the information shall be permitted to contest the factual content of the information, or to provide context to such information, through a written statement provided to the

Internal Market Monitor or External Market Monitor and the authorized state agency that has received the information.

**III.A.18. Ethical Conduct Standards.**

**III.A.18.1. Compliance with ISO New England Inc. Code of Conduct.**

The employees of the ISO that perform market monitoring and mitigation services for the ISO and the employees of the External Market Monitor that perform market monitoring and mitigation services for the ISO shall execute and shall comply with the terms of the ISO New England Inc. Code of Conduct attached hereto as *Exhibit 5*.

**III.A.18.2. Additional Ethical Conduct Standards.**

The employees of the ISO that perform market monitoring and mitigation services for the ISO and the employees of the External Market Monitor that perform market monitoring and mitigation services for the ISO shall also comply with the following additional ethical conduct standards. In the event of a conflict between one or more standards set forth below and one or more standards contained in the ISO New England Inc. Code of Conduct, the more stringent standard(s) shall control.

**III.A.18.2.1. Prohibition on Employment with a Market Participant.**

No such employee shall serve as an officer, director, employee or partner of a Market Participant.

**III.A.18.2.2. Prohibition on Compensation for Services.**

No such employee shall be compensated, other than by the ISO or, in the case of employees of the External Market Monitor, by the External Market Monitor, for any expert witness testimony or other commercial services, either to the ISO or to any other party, in connection with any legal or regulatory proceeding or commercial transaction relating to the ISO or the New England Markets.

**III.A.18.2.3. Additional Standards Applicable to External Market Monitor.**

In addition to the standards referenced in the remainder of this Section 18 of *Appendix A*, the employees of the External Market Monitor that perform market monitoring and mitigation services for the ISO are subject to conduct standards set forth in the External Market Monitor Services Agreement entered into between the External Market Monitor and the ISO, as amended from time-to-time. In the event of a conflict between one or more standards set forth in the

External Market Monitor Services Agreement and one or more standards set forth above or in the ISO New England Inc. Code of Conduct, the more stringent standard(s) shall control.

**III.A.19. Protocols on Referral to the Commission of Suspected Violations.**

- (A) The Internal Market Monitor or External Market Monitor is to make a non-public referral to the Commission in all instances where the Internal Market Monitor or External Market Monitor has reason to believe that a Market Violation has occurred. While the Internal Market Monitor or External Market Monitor need not be able to prove that a Market Violation has occurred, the Internal Market Monitor or External Market Monitor is to provide sufficient credible information to warrant further investigation by the Commission. Once the Internal Market Monitor or External Market Monitor has obtained sufficient credible information to warrant referral to the Commission, the Internal Market Monitor or External Market Monitor is to immediately refer the matter to the Commission and desist from independent action related to the alleged Market Violation. This does not preclude the Internal Market Monitor or External Market Monitor from continuing to monitor for any repeated instances of the activity by the same or other entities, which would constitute new Market Violations. The Internal Market Monitor or External Market Monitor is to respond to requests from the Commission for any additional information in connection with the alleged Market Violation it has referred.
- (B) All referrals to the Commission of alleged Market Violations are to be in writing, whether transmitted electronically, by fax, mail or courier. The Internal Market Monitor or External Market Monitor may alert the Commission orally in advance of the written referral.
- (C) The referral is to be addressed to the Commission's Director of the Office of Enforcement, with a copy also directed to both the Director of the Office of Energy Market Regulation and the General Counsel.
- (D) The referral is to include, but need not be limited to, the following information
- (1) The name(s) of and, if possible, the contact information for, the entity(ies) that allegedly took the action(s) that constituted the alleged Market Violation(s);
  - (2) The date(s) or time period during which the alleged Market Violation(s) occurred and whether the alleged wrongful conduct is ongoing;
  - (3) The specific rule or regulation, and/or tariff provision, that was allegedly violated, or the nature of any inappropriate dispatch that may have occurred;
  - (4) The specific act(s) or conduct that allegedly constituted the Market Violation;
  - (5) The consequences to the market resulting from the acts or conduct, including, if known, an estimate of economic impact on the market;

- (6) If the Internal Market Monitor or External Market Monitor believes that the act(s) or conduct constituted a violation of the anti-manipulation rule of Part 1c of the Commission's Rules and Regulations, 18 C.F.R. Part 1c, a description of the alleged manipulative effect on market prices, market conditions, or market rules;
  - (7) Any other information the Internal Market Monitor or External Market Monitor believes is relevant and may be helpful to the Commission.
- (E) Following a referral to the Commission, the Internal Market Monitor or External Market Monitor is to continue to notify and inform the Commission of any information that the Internal Market Monitor or External Market Monitor learns of that may be related to the referral, but the Internal Market Monitor or External Market Monitor is not to undertake any investigative steps regarding the referral except at the express direction of the Commission or Commission staff.

**III.A.20. Protocol on Referrals to the Commission of Perceived Market Design Flaws and Recommended Tariff Changes.**

- (A) The Internal Market Monitor or External Market Monitor is to make a referral to the Commission in all instances where the Internal Market Monitor or External Market Monitor has reason to believe market design flaws exist that it believes could effectively be remedied by rule or tariff changes. The Internal Market Monitor or External Market Monitor must limit distribution of its identifications and recommendations to the ISO and to the Commission in the event it believes broader dissemination could lead to exploitation, with an explanation of why further dissemination should be avoided at that time.
- (B) All referrals to the Commission relating to perceived market design flaws and recommended tariff changes are to be in writing, whether transmitted electronically, by fax, mail, or courier. The Internal Market Monitor or External Market Monitor may alert the Commission orally in advance of the written referral.
- (C) The referral should be addressed to the Commission's Director of the Office of Energy Market Regulation, with copies directed to both the Director of the Office of Enforcement and the General Counsel.
- (D) The referral is to include, but need not be limited to, the following information:
  - (1) A detailed narrative describing the perceived market design flaw(s);
  - (2) The consequences of the perceived market design flaw(s), including, if known, an estimate of economic impact on the market;
  - (3) The rule or tariff change(s) that the Internal Market Monitor or External Market Monitor believes could remedy the perceived market design flaw;

(4) Any other information the Internal Market Monitor or External Market Monitor believes is relevant and may be helpful to the Commission.

(E) Following a referral to the Commission, the Internal Market Monitor or External Market Monitor is to continue to notify and inform the Commission of any additional information regarding the perceived market design flaw, its effects on the market, any additional or modified observations concerning the rule or tariff changes that could remedy the perceived design flaw, any recommendations made by the Internal Market Monitor or External Market Monitor to the regional transmission organization or independent system operator, stakeholders, market participants or state commissions regarding the perceived design flaw, and any actions taken by the regional transmission organization or independent system operator regarding the perceived design flaw.

### **III.A.21 Review of Offers From New Resources in the Forward Capacity Market.**

The Internal Market Monitor shall review offers from new resources in the Forward Capacity Auction as described in this Section III.A.21.

#### **III.A.21.1 Offer Review Trigger Prices.**

For each new technology type, the Internal Market Monitor shall establish an Offer Review Trigger Price. Offers in the Forward Capacity Auction at prices that are equal to or above the relevant Offer Review Trigger Price will not be subject to further review by the Internal Market Monitor. A request to submit offers in the Forward Capacity Auction at prices that are below the relevant Offer Review Trigger Price must be submitted in advance of the Forward Capacity Auction as described in Sections III.13.1.1.2.2.3 or III.13.1.4.2.4 and shall be reviewed by the Internal Market Monitor as described in this Section III.A.21.

##### **III.A.21.1.1 Offer Review Trigger Prices for the Ninth Forward Capacity Auction.**

For resources other than New Import Capacity Resources, the Offer Review Trigger Prices for the ninth Forward Capacity Auction (for the Capacity Commitment Period beginning on June 1, 2018) shall be as follows:

<b>Generation Resources</b>	
<b>Technology Type</b>	<b>Offer Review Trigger Price (\$/kW-month)</b>
Combustion Turbine	\$13.424
Combined Cycle Gas Turbine	\$8.866
On-Shore Wind	\$0.000

<b>Demand Resources - Commercial and Industrial</b>	
<b>Technology Type</b>	<b>Offer Review Trigger Price (\$/kW-month)</b>
Load Management	\$1.145
Distributed Generation	based on generation technology type
Energy Efficiency	\$0.000

<b>Demand Resources – Residential</b>	
<b>Technology Type</b>	<b>Offer Review Trigger Price (\$/kW-month)</b>
Load Management	\$7.094
Distributed Generation	based on generation technology type
Energy Efficiency	\$0.000

<b>Other Resources</b>	
All other technology types	Forward Capacity Auction Starting Price


Where a new resource is composed of assets having different technology types, the resource shall have an Offer Review Trigger Price equal to the highest of the applicable Offer Review Trigger Prices.

For a New Import Capacity Resource that is backed by a single new External Resource and that is associated with an investment in transmission that increases New England’s import capability, the Offer Review Trigger Prices in the table above shall apply, based on the technology type of the External Resource.

For any other New Import Capacity Resource, the Offer Review Trigger Price shall be \$0.00/kW-month.

**III.A.21.1.2 Calculation of Offer Review Trigger Prices.**



(a) The Offer Review Trigger Price for each of the technology types listed above shall be recalculated using updated data no less often than once every three years. Where any Offer Review Trigger Price is recalculated, the Internal Market Monitor will review the results of the recalculation with stakeholders and the new Offer Review Trigger Price shall be filed with the Commission prior to the Forward Capacity Auction in which the Offer Review Trigger Price is to apply.

(b) For new generation resources, the methodology used to develop the Offer Review Trigger Price is as follows. Capital costs, expected non-capacity revenues and operating costs, assumptions regarding depreciation, taxes and discount rate are input into a capital budgeting model which is used to calculate the break-even contribution required from the Forward Capacity Market to yield a discounted cash flow with a net present value of zero for the project. The Offer Review Trigger Price is set equal to the year-one capacity price output from the model. The model looks at 20 years of real-dollar cash flows discounted at a rate (Weighted Average Cost of Capital) consistent with that expected of a project whose output is under contract (i.e., a contract negotiated at arm's length between two unrelated parties).

(c) For new energy efficiency Demand Resources, the methodology used to develop the Offer Review Trigger Price shall be the same as that used for new generation resources, with the following exceptions. First, the model takes account of all costs incurred by the utility and end-use customer to deploy the efficiency measure. Second, rather than energy revenues, the model recognizes end-use customer savings associated with the efficiency programs. Third, the model assumes that all costs are expensed as incurred. Fourth, the benefits realized by end-use customers are assumed to have no tax implications for the utility. Fifth, the model discounts cash flows over the Measure Life of the energy efficiency measure.

(d) For new Demand Resources other than energy efficiency Demand Resources, the methodology used to develop the Offer Review Trigger Price is the same as that used for new generation resources, except that the model discounts cash flows over the contract life. For Demand Resources (other than those using energy efficiency) that are composed primarily of large commercial or industrial customers that use pre-existing equipment or strategies, incremental costs include new equipment costs and annual operating costs such as customer incentives and sales representative commissions. For Demand Resources (other than energy efficiency Demand Resources) primarily composed of residential or small commercial customers that do not use pre-existing equipment or strategies, incremental costs include equipment costs,

customer incentives, marketing, sales, and recruitment costs, operations and maintenance costs, and software and network infrastructure costs.

(e) For years in which no full recalculation is performed pursuant to subsection (a) above, the Offer Review Trigger Prices will be adjusted as follows:

(1) Each line item associated with capital costs that is included in the capital budgeting model will be associated with the indices included in the table below:

<b>Cost Component</b>	<b>Index</b>
Gas Turbines	BLS-PPI "Turbines and Turbine Generator Sets"
Steam Turbines	BLS-PPI "Turbines and Turbine Generator Sets"
Wind Turbines	Bloomberg Wind Turbine Price Index
Other Equipment	BLS-PPI "General Purpose Machinery and Equipment"
Construction Labor	BLS "Quarterly Census of Employment and Wages" 2371 Utility System Construction Average Annual Pay: <ul style="list-style-type: none"> <li>- Combustion Turbine and Combined Cycle Gas Turbine costs to be indexed to values corresponding to the location of Hampden County, Massachusetts</li> <li>- On-shore Wind costs to be indexed to values corresponding to the location of Cumberland County, Maine</li> </ul>
Other Labor	BLS "Quarterly Census of Employment and Wages" 2211 Power Generation and Supply Average Annual Pay: <ul style="list-style-type: none"> <li>- Combustion Turbine and Combined Cycle Gas Turbine costs to be indexed to values corresponding to the location of Hampden County, Massachusetts</li> <li>- On-Shore Wind costs to be indexed to values corresponding to the location of Cumberland County, Maine</li> </ul>
Materials	BLS-PPI "Materials and Components for Construction"
Electric Interconnection	BLS - PPI "Electric Power Transmission, Control, and Distribution"
Gas Interconnection	BLS - PPI "Natural Gas Distribution: Delivered to ultimate consumers for the account of others (transportation only)"
Fuel Inventories	Federal Reserve Bank of St. Louis "Gross Domestic Product: Implicit Price Deflator (GDPDEF)"

(2) Each line item associated with fixed operating and maintenance costs that is included in the capital budgeting model will be associated with the indices included in the table below:

<b>Cost Component</b>	<b>Index</b>
Labor, Administrative and General	BLS "Quarterly Census of Employment and Wages" 2211 Power Generation and Supply Average Annual Pay: <ul style="list-style-type: none"> <li>- Combustion Turbine and Combined Cycle Gas Turbine costs to be indexed to values corresponding to the location of Hampden County, Massachusetts</li> </ul>

	- On-Shore Wind costs to be indexed to values corresponding to the location of Cumberland County, Maine
Materials and Contract Services	BLS-PPI "Materials and Components for Construction"
Site Leasing Costs	Federal Reserve Bank of St. Louis "Gross Domestic Product: Implicit Price Deflator (GDPDEF)"

(3) For each line item in (1) and (2) above, the ISO shall calculate a multiplier that is equal to the average of values published during the most recent twelve month period available at the time of making the adjustment divided by the average of the most recent twelve month period available at the time of establishing the Offer Review Trigger Prices for the ninth FCA reflected in the table in Section III.A.21.1.1 above. The value of each line item associated with capital costs and fixed operating and maintenance costs included in the capital budgeting model for the ninth FCA will be adjusted by the relevant multiplier.

(4) The energy and ancillary services offset values for each technology type in the capital budgeting model shall be adjusted by inputting to the capital budgeting model the most recent Henry Hub natural gas futures prices from the time of the update through the end of the Capacity Commitment Period associated with the relevant FCA, and the Massachusetts Hub On-Peak electricity prices and the Algonquin City Gates natural gas prices for the twelve months following the time of the update, as published by the CME Group.

(5) Renewable Energy Credit values in the capital budgeting model shall be updated based on the most recent MA Class 1 REC price for the vintage closest to the first year of the Capacity Commitment Period associated with the relevant FCA as published by SNL Financial.

(6) The capital budgeting model and the Offer Review Trigger Prices adjusted pursuant to this subsection (e) will be published on the ISO's web site.

(7) If any of the values required for the calculations described in this subsection (e) are unavailable, then comparable values, prices or sources shall be used.

**III.A.21.2 New Resource Offer Floor Prices.**

For every new resource participating in a Forward Capacity Auction, the Internal Market Monitor shall determine a New Resource Offer Floor Price, as described in this Section III.A.21.2.

(a) For a new capacity resource that does not submit a request to submit offers in the Forward

Capacity Auction at prices that are below the relevant Offer Review Trigger Price as described in Sections III.13.1.1.2.2.3 or III.13.1.4.2.4, the New Resource Offer Floor Price shall be equal to the Offer Review Trigger Price applicable to the relevant technology type.

(b) For a new capacity resource that does submit a request to submit offers in the Forward Capacity Auction at prices that are below the relevant Offer Review Trigger Price as described in Sections III.13.1.1.2.2.3 and III.13.1.4.2.4, the Internal Market Monitor shall enter all relevant resource costs and non-capacity revenue data, as well as assumptions regarding depreciation, taxes, and discount rate into the capital budgeting model used to develop the relevant Offer Review Trigger Price and shall calculate the break-even contribution required from the Forward Capacity Market to yield a discounted cash flow with a net present value of zero for the project. The Internal Market Monitor shall compare the requested offer price to this capacity price estimate.

(i) The Internal Market Monitor will exclude any out-of-market revenue sources from the cash flows used to evaluate the requested offer price. Out-of-market revenues are any revenues that are: (a) not tradable throughout the New England Control Area or that are restricted to resources within a particular state or other geographic sub-region; or (b) not available to all resources of the same physical type within the New England Control Area, regardless of the resource owner. Expected revenues associated with economic development incentives that are offered broadly by state or local government and that are not expressly intended to reduce prices in the Forward Capacity Market are not considered out-of-market revenues for this purpose. In submitting its requested offer price, the Project Sponsor shall indicate whether and which project cash flows are supported by a regulated rate, charge, or other regulated cost recovery mechanism. If the project is supported by a regulated rate, charge, or other regulated cost recovery mechanism, then that rate will be replaced with the Internal Market Monitor estimate of energy revenues. Where possible, the Internal Market Monitor will use like-unit historical production, revenue, and fuel cost data. Where such information is not available (e.g., there is no resource of that type in service), the Internal Market Monitor will use a forecast provided by a credible third party source. The Internal Market Monitor will review capital costs, discount rates, depreciation and tax treatment to ensure that it is consistent with overall market conditions. Any assumptions that are clearly inconsistent with prevailing market conditions will be adjusted.

(ii) For a new Demand Resource, the resource's costs shall

include all expenses, including incentive payments, equipment costs, marketing and selling and administrative and general costs incurred by the Demand Response provider and end-use customers to acquire the Demand Resource. Revenues shall include all non-capacity payments expected from the ISO-administered markets made for services delivered from the Demand Resource, and expected costs avoided by the end-use customer as a direct result of the installation or implementation of the Demand Resource.

(iii) For a new capacity resource that has achieved commercial operation prior to the New Capacity Qualification Deadline for the Forward Capacity Auction in which it seeks to participate, the relevant capital costs to be entered into the capital budgeting model will be the undepreciated original capital costs adjusted for inflation. For any such resource, the prevailing market conditions will be those that were in place at the time of the decision to construct the resource.

(iv) Sufficient documentation and information must be included in the resource's qualification package to allow the Internal Market Monitor to make the determinations described in this subsection (b). Such documentation should include all relevant financial estimates and cost projections for the project, including the project's pro-forma financing support data. For a new capacity resource that has achieved commercial operation prior to the New Capacity Qualification Deadline, such documentation should also include all relevant financial data of actual incurred capital costs, actual operating costs, and actual revenues since the date of commercial operation. If the supporting documentation and information required by this subsection (b) is deficient, the Internal Market Monitor, at its sole discretion, may consult with the Project Sponsor to gather further information as necessary to complete its analysis. If after consultation, the Project Sponsor does not provide sufficient documentation and information for the Internal Market Monitor to complete its analysis, then the resource's New Resource Offer Floor Price shall be equal to the Offer Review Trigger Price.

(v) If the Internal Market Monitor determines that the requested offer price is consistent with the Internal Market Monitor's capacity price estimate, then the resource's New Resource Offer Floor Price shall be equal to the requested offer price.

(vi) If the Internal Market Monitor determines that the requested offer price is not consistent with the Internal Market Monitor's capacity price estimate, then the resource's

New Resource Offer Floor Price shall be set to a level that is consistent with the capacity price estimate, as determined by the Internal Market Monitor. Any such determination will be explained in the resource's qualification determination notification and will be filed with the Commission as part of the filing described in Section III.13.8.1.

**III.A.21.3 Special Treatment of Certain Out-of-Market Capacity Resources in the Eighth Forward Capacity Auction.**

For the eighth Forward Capacity Auction (for the Capacity Commitment Period beginning on June 1, 2017), the provisions of Sections III.A.21.1 and III.A.21.2 shall also apply to certain resources that cleared in the sixth Forward Capacity Auction (for the Capacity Commitment Period beginning on June 1, 2015) and/or the seventh Forward Capacity Auction (for the Capacity Commitment Period beginning on June 1, 2016), as follows:

(a) This Section III.A.21.3 shall apply to: (i) any capacity clearing in the sixth or seventh Forward Capacity Auction as a New Generating Capacity Resource or New Import Capacity Resource designated as a Self-Supplied FCA Resource; and (ii) any capacity clearing in the sixth or seventh Forward Capacity Auction from a New Generating Capacity Resource, New Import Capacity Resource, or New Demand Resource at prices found by the Internal Market Monitor to be not consistent with either: (a) the resource's long run average costs net of expected net revenues other than capacity revenues for a New Generating Capacity Resource and a New Demand Resource or (b) opportunity costs for a New Import Capacity Resource.

(b) For the eighth Forward Capacity Auction, the capacity described in subsection (a) above shall receive Offer Review Trigger Prices as described in Section III.A.21.1 and New Resource Offer Floor Prices as described in Section III.A.21.2. These values will apply to such capacity in the conduct of the eighth Forward Capacity Auction as described in Section III.13.2.3.2.

(c) For the eighth Forward Capacity Auction, the Project Sponsor or Lead Market Participant for such capacity may be required to comply with some or all of the qualification provisions applicable to new resources described in Section III.13.1. These requirements will be determined by the ISO on a case-by-case basis in consultation with the Project Sponsor or Lead Market Participant.

(d) For any capacity described in subsection (a) above that does not clear in the eighth Forward Capacity Auction:

(i) any prior election to have a Capacity Clearing Price and Capacity Supply Obligation continue to apply for more than one Capacity Commitment Period made pursuant to Section III.13.1.1.2.2.4 or Section III.13.1.4.2.2.5 shall be terminated as of the beginning of the Capacity Commitment Period associated with the eighth FCA (beginning June 1, 2017); and

(ii) after the eighth Forward Capacity Auction, such capacity will be deemed to have never been previously counted as capacity, such that it meets the definition, and must meet the requirements, of a new capacity resource for the subsequent Forward Capacity Auction in which it seeks to participate.

**JANUARY 10, 2014 PARTICIPANTS COMMITTEE MEETING  
VOTE TAKEN TO SUPPORT  
ENERGY MARKET OFFER FLEXIBILITY COMPLIANCE CHANGES**

**TOTAL**

Participant Name	VOTE
GENERATION	<b>0.00</b>
TRANSMISSION	<b>17.17</b>
SUPPLIER	<b>0.00</b>
ALTERNATIVE RESOURCES	<b>14.16</b>
PUBLICLY OWNED ENTITY	<b>17.17</b>
END USER	<b>17.17</b>
<b>% IN FAVOR</b>	<b>65.67</b>

**GENERATION SECTOR**

Participant Name	VOTE
Entergy Nuclear Power Marketing LLC	O
EquiPower Resources Management	O
Essential Power, LLC	A
Generation Group Member	A
Millennium Power Partners	O
NextEra Energy Resources, LLC	A
NRG Power Marketing, LLC	A
TransCanada Power Marketing Ltd.	O
Verso Maine Energy LLC	A
IN FAVOR (F)	0
OPPOSED (O)	4
TOTAL VOTES	4
ABSTENTIONS (A)	5

**TRANSMISSION SECTOR**

Participant Name	VOTE
Emera Maine Inc.	A
New England Power Company	F
The United Illuminating Company	F
NU / NSTAR	F
Vermont Electric Power Company, Inc.	F
IN FAVOR (F)	4
OPPOSED (O)	0
TOTAL VOTES	4
ABSTENTIONS (A)	1

**SUPPLIER SECTOR**

Participant Name	VOTE
BP Energy Company	A
Brookfield Energy Mktg /Cross Sound Cable	A
Calpine Energy Services	O
Consolidated Edison Energy, Inc.	A
Dynegy Marketing and Trade, LLC	A
Energy America, LLC	A
Exelon Generation Company	A
Galt Power, Inc.	A
Granite Ridge/Merrill Lynch Commodities	A
H.Q. Energy Services (U.S.) Inc.	A
Hess	A
Integrays Energy Services, Inc.	A
Kimberly-Clark Corporation	A
Linde Energy Services, Inc.	A
LIPA	A
PPL EnergyPlus, LLC	A
PSEG Energy Resources & Trade LLC	O
Vitol Inc.	O
IN FAVOR (F)	0
OPPOSED (O)	3
TOTAL VOTES	3
ABSTENTIONS (A)	15

**ALTERNATIVE RESOURCES SECTOR**

Participant Name	VOTE
<b>Renewable Generation Sub-Sector</b>	
First Wind Energy Marketing	F
Small RG Group Member	A
<b>Distributed Generation Sub-Sector</b>	
Conservation Services Group	F
Small DG Group Member	F
<b>Load Response Sub-Sector</b>	
Vermont Energy Investment Corp.	F
Small LR Group Member	F
LR Provisional Group Voting Member	A
IN FAVOR (F)	5
OPPOSED (O)	0
TOTAL VOTES	5
ABSTENTIONS (A)	2



**JANUARY 10, 2014 PARTICIPANTS COMMITTEE MEETING  
VOTE TAKEN TO SUPPORT  
ENERGY MARKET OFFER FLEXIBILITY COMPLIANCE CHANGES**

**PUBLICLY OWNED ENTITY SECTOR**

Participant Name	VOTE
Ashburnham Municipal Light Plant	F
Boylston Municipal Light Dept.	F
Braintree Electric Light Department	F
Chicopee Municipal Lighting Plant	F
Concord Municipal Light Plant	F
CT Municipal Electric Energy Coop.	F
Georgetown Municipal Light Dept.	F
Groton Electric Light Dept.	F
Groveland Electric Light Dept.	F
Hingham Municipal Lighting Plant	F
Holden Municipal Light Dept.	F
Holyoke Gas & Electric Dept.	F
Hudson Light and Power Dept.	F
Hull Municipal Lighting Plant	F
Ipswich Municipal Light Dept.	F
Littleton (MA) Electric Light Dept.	F
Littleton (NH) Water & Light Dept.	A
Mansfield Municipal Electric Dept.	F
Marblehead Municipal Light Dept.	F
Mass. Municipal Wholesale Electric Co.	F
Merrimac Municipal Light Dept.	F
Middleborough Gas and Electric	F
Middleton Municipal Electric Dept.	F
New Hampshire Electric Coop.	F
Pascoag Utility District	F
Paxton Municipal Light Dept.	F
Peabody Municipal Light Plant	F
Princeton Municipal Light Dept.	F
Rowley Municipal Lighting Plant	F
Russell Municipal Light Department	F
Shrewsbury's Electric & Cable Operations	F
South Hadley Electric Light Dept.	F
Sterling Municipal Electric Light	F
Taunton Municipal Lighting Plant	F
Templeton Municipal Lighting Plant	F
Vermont Electric Cooperative	A
VT Public. Power Supply Authority	F
Wakefield Municipal Gas and Light	F
Wallingford, Town of	F
Wellesley Municipal Light Plant	F
W. Boylston Municipal Lighting Plant	F
Westfield Gas & Electric Light Dept.	F
IN FAVOR (F)	40
OPPOSED (O)	0
TOTAL VOTES	40
ABSTENTIONS (A)	2

**END USER SECTOR**

Participant Name	VOTE
Cianbro Companies	A
Connecticut Office of Consumer Counsel	F
Conservation Law Foundation	F
Dragon Products Company	A
Elektrisola, Inc.	A
Fairchild Semiconductor Corporation	A
Food City, Inc.	A
Hardwood Products Company	A
Harvard Dedicated Energy Limited	F
High Liner Foods (USA) Inc.	A
Industrial Energy Consumer Group	A
LaBree's Inc.	A
Maine Public Advocate Office	F
Maine Skiing, Inc.	A
Marden's Inc.	A
Mass. Attorney General's Office	F
MoArk, LLC	A
NH Office of Consumer Advocate	F
PalletOne of Maine	A
PowerOptions, Inc.	F
Praxair, Inc.	A
St. Anselm College	A
Shipyard Brewing Co., LLC	A
The Energy Consortium	F
Union of Concerned Scientists	F
Utility Services Inc.	F
Westerly Hospital, The	A
Z-TECH, LLC	A
IN FAVOR (F)	10
OPPOSED (O)	0
TOTAL VOTES	10
ABSTENTIONS (A)	18