



September 17, 2013

VIA ELECTRONIC 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- -000; Reliability Commitment Mitigation Revisions to
Appendix A of Market Rule 1**

***Requested Waiver of 60-Day Notice Period For
September 18, 2013 Effective Date***

Dear Secretary Bose:

Pursuant to Section 205 of the Federal Power Act,¹ ISO New England Inc. (the “ISO”) joined by the New England Power Pool (“NEPOOL”) Participants Committee² (together, the “Filing Parties”), hereby jointly submit this transmittal letter and revised tariff sections to modify the market power mitigation rules in Appendix A of Market Rule 1 that apply to Supply Offers for resources that are committed out-of-merit to address a local reliability need (the “Reliability Commitment Mitigation Revisions”).³ In support of the Reliability Commitment Mitigation Revisions, this filing also includes the testimony of David LaPlante, Vice President of Internal Market Monitoring for the ISO, and Robert Laurita, the Internal Market Monitor’s Manager of

¹ 16 U.S.C. § 824d (2006 and Supp. II 2009).

² 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 (“ISO Tariff”), the Second Restated New England Power Pool Agreement, and the Participants Agreement. Market Rule 1 is Section III of the ISO Tariff.

³ Under New England's RTO arrangements, the rights to make this filing of changes to Market Rule 1 under Section 205 of the Federal Power Act are the ISO's. NEPOOL, which pursuant to the Participants Agreement provides the sole market participant stakeholder process for advisory voting on ISO matters, supported the changes reflected in this filing and accordingly, joins in this Section 205 filing.

Surveillance and Analysis, which is sponsored solely by the ISO (the “LaPlante-Laurita Testimony”).

The Reliability Commitment Mitigation Revisions are being filed in response to the Internal Market Monitor’s (“IMM”) determination that the current mitigation test for local reliability commitments has resulted in conduct that the IMM views as manipulation. **To prevent the continuation or expansion of that conduct, and as discussed more fully in Section II of this transmittal letter, the ISO is requesting an effective date of September 18, 2013, which is one day after the filing of these changes.**

Resources that are committed out-of-merit to address a local reliability need are in a unique position to assert market power. These resources are not committed based on the price at which their energy is offered, but rather based on the need to address a particular local reliability issue. To address the potential assertion of market power by a Market Participant with a resource in this position, Section III.A.5.5.5 of Appendix A contains a mitigation “conduct test” that evaluates a Market Participant’s Supply Offer for a resource over the course of its minimum run time when the resource is committed by the ISO to address a local reliability issue. The intent of the existing conduct test is to ensure that a Market Participant with such a resource does not obtain excessive revenues through the exercise of market power. The existing test limits a Market Participant to receiving payments that are based on Supply Offer values that are no more than 10% (the “10% adder”) above the cost-based Reference Levels for the resource.

The IMM has found that a Market Participant with a resource committed for longer than its minimum run time can pass the existing conduct test and recover substantially more than the 10% adder through modifications of its three-part Supply Offer. To prevent this conduct, an additional conduct test is being proposed. Under the new test, the IMM will evaluate the Supply Offers of a resource over the entire period for which the resource is committed to address the local reliability issue. This new test, referred to as the “Actual Run Time Conduct Test,” will be performed after the operation of the resource, and if violated will result in the Supply Offer being mitigated to its Reference Levels on file with the IMM. The mitigated Supply Offers will be used for purposes of determining the Net Commitment Period Compensation (“NCPC”) to which the Market Participant is entitled for the resource’s operation to address the reliability need.

I. DESCRIPTION OF THE FILING PARTIES; COMMUNICATIONS

The ISO is the private, non-profit entity that serves as the regional transmission organization (“RTO”) for New England. The ISO operates the New England bulk power system and administers New England’s organized wholesale electricity market pursuant to the ISO Tariff and the Transmission Operating Agreement with the New England transmission owners. In its capacity as an RTO, the ISO also has the objective to assure that the bulk power supply system within the New England Control Area conforms to proper standards of reliability as established by the Northeast Power Coordinating Council and the North American Electric Reliability Corporation.

NEPOOL is a voluntary association organized in 1971 pursuant to the New England Power Pool Agreement, and it has grown to include more than 440 members. The Participants include all of the electric utilities rendering or receiving services under the ISO Tariff, as well as independent power generators, marketers, load aggregators, brokers, consumer-owned utility systems, demand response providers, developers, end users and a merchant transmission provider. Pursuant to revised governance provisions accepted by the Commission in *ISO New England Inc. et al.*, 109 FERC ¶ 61,147 (2004), the Participants act through the NEPOOL Participants Committee. The Participants Committee is authorized by Section 6.1 of the Second Restated NEPOOL Agreement and Section 8.1.3(c) of the Participants Agreement to represent NEPOOL in proceedings before the Commission. Pursuant to Section 2.2 of the Participants Agreement, “NEPOOL provide[s] the sole Participant Process for advisory voting on ISO matters and the selection of ISO Board members, except for input from state regulatory authorities and as otherwise may be provided in the [ISO] Tariff, [Transmission Operating Agreement] and the Market Participant Services Agreement included in the [ISO] Tariff.”

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II. REQUESTED EFFECTIVE DATE AND REQUEST FOR WAIVER

Pursuant to Section 35.11 of the Commission's rules and regulations, 18 C.F.R. § 35.11, the ISO requests waiver of the 60-day notice requirement, so that the proposed Reliability Commitment Mitigation Revisions may become effective on **September 18, 2013**, which is one day after this filing.

The ISO submits that good cause exists to grant this request. As Messrs. LaPlante and Laurita explain in their supporting testimony, the current reliability commitment mitigation conduct test has resulted in conduct that the IMM considers to be manipulation, and that without change could permit a Market Participant to earn excessive revenues through its assertion of market power.⁵ It is important to immediately implement the proposed modifications to the existing mitigation tests to prevent such conduct.

Furthermore, the ISO submits that there is little risk that any party will be adversely affected by the waiver requested in these circumstances. As explained in further detail below, the new Actual Run Time Conduct Test will be performed after the resource has completed its operation to address the reliability need. If the test is violated, the mitigated Supply Offers will not impact the resource's commitment, but rather will impact only the compensation the Market Participant receives for the resource's operation. Accordingly, should the Commission ultimately reject the proposed Reliability Commitment Mitigation Revisions, the entire impact of any mitigation that has been imposed under the revised ISO Tariff can be undone through the normal resettlement process provided for in the ISO Tariff.⁶

Finally, since discovering the issue with the existing reliability commitment mitigation test, the ISO has worked expeditiously to develop the proposed modifications, test their accuracy and effectiveness, and review the proposed changes with stakeholders in an expedited manner. The ISO presented the proposed changes to the NEPOOL Markets Committee for review and a vote on September 11th, and to the NEPOOL Participants Committee on September 13th. Having received the support of stakeholders, the Filing Parties are making this filing shortly after completing the stakeholder review process.

⁴ Due to the joint nature of this filing, the Filing Parties respectfully request a waiver of Section 385.203 of the Commission's regulations to allow the inclusion of more than two persons on the service list in this proceeding.

⁵ LaPlante-Laurita Testimony at pp. 15. The Internal Market Monitor is taking appropriate action to address this conduct, consistent with its investigatory authority.

⁶ See Market Rule 1, Section III.3.6 Data Reconciliation.

III. STANDARD OF REVIEW

The instant revisions are submitted pursuant to Section 205 of the Federal Power Act, which “gives a utility the right to file rates and terms for services rendered with its assets.”⁷ Under Section 205, the Commission “plays ‘an essentially passive and reactive’ role”⁸ whereby it “can reject [a filing] only if it finds that the changes proposed by the public utility are not ‘just and reasonable.’”⁹ The Commission limits this inquiry “into whether the rates proposed by a utility are reasonable -- and [this inquiry does not] extend to determining whether a proposed rate schedule is more or less reasonable than alternative rate designs.”¹⁰ The revision “need not be the only reasonable methodology, or even the most accurate.”¹¹ As a result, even if an intervenor or the Commission develops an alternative proposal, the Commission must accept this Section 205 filing if it is just and reasonable.¹²

IV. THE RELIABILITY COMMITMENT MITIGATION REVISIONS

The IMM has determined that the current reliability commitment mitigation conduct test is susceptible to manipulation when a resource is committed beyond its minimum run time. To prevent this conduct, the Reliability Commitment Mitigation Revisions implement a second conduct test that will evaluate a resource based on all hours in which it is committed to address a reliability need, rather than only during the hours of its minimum run time. This Section IV describes the current conduct test, why it is susceptible to conduct the IMM considers to be manipulative, and the Actual Run Time Conduct Test being proposed to prevent such conduct.

A. The Current Reliability Commitment Mitigation Conduct Test

The current local reliability commitment mitigation conduct test in Section III.5.5.5.2 of Appendix A restricts the ability of a Market Participant with a resource that is operated out-of-merit to address a reliability need from asserting market power. The test accomplishes this by limiting the amount of out-of-merit compensation a Market Participant can earn when its resource is committed out of economic merit order to address a reliability issue. In absence of this mitigation, a Market Participant with a resource that is needed to address a reliability issue could earn significant amounts of out-of-merit revenues, in the form of NCPC, by increasing

⁷ *Atlantic City Elec. Co. v. FERC*, 295 F.3d 1, 9 (D.C. Cir. 2002).

⁸ *Id.* at 10 (quoting *City of Winnfield v. FERC*, 744 F.2d 871, 876 (D.C. Cir. 1984)).

⁹ *Id.*

¹⁰ *City of Bethany v. FERC*, 727 F.2d 1131, 1136 (D.C. Cir. 1984).

¹¹ *Oxy USA, Inc. v. FERC*, 64 F.3d 679, 692 (D.C. Cir. 1995).

¹² *Cf. Southern California Edison Co., et al.*, 73 FERC ¶ 61,219 at 61,608 n.73 (1995) (“Having found the Plan to be just and reasonable, there is no need to consider in any detail the alternative plans proposed by the Joint Protesters.” (citing *City of Bethany*, 727 F.2d at 1136)).

their Supply Offers well in excess of the resource's Reference Levels. Those Reference Levels have been set to reflect the incremental costs of operating the resource.¹³

The current reliability commitment mitigation conduct test limits a Market Participant to receiving NCPC payments that are no more than 10% above the resource's Reference Levels. If the financial parameters of the Market Participant's Supply Offers (*i.e.*, the Start-Up Fee, No-Load Fee and energy price at the resource's Economic Minimum Limit) are in excess of 10% above the cost-based Reference Levels for the resource, then the Market Participant's Supply Offers will be mitigated to the Reference Level values. The effect of using Reference Levels is that the most the Market Participant can receive through NCPC payments for providing the reliability service is 10% in excess of the resource's Reference Levels.¹⁴ The LaPlante-Laurita Testimony explains how, mechanically, the existing conduct test functions and provides an example of its implementation.¹⁵

B. Manipulation of the Current Reliability Commitment Mitigation Conduct Test

Under the current conduct test in Section III.A.5.5.5.2, a Market Participant can structure a Supply Offer so that it passes the conduct test but the Market Participant nevertheless receives NCPC payments significantly in excess of its costs (as reflected in the resource's Reference Levels) plus the 10% adder when its resource is committed for local reliability.¹⁶ The current test presumes a Market Participant will structure its offer so as to recover all its start-up and no-load costs by the end of the resource's minimum run time. Accordingly, the current conduct test evaluates the resource's performance only for the period of its minimum run time. Because of this, it is possible to reduce the Start-Up Fee and increase one or both of the No-Load Fee and energy price parameters in the resource's Supply Offer, on the presumption that the resource will be operated to address the reliability need for longer than its minimum run time. This allows a Market Participant whose resource is committed for local reliability beyond its minimum run time to receive NCPC payments well in excess of the Reference Levels (plus the 10% adder permitted under the conduct test).¹⁷

This result is only possible because the Market Participant's resource is needed for reliability and the Market Participant therefore has market power. As Messrs. LaPlante and Laurita note, if the Market Participant was facing competition, modifying the Supply Offer by reducing the Start-Up Fees and increasing the energy price parameter would significantly reduce

¹³ LaPlante-Laurita Testimony at pp. 5-6.

¹⁴ *Id.* at pp. 9-10.

¹⁵ *Id.* at pp. 4-9.

¹⁶ *Id.* at p. 11. The LaPlante-Laurita Testimony provides an example of this offer strategy at pp. 12-14.

¹⁷ *Id.* at p. 12.

the resource's likelihood of being committed and earning energy revenues.¹⁸ It indicates that the current reliability mitigation rules need to be revised to prevent this conduct.

C. The Actual Run Time Conduct Test

The Filing Parties are proposing to modify the local reliability commitment mitigation conduct test to include a *second* conduct test for any resource committed for reliability that passes the current conduct test. The new Actual Run Time Conduct Test is similar to the existing conduct test. However, instead of using the resource's minimum run time to calculate the resource's cost of operation to address the reliability need, the Actual Run Time Conduct Test evaluates the resource's operation using the *actual* time the resource was operated to address the reliability need. If the resource fails the Actual Run Time Conduct Test, all the resource's Supply Offer values will be replaced with the resource's Reference Level values for purposes of calculating NCPC payments. The LaPlante-Laurita Testimony provides an example of how the new Actual Run Time Conduct Test will be implemented.¹⁹

The Actual Run Time Conduct Test has been structured to ensure that a Market Participant cannot, through modification of its Supply Offer parameters, circumvent the existing conduct test to take advantage of its market power and earn NCPC payments in excess of the 10% adder that is permitted under the current conduct test.²⁰ Under the new test, if the Market Participant submits a Supply Offer with a Start-Up Fee that is less than the Reference Level, and simultaneously increases the No-Load Fee or energy price at Economic Minimum Limit, applying the conduct test to the actual run time will determine whether these modifications permit the Market Participant to exceed the Reference Levels for the period of the resource's operation by more than 10%. By extending the test to the entire actual run time it prevents resources from achieving in excess of the 10% adder by misrepresenting their start-up, no-load or energy costs. As the LaPlante-Laurita Testimony notes, the Actual Run Time Conduct Test does not impose a more stringent standard on resources that operate for a longer (or shorter) duration because the 10% adder naturally increases as the run time and total costs of the unit increase.²¹

The proposed Actual Run Time Conduct Test does not prevent a Market Participant from modifying the Start-Up Fee parameter in its Supply Offer to a value that varies from the value reflected in the resource's Reference Levels. Should a Market Participant wish to change the

¹⁸ *Id.* at p. 11.

¹⁹ *Id.* at pp. 16-17.

²⁰ *Id.* at pp. 18-20.

²¹ *Id.* at p. 20. Moreover, a significant decrease to the Supply Offer Startup Fee without a simultaneous increase to the Supply Offer No Load Fee or Energy price at Economic Minimum Limit, relative to Reference Levels, will not result in the Supply Offer being mitigated under the new conduct test if the Supply Offer passed the current conduct test.

Start-Up Fee parameter of its Supply Offer (or any other parameter), the Market Participant can consult with the Internal Market Monitor pursuant to Section III.A.3 of Appendix A, prior to submitting the Supply Offer, to assess whether a change to the resource's Reference Levels are appropriate.

It is anticipated that the Actual Run Time Conduct Test will be performed in advance of the completion of the initial settlement for the operating day, and that therefore any mitigation resulting from application of the new test will be imposed and reflected in the initial invoice that is issued twice weekly.²² In the event that the actual run time data is not available in time for issuance of the initial invoice, the modified NCPC payments will be reflected in the normal resettlement process, which is addressed in Section III.3.6 of Market Rule 1. A Market Participant whose Supply Offer is mitigated under the Actual Run Time Conduct Test will be notified of the mitigation at the time the test is performed.

D. Removal of the \$80/MW Factor from the Current Conduct Test

Finally, the Reliability Commitment Mitigation Revisions remove from the current conduct test a second factor that is applied when evaluating a Supply Offer for reliability commitment mitigation. Currently, the conduct test evaluates the resource's operation to determine whether it violates either the 10% threshold *or* a potentially more restrictive threshold – the Economic Maximum Limit (MW) of the resource multiplied times \$80/MW (the “\$80/MW factor”). In the July 1, 2013 filing of ISO Tariff changes to increase Supply Offer flexibility, the ISO, joined by the NEPOOL Participants Committee, proposed to remove the fixed \$80/MW factor on grounds that high and volatile fuel prices could result in mitigation being triggered inappropriately.²³ The IMM has determined that, rather than waiting until the offer flexibility

²² *Id.* at p. 21.

²³ *ISO New England Inc. and New England Power Pool*, Energy Market Offer Flexibility Changes, Docket No. ER13-1877-000 (filed July 1, 2013), transmittal letter at p. 15. As Mario DePillis, an economist with the Internal Market Monitor, explained in ISO-sponsored supporting testimony filed with the Energy Market Offer Flexibility Changes, at p. 18,

The original design included both a 10% threshold and a threshold based on a total dollar amount of \$80/MW. Historically the \$80/MW threshold has only triggered when the fuel price is expensive, typically oil, and the cost of running the resource at minimum is high compared to its total capacity. These can be described as expensive and inflexible oil fired resources. Since the oil price has been much less volatile than gas, it was not anticipated that a Market Participant would have difficulty bidding competitively and staying within the \$80/MW threshold when it was less than the 10% threshold.

During the most recent winter, however, gas prices rose to levels that were higher than oil during certain periods. At the same time gas prices were very volatile. This led to the mitigation of gas-fired generators because of the \$80/MW threshold. Given the volatility at the time, it would have been difficult for Market Participants to avoid violating the conduct test while submitting offers based on widely varying natural gas prices.

revisions go into effect in December 2014, it is appropriate to remove the \$80/MW factor with the implementation of the Actual Run Time Conduct Test prior to the upcoming winter when gas price volatility is likely to increase.²⁴

V. STAKEHOLDER PROCESS

As explained above, given the intention of quickly implementing the Reliability Commitment Mitigation Revisions, the ISO undertook an expedited review process with stakeholders. The proposed revisions were first presented to the NEPOOL Markets Committee, both for review and a vote, on September 11, and were then presented shortly thereafter to the NEPOOL Participants Committee on September 13, 2013. The NEPOOL Markets Committee, at its September 10-11, 2013 meeting, voted to recommend NEPOOL Participants Committee support for the Reliability Commitment Mitigation Revisions with 79.4% Vote in favor.²⁵ At its September 13, 2013 meeting, the NEPOOL Participants Committee also voted to support the Reliability Commitment Mitigation Revisions, with 88.96% Vote in favor.²⁶ NEPOOL will be submitting additional information in separate comments regarding the Participant Processes for considering these NEPOOL-supported changes.

VI. ADDITIONAL SUPPORTING INFORMATION

Section 35.13 of the Commission's regulations generally requires public utilities to file certain cost and other information related to an examination of traditional cost-of-service rates.²⁷ However, the Reliability Commitment Mitigation Revisions are not traditional "rates," and the Filing Parties are not traditional investor-owned utilities. In light of these circumstances, the Filing Parties submit the following additional information in substantial compliance with relevant provisions of Section 35.13, and request a waiver of Section 35.13 of the Commission's regulations to the extent the content or form deviates from the specific technical requirements of the regulations.

35.13(b)(1) - Materials included herewith are as follows:

- ♦ This transmittal letter;
- ♦ Blacklined ISO Tariff sections reflecting the revisions submitted in this filing;

²⁴ LaPlante-Laurita Testimony at pp. 22-23.

²⁵ The individual Sector votes at the Markets Committee were Generation (0% in favor, 17.17% opposed, 6 abstentions), Transmission (17.17% in favor, 0% opposed, 2 abstentions), Supplier (13.73% in favor, 3.44% opposed, 14 abstentions), Alternative Resources (14.17% in favor, 0% opposed, 5 abstentions), Publicly Owned Entity (17.17% in favor, 0% opposed, 27 abstentions), and End User (17.17% in favor, 0% opposed, 2 abstentions).

²⁶ See the NEPOOL Participants Committee Vote Tabulation, attached hereto.

²⁷ 18 C.F.R. § 35.13 (2009).

- ♦ Clean ISO Tariff sections reflecting the revisions submitted in this filing;
- ♦ Testimony of David LaPlante and Robert Laurita, sponsored solely by the ISO;
- ♦ NEPOOL Participants Committee vote tabulation; and
- ♦ List of governors, utility regulatory agencies in Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont, and other entities, to which a copy of this filing has been sent.

35.13(b)(2) - The ISO requests that the revisions become effective September 18, 2013.

35.13(b)(3) - Pursuant to Section 17.11(e) of the Participants Agreement, Governance Participants are being served electronically rather than by paper copy. The names and addresses of the Governance Participants are posted on the ISO's website at http://www.iso-ne.com/regulatory/ferc/nepool/gov_ptcpnts_eserved.pdf. A copy of this transmittal letter and the accompanying materials have also been sent to the governors and electric utility regulatory agencies for the six New England states that comprise the New England Control Area, the New England Conference of Public Utility Commissioners, Inc., and to the New England States Committee on Electricity. Their names and addresses are shown in the attached listing. In accordance with Commission rules and practice, there is no need for the Governance Participants or the entities identified in the listing to be included on the Commission's official service list in the captioned proceeding unless such entities become intervenors in this proceeding.

35.13(b)(4) - A description of the materials submitted pursuant to this filing is contained in Section VI of this transmittal letter.

35.13(b)(5) - The reasons for this filing are discussed in Section IV of this transmittal letter.

35.13(b)(6) - The ISO's approval of the revision is evidenced by this filing. With respect to NEPOOL's support, as noted in Section V of this transmittal letter, these changes reflect the outcome of the Participant Processes required by the Participants Agreement, and are supported by the NEPOOL Participants Committee.

35.13(b)(7) - The Filing Parties do not have knowledge of any relevant expenses or costs of service that have been alleged or judged in any administrative or judicial proceeding to be illegal, duplicative, or unnecessary costs that are demonstrably the product of discriminatory employment practices.

VII. CONCLUSION

For the reasons stated herein, the Filing Parties respectfully request that the Commission accept the Reliability Commitment Mitigation Revisions as filed, without condition, suspension, or hearing. The ISO requests that these changes become effective on September 18, 2013.

Respectfully submitted,

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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.

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. Market Participant requests to alter a Reference Level must be submitted to imm@iso-ne.com.

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 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 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 no later than 30 minutes prior to the submission deadline for the Day-Ahead Energy Market. In order for the information to be considered for purposes of the Real-Time Energy Market, the Market Participant must contact the Internal Market Monitor no later than 60 minutes after the posting of the Day-Ahead Energy Market results. 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.

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 least cost fuel type in 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 Reference Levels will be made available on a daily basis. The Market Participant shall not modify such Reference Levels in the ISO's or Internal Market Monitor's systems.

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 ~~to determine whether~~using the following formula~~is true~~:

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

Where,

Commitment Cost Threshold = ~~the lower of (0.1 times Low Load Cost at Reference Level) or (\$80 multiplied by the Resource's Economic Maximum).~~

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

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

Low Load Cost Minimum Run Time at Offer = Low Load Cost calculated with financial parameters of the Supply Offer ~~as submitted by the Lead Market Participant.~~

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-} \text{Minimum run-Run timeTime}~~ and ~~minimum-} \text{Minimum down Down timeTime}~~ exceed 24 hours, then the conduct test will use the greater of 24 hours or the Resource's ~~minimum-} \text{Minimum run-Run timeTime}~~ for the ~~minimum-} \text{Minimum run-Run timeTime}~~.

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.5.5.5.34. 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;
- (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 through the end of the Operating Day or through the end of the Resource’s minimum run time, whichever is later.

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 through the end of the Operating Day or through the end of the Resource's minimum run time, 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:

(start-up fuel use * fuel costs) + (start-up emissions * emission allowance price) + start-up variable and maintenance costs + 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 either (a) as a result of mitigation 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, despite having submitted a Supply Offer at the energy offer cap specified in Section III.1.10.1.A(d) of Market Rule 1, a 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.

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; (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 resource 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 Eighth Forward Capacity Auction.

For resources other than New Import Capacity Resources, the Offer Review Trigger Prices for the eighth Forward Capacity Auction (for the Capacity Commitment Period beginning on June 1, 2017) shall be as follows:

Resource Type	Offer Review Trigger Price (\$/kW-month)
Combustine Turbine	\$10.00
Combined Cycle Gas Turbine	\$11.00
Biomass	\$24.00
On-Shore Wind	\$14.00
Real-Time Demand Response	\$1.00
Energy Efficiency	\$0.00
All Other Resource Types	Forward Capacity Auction Starting Price

Where a new resource is composed of assets having different resource 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 resource 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 resource 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, rounded to the nearest whole dollar value. 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 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 programs' life.

(d) For new Real-Time Demand Response resources, the methodology used to develop the Offer Review Trigger Price is based on an analysis of the incremental operating costs associated with the demand response business activities of selected industry firms engaged primarily in the demand response business, as reported in their Form 10k filings with the U.S. Securities and Exchange Commission. The Internal Market Monitor will review data regarding annual customer totals (MW) and operating costs (cost of sales), allocated marketing and sales expense, and allocated administrative and general expense for the three preceding consecutive years. The incremental MW and

the total incremental operating costs for each firm is calculated and the incremental cost is then divided by the incremental MW to estimate the incremental revenues required to cover the cost of new Real-Time Demand Response MW. The Offer Review Trigger Price is set to the lowest calculated incremental revenue value for the selected firms during the studied years rounded to the nearest whole number.

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 resource 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 Real-Time Demand Response 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 to acquire the Real-Time Demand Response resource. Revenues shall include all non-capacity payments expected from the ISO-administered markets made for services delivered from the Real-Time Demand Response 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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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.

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. Market Participant requests to alter a Reference Level must be submitted to imm@iso-ne.com.

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 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 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 no later than 30 minutes prior to the submission deadline for the Day-Ahead Energy Market. In order for the information to be considered for purposes of the Real-Time Energy Market, the Market Participant must contact the Internal Market Monitor no later than 60 minutes after the posting of the Day-Ahead Energy Market results. 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.

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 least cost fuel type in 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 Reference Levels will be

made available on a daily basis. The Market Participant shall not modify such Reference Levels in the ISO's or Internal Market Monitor's systems.

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;
- (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 through the end of the Operating Day or through the end of the Resource’s minimum run time, whichever is later.

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 through the end of the Operating Day or through the end of the Resource’s minimum run time, 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 either (a) as a result of mitigation 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, despite having submitted a Supply Offer at the energy offer cap specified in Section III.1.10.1.A(d) of Market Rule 1, a 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.

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; (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 resource 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 Eighth Forward Capacity Auction.

For resources other than New Import Capacity Resources, the Offer Review Trigger Prices for the eighth Forward Capacity Auction (for the Capacity Commitment Period beginning on June 1, 2017) shall be as follows:

Resource Type	Offer Review Trigger Price (\$/kW-month)
Combustine Turbine	\$10.00
Combined Cycle Gas Turbine	\$11.00
Biomass	\$24.00
On-Shore Wind	\$14.00
Real-Time Demand Response	\$1.00
Energy Efficiency	\$0.00
All Other Resource Types	Forward Capacity Auction Starting Price

Where a new resource is composed of assets having different resource 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 resource 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 resource 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, rounded to the nearest whole dollar value. 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 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 programs' life.

(d) For new Real-Time Demand Response resources, the methodology used to develop the Offer Review Trigger Price is based on an analysis of the incremental operating costs associated with the demand response business activities of selected industry firms engaged primarily in the demand response business, as reported in their Form 10k filings with the U.S. Securities and Exchange Commission. The Internal Market Monitor will review data regarding annual customer totals (MW) and operating costs (cost of sales), allocated marketing and sales expense, and allocated administrative and general expense for the three preceding consecutive years. The incremental MW and the total incremental operating costs for each firm is calculated and the incremental cost is then divided by the incremental MW to estimate the incremental revenues required to cover the cost of new Real-Time Demand Response MW. The Offer Review Trigger Price is set to the lowest calculated incremental revenue value for the selected firms during the studied years rounded to the nearest whole number.

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 resource 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 Real-Time Demand Response 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 to acquire the Real-Time Demand Response resource. Revenues shall include all non-capacity payments expected from the ISO-administered markets made for services delivered from the Real-Time Demand Response 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.

1 **UNITED STATES OF AMERICA**
2 **BEFORE THE**
3 **FEDERAL ENERGY REGULATORY COMMISSION**

4 **ISO New England Inc. and**)
5 **New England Power Pool**)
6
7

Docket No. ER13-____-000

8 **JOINT TESTIMONY OF DAVID LAPLANTE AND ROBERT LAURITA**
9

10 **I. WITNESS IDENTIFICATION**

11 **Q: PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.**

12 A: *Mr. LaPlante.* My name is David LaPlante. I am the Vice President of Market
13 Monitoring for ISO New England Inc. (the "ISO"). My business address is One
14 Sullivan Road, Holyoke, Massachusetts 01040-2841.

15
16 *Mr. Laurita.* My name is Robert Laurita. I am the Manager of Surveillance and
17 Analysis, Internal Market Monitoring for the ISO. My business address is One
18 Sullivan Road, Holyoke, Massachusetts, 01040-2841.

19
20 **Q: PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**
21 **WORK EXPERIENCE.**

22 A: *Mr. LaPlante.* I have a Bachelor's degree in statistics from Princeton University
23 and a Master's Degree in City and Regional Planning from Harvard University. I
24 have over 22 years of experience in the energy and utility industry. Between
25 1989 and 1994, I spent five years supervising and conducting power system
26 reliability studies at the New England Power Pool. I have been working on the

1 deregulation of the wholesale electric industry in New England since 1994. When
2 serious discussions about deregulation of the wholesale electricity market in New
3 England began, I was part of the team that negotiated the contract between the
4 ISO and the New England Power Pool that led to the creation of the ISO in 1997.
5 I then led the ISO team that worked with NEPOOL to develop and implement the
6 region's first set of wholesale markets in 1999. Following that, I was responsible
7 for the market design portion of the Standard Market Design implemented by the
8 ISO in March 2003. I was integrally involved in the Forward Capacity Market
9 settlement agreement and in the development of the capacity market rules that
10 implement the settlement agreement. In July 2008, I was promoted to Vice
11 President of the Internal Market Monitoring Unit at the ISO.

12
13 *Mr. Laurita.* I am responsible for overseeing the market surveillance, analysis,
14 reporting, investigation and compliance activities of the Internal Market Monitor
15 (“IMM”). I have over twenty five years of experience in the energy and utility
16 industry. Prior to joining the ISO in 2003, I held management positions at the
17 Public Service Electric and Gas Company, XENERGY, Applied Energy Group
18 and InSite Services. As the Manager of Measurement Services at Public Service
19 Electric and Gas Company, I was responsible for the design, development and
20 implementation of large-scale metering and meter data management systems that
21 supported the implementation of retail competition in New Jersey. As the
22 Director of Client Services for XENERGY, I worked with electric and gas

1 utilities throughout the United States and Europe to design, develop and
2 implement energy efficiency and demand side management programs.

3

4 I have a Bachelor of Science degree in Electric Power Engineering from
5 Rensselaer Polytechnic Institute and a Masters in Business Administration from
6 Western New England University.

7

8 **II. PURPOSE, SCOPE AND SUMMARY OF DIRECT TESTIMONY**

9 **Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

10 A: The purpose of this testimony is to explain revisions to the current rules for
11 mitigating Supply Offers for resources that operate out-of-merit when those
12 resources are committed to address a reliability issue on the New England
13 electrical system. This mitigation, referred to as “local reliability commitment
14 mitigation,” impacts the amount of uplift, or Net Commitment Period
15 Compensation (“NCPC”) a Market Participant earns when a resource operates
16 out-of-merit to address a reliability need.

17

18 The testimony describes offer conduct which the Internal Market Monitor has
19 determined Market Participants can engage in to assert market power and
20 strategically avoid mitigation under the current local reliability commitment
21 mitigation rules. The testimony explains a new local reliability mitigation test,
22 called the “Actual Run Time Conduct Test,” which is being proposed to prevent
23 Market Participants from asserting market power in this manner, and explains

1 how the new test will be implemented.

2

3 **Q: WHAT IS NET COMMITMENT PERIOD COMPENSATION?**

4 A: Net Commitment Period Compensation provides “make whole” payments to
5 Market Participants with resources when the costs, as expressed in the resource’s
6 offer, of providing energy or reserves from the resource exceed the revenue paid
7 to the Market Participant. This most often occurs when resources are needed for
8 local reliability purposes but may also occur with resources that are economic for
9 some hours of daily operation. The rule changes proposed herein apply only to
10 NCPC paid to resources committed to meet local reliability requirements.

11

12 **Q: WHEN A RESOURCE IS COMMITTED TO ADDRESS A LOCAL**
13 **RELIABILITY ISSUE, HOW IS THE SUPPLY OFFER FOR THE**
14 **RESOURCE CURRENTLY EVALUATED FOR MITIGATION?**

15 A: Market Participants with resources that provide local reliability services typically
16 do not compete with other resources to provide the same service. Therefore,
17 resources providing a local reliability service have the ability to exercise market
18 power. For this reason the IMM reviews the Supply Offers of all resources
19 committed for local reliability and subjects the resource to local reliability
20 commitment mitigation if the Supply Offer exceeds the conduct thresholds
21 defined in Section III.A.5.5.5 of Market Rule 1.

22

1 The local reliability commitment mitigation conduct test compares the cost of
2 operating the resource (as reflected in its Supply Offer) at its Economic Minimum
3 Limit for its minimum run time (referred to as the “resource’s Low Load Cost at
4 Offer”) to the cost of operating the resource (as reflected in its Reference Levels)
5 at its Economic Minimum Limit for its minimum run time (referred to as the
6 “Low Load Cost at Reference Level”).

7
8 There are five parameters used to calculate the Low Load Cost for a resource:

- 9 1. Start-Up Fee (\$),
- 10 2. No-Load Fee (\$/Hr),
- 11 3. Offer price for energy at the resource’s Economic Minimum Limit
12 (\$/MWh),
- 13 4. Economic Minimum Limit (MW), and
- 14 5. Minimum run time (Hrs)

15 The formula to calculate the Low Load Cost is as follows: Startup Fee + (No
16 Load Fee * minimum run time) + (energy offer price at Economic Minimum
17 Limit * Economic Minimum * minimum run time).

18
19 The IMM calculates daily Reference Level values for the Start-Up Fee, the No-
20 Load Fee and the energy offer price at the Economic Minimum Limit, which are
21 used in the Low Load Cost at Reference Level calculation. These Reference

1 Level parameters can change based on fuel prices. The Economic Minimum
2 Limit and minimum run time values used to calculate both the Low Load Cost at
3 Offer and the Low Load Cost at Reference Level are based on the Market
4 Participant's Supply Offer.

5
6 The difference between the Low Load Cost at Offer and the Low Load Cost at
7 Reference Level is compared to a Commitment Cost Conduct Threshold where
8 the threshold is the minimum of two values:

9 1. The Low Load Cost at Reference Level multiplied times 0.10, or

10 2. The Economic Maximum Limit (MW) multiplied times \$80/MW

11 If the difference between the Low Load Cost at Offer and the Low Load Cost at
12 Reference Level is greater than the Commitment Cost Conduct Threshold then the
13 Supply Offer fails the conduct test and the resource is subjected to mitigation. In
14 which case, all the Supply Offer parameters are replaced with the corresponding
15 Reference Levels.

16

17 **Q: WHAT IS THE UNDERLYING INTENT OF THIS CONDUCT TEST?**

18 A: The local reliability commitment mitigation conduct test is intended to limit the
19 ability of a Market Participant with a resource that is operated out-of-merit to
20 address a reliability concern from asserting market power. The test accomplishes
21 this by limiting the amount of out-of-merit compensation a Market Participant can
22 earn when its resource is committed out of economic merit order to address a
23 reliability issue. In absence of mitigation, a Market Participant with a resource

1 that is needed to address a reliability issue could earn significant amounts of out-
2 of-merit revenues, in the form of NCPC, by raising the financial parts of their
3 Supply Offers well in excess of the resource's Reference Levels – values that
4 reflect the costs of operating the resource to address the reliability issue.

5
6 **Q: PLEASE PROVIDE AN EXAMPLE OF HOW THE CONDUCT TEST IS**
7 **INTENDED TO WORK.**

8 A: An example of how the local reliability commitment mitigation conduct test is
9 intended to work is illustrated in the following tables. For this example, we
10 ignore the application of the \$80/MW times Economic Maximum Limit factor for
11 simplification. Table 1 illustrates a scenario in which a Market Participant
12 submits a Supply Offer with Start-Up Fee, No-Load Fee and the price for
13 incremental energy at the resource's Economic Minimum Limit that are slightly
14 greater than the resource's Reference Levels. The Market Participant offers the
15 resource with a four hour minimum run time and an Economic Minimum Limit of
16 100 MW. The resource is committed to provide a local reliability service and is
17 evaluated for Local Reliability Commitment Mitigation.

18

1

	Reference Level	Supply Offer
Start-Up Fee	\$ 50,000	\$ 51,000
No Load Fee (\$/Hr)	\$ 300	\$ 305
Energy at Eco Min (\$/MWh)	\$ 50	\$ 55
Economic Minimum (MW)		100
Minimum Run Time (Hrs)		4
Low Load Cost (LLC)	\$ 71,200	\$ 74,220
Difference		\$ 3,020
Conduct Test Threshold = 10% of LLC at Reference		\$ 7,120
Conduct Test (Difference > Conduct Test Threshold)		Pass

2


3 The Low Load Cost calculated using the Supply Offer parameters is \$3,020
4 greater than the Low Load Cost calculated using the Reference Level parameters.
5 The difference between the Low Load Costs as reflected in the Supply Offer
6 (\$3,020) is compared with 10% of the Low Load Cost as reflected in the
7 Reference Level values (\$7,120). The Supply Offer passes the conduct test and
8 will not be mitigated because \$3,020 is less than \$7,120.

9

10 Table 2 illustrates the Supply Offer and Reference Level for the same resource
11 with the only change being an increase to the Start-Up Fee parameter of the
12 Supply Offer by \$10,000 above the Reference Level value.

13

1

	Reference Level	Supply Offer
Start-Up Fee	\$ 50,000	\$  60,000
No Load Fee (\$/Hr)	\$ 300	\$ 305
Energy at Eco Min (\$/MWh)	\$ 50	\$ 55
Economic Minimum (MW)		100
Minimum Run Time (Hrs)		4
Low Load Cost (LLC)	\$ 71,200	\$ 83,220
Difference		\$ 12,020
Conduct Test Threshold = 10% of LLC at Reference		\$ 7,120
Conduct Test (Difference > Conduct Test Threshold)		Fail

2

3 The Low Load Cost calculated using the Supply Offer parameters is \$12,020
 4 greater than the Low Load Cost calculated using the Reference Level parameters.

5 The difference between the Low Load Costs (\$12,020) is compared with 10% of
 6 the Low Load Cost at Reference Level (\$7,120). The Supply Offer fails the
 7 conduct test and will be mitigated because \$12,020 is greater than \$7,120.

8

9 **Q: WHAT IS THE PRACTICAL IMPACT OF THE LOCAL RELIABILITY**
 10 **COMMITMENT MITIGATION TEST ON THE AMOUNT OF OUT-OF-**
 11 **MERIT COMPENSATION A MARKET PARTICIPANT CAN EARN**
 12 **WHEN ITS RESOURCE IS COMMITTED TO ADDRESS A**
 13 **RELIABILITY CONCERN?**

14 A: The reliability commitment mitigation test limits a Market Participant to receiving
 15 NCPC payments that are no more than 10% above its costs of providing energy to

1 address the reliability concern. As explained above, if the financial parameters of
2 the Market Participant's Supply Offers (*i.e.*, the Start-Up Fee, No-Load Fee and
3 energy price at Economic Minimum Limit) are in excess of 10% above the cost-
4 based Reference Levels for the resource, then the Market Participant's Supply
5 Offers will be mitigated to the Reference Level values. The effect is that the *most*
6 the Market Participant can receive through NCPC payments for providing the
7 reliability service is 10% above the costs for providing the service, as those costs
8 are reflected in the Reference Levels for the resource.

9

10 **Q: YOU EXPLAIN ABOVE THAT THE CURRENT TEST LOOKS AT THE**
11 **"MINIMUM OF" 10% ABOVE THE COST-BASED REFERENCE**
12 **LEVELS AND THE ECONOMIC MAXIMUM LIMIT FOR THE**
13 **RESOURCE MULTIPLIED BY \$80/MW. WHAT IS THE PURPOSE OF**
14 **THE SECOND FACTOR?**

15 A: The \$80/MW factor is relevant in a very narrow set of circumstances, and thus is
16 usually not a triggering event for mitigation. It is in place to recognize that low
17 load cost dollar amounts for large units with long minimum run times can be very
18 large. For example, when the price of No. 6 Oil is \$20/MMBTU a large steam
19 generator with a 8,000 BTU/kW heat rate, a 24 hour minimum run time, and a
20 250 MW Economic Minimum Limit will have a total low load cost of \$960,000 (a
21 normal start-up cost would increase this number significantly). Under the existing
22 conduct test, the 10% criterion would not trigger mitigation unless the offer for

1 the resource resulted in the Market Participant receiving more than \$96,000 of
2 daily net revenues.

3
4 When the existing reliability commitment mitigation rules were developed and
5 implemented, it was believed that the \$80/MW factor was necessary to reduce
6 incentives for resources with long minimum run times to create strategies to earn
7 additional NCPC. As discussed below, the IMM now believes that this test
8 should be removed at this time.

9

10 **Q: YOU STATE ABOVE THAT THE CURRENT CONDUCT TEST IS**
11 **SUSCEPTIBLE TO MANIPULATION TO PERMIT THE ASSERTION OF**
12 **MARKET POWER. CAN YOU EXPLAIN HOW THIS COULD OCCUR?**

13 A: Yes. Under the current rule, a Market Participant can structure their Supply Offer
14 so that it passes the conduct test but results in the Market Participant receiving
15 NCPC payments significantly in excess of their costs as reflected in their
16 Reference Levels. This result is only possible because the Market Participant's
17 resource is needed for reliability and the Market Participant therefore has market
18 power. If the Market Participant was facing competition, the strategy used to pass
19 the existing conduct test would significantly reduce the resource's likelihood of
20 being committed and earning energy revenues. It indicates that the current
21 reliability mitigation rules need to be revised to prevent this manipulation of the
22 current conduct test

23

1 **Q: PLEASE EXPLAIN HOW A MARKET PARTICIPANT COULD**
2 **STRUCTURE THEIR SUPPLY OFFER TO OBTAIN THIS RESULT?**



3 A: As we explained above, the current conduct test evaluates the “Low Load Cost”
4 of the resource’s operation, which is the cost of operating the resource for the
5 period of its minimum run time. The test does not evaluate operation of the
6 resource beyond its minimum run time. The current test presumes a Market
7 Participant will structure its offer so as to recover all its start-up and no-load costs
8 by the end of the resource’s minimum run time. Because of this, it is possible to
9 manipulate the Supply Offer by reducing the Start-Up Fee and increasing one or
10 both of the No-Load Fee and energy price parameters, on the presumption that the
11 resource will be operated for reliability for longer than its minimum run time.
12 This would effectively allow a Market Participant whose resource is committed
13 for local reliability beyond its minimum run time to receive NCPC payments well
14 in excess of its actual start-up costs, no-load costs and cost for energy provided
15 (plus the 10% adder permitted under the reliability commitment mitigation test).

16

17 **Q: PLEASE PROVIDE AN EXAMPLE OF HOW THIS OFFER STRATEGY**
18 **WOULD WORK.**

19 A: An example of how the local reliability commitment mitigation conduct test can
20 be manipulated is illustrated in the following tables. Table 3 is similar to the
21 previous examples with the only changes being that the Market Participant has
22 reduced the Start-up Fee to \$5,000 and increased the price of energy at the
23 Economic Minimum Limit from \$55/MWh to \$175/MWh. Again, for illustration

1 we ignore the \$80/MW times Economic Maximum Limit factor.

	Reference Level	Supply Offer
Start-Up Fee	\$ 50,000	\$  5,000
No Load Fee (\$/Hr)	\$ 300	\$ 305
Energy at Eco Min (\$/MWh)	\$ 50	\$  175
Economic Minimum (MW)		100
Minimum Run Time (Hrs)		4
Low Load Cost (LLC)	\$ 71,200	\$ 76,220
Difference		\$ 5,020
Conduct Test Threshold = 10% of LLC at Reference		\$ 7,120
Conduct Test (Difference > Conduct Test Threshold)		Pass

2

3 The Low Load Cost calculated using the Supply Offer parameters is \$5,020
4 greater than the Low Load Cost calculated using the Reference Level parameters.

5 The difference between the Low Load Costs (\$5,020) is compared with 10% of
6 the Low Load Cost at Reference Level (\$7,120). The Supply Offer passes the
7 conduct test and will not be mitigated because \$5,020 is less than \$7,120.

8 However, as illustrated in Table 4 below, if the resource is operated beyond the
9 minimum run time at the resource's Economic Minimum Limit to provide the
10 local reliability service the NCPC payments are significantly greater than 10%
11 above the Reference Levels.

12

1

	NCPC Payment			
Actual Run Time (Hrs)	Reference Level	Supply Offer	Difference	% Difference from Reference Level
4	\$ 71,200	\$ 76,220	\$ 5,020	7%
5	\$ 76,500	\$ 94,025	\$ 17,525	23%
6	\$ 81,800	\$ 111,830	\$ 30,030	37%
7	\$ 87,100	\$ 129,635	\$ 42,535	49%
8	\$ 92,400	\$ 147,440	\$ 55,040	60%
9	\$ 97,700	\$ 165,245	\$ 67,545	69%
10	\$ 103,000	\$ 183,050	\$ 80,050	78%
11	\$ 108,300	\$ 200,855	\$ 92,555	85%
12	\$ 113,600	\$ 218,660	\$ 105,060	92%

2

3 The formula to calculate the NCPC Payment for the actual run time is as follows:

4 Startup Fee + (No Load Fee *Actual Run Time) + (energy offer price at

5 Economic Minimum Limit * Economic Minimum Limit * actual run time).

6

7 By structuring the Supply Offer to pass the conduct test based on the minimum

8 run time, the Market Participant can exercise market power in the hours the

9 resource operates beyond the minimum run time to receive NCPC payments

10 significantly greater than 10% above the Reference Levels.

11

12 **Q: IF A MARKET PARTICIPANT UTILIZES THIS STRATEGY, ISN'T IT**

13 **MISREPRESENTING ITS COSTS?**

14 **A:** Yes. By reducing the Start-Up Fee and including those costs in either the energy

15 price parameter or the No-Load Fee parameter of the offer, the Market Participant

16 is misrepresenting the actual costs to start the resource, to maintain its operation at

1 no-load, or to provide additional energy above no-load. The current market
2 power mitigation rules and procedures in place do not contemplate that a Market
3 Participant would misrepresent their actual costs in this manner.
4

5 **Q: IS THE ISO AWARE THAT MARKET PARTICIPANTS ARE**
6 **EMPLOYING THIS STRATEGY?**

7 A: Yes. The proposed revisions to the local reliability commitment mitigation
8 conduct test are in response to evidence that this offer strategy is being employed
9 by one Market Participant. The Internal Market Monitor is taking appropriate
10 action to address this conduct, consistent with its investigatory authority.
11

12 **Q: PLEASE EXPLAIN THE MODIFICATIONS TO THE RELIABILITY**
13 **COMMITMENT MITIGATION CONDUCT TEST THAT THE ISO IS**
14 **PROPOSING IN ORDER TO ADDRESS THIS OFFER CONDUCT.**

15 A: The ISO is proposing to modify local reliability commitment mitigation to include
16 a *second* conduct test for any resource committed for reliability that passes the
17 current conduct test that is defined in Section III.A.5.5.5.2. The new conduct test
18 is similar to the existing Low Load Cost test. However, instead of using the
19 resource's minimum run time to calculate the resource's Low Load Cost, the
20 second conduct test will be performed using the actual time the resource was
21 operated to address the reliability need.
22

1 If the resource fails the second conduct test, referred to as the “Actual Run Time
2 Conduct Test,” then all the resource’s Supply Offer values will be replaced with
3 the resource’s Reference Levels for purposes of calculating the resource’s NCPC
4 payments.

5
6 **Q: PLEASE EXPLAIN HOW THE PROPOSED ACTUAL RUN TIME**
7 **CONDUCT TEST WILL PREVENT A MARKET PARTICIPANT FROM**
8 **MANIPULATING THE LOCAL RELIABILITY COMMITMENT**
9 **MITIGATION TEST AND ASSERTING MARKET POWER.**

10 A: An example of how the Actual Run Time Conduct Test will prevent a Market
11 Participant from manipulating the current conduct test and asserting market power
12 is illustrated in the table below. For this example, the Market Participant has
13 offered a four hour minimum run time and is operated for 10 hours to provide the
14 local reliability service. Table 5 is similar to the previous example in Table 3 in
15 which the Market Participant has reduced the Start-Up Fee to \$5,000 and
16 increased the price for energy at the Economic Minimum Limit to \$175/MWh.

17
18 The Actual Run Time Conduct Test will calculate the “Low Load Cost Actual
19 Run Time” using the Supply Offer and Reference Level parameters based on the
20 10 hour actual run time. The Low Load Cost Actual Run Time calculated using
21 the Supply Offer parameters is \$80,050 greater than the Low Load Cost Actual
22 Run Time calculated using the Reference Level parameters. The difference
23 between the Low Load Cost Actual Run Time (\$80,050) is compared with 10% of

1 the Low Load Cost Actual Run Time at Reference Level (\$10,300). The Supply
2 Offer fails the proposed conduct test. While the Supply Offer passes the current
3 conduct test based on the four hour minimum run time, the Supply Offer fails the
4 proposed Actual Run Time Conduct Test based on the resource's 10 hour actual
5 run time. Therefore, the Supply Offer will be mitigated.

6

	Reference Level	Supply Offer
Start-Up Fee	\$ 50,000	\$ 5,000
No Load Fee (\$/Hr)	\$ 300	\$ 305
Energy at Eco Min (\$/MWh)	\$ 50	\$ 175
Economic Minimum (MW)		100
Minimum Run Time (Hrs)		4
Low Load Cost (Minimum Run Time)	\$ 71,200	\$ 76,220
Difference		\$ 5,020
Conduct Test Threshold = 10% of LLC at Reference		\$ 7,120
Conduct Test (Difference > Conduct Test Threshold)		Pass

Actual Run Time (Hrs)		10
Low Load Cost (Actual Run Time)	\$ 103,000	\$ 183,050
Difference		\$ 80,050
Conduct Test Threshold = 10% of LLC at Reference		\$ 10,300
Conduct Test (Difference > Conduct Test Threshold)		Fail

7

1 **Q: HOW WILL THE NEW CONDUCT TEST BE IMPLEMENTED TO**
2 **PREVENT THE ASSERTION OF MARKET POWER?**

3 A: Any Supply Offer that is evaluated for local reliability commitment mitigation
4 and passes the current conduct test, based on the resource's minimum run time,
5 will be subjected to the proposed Actual Run Time Conduct Test, based on the
6 resource's actual run time. Failing the second proposed conduct test will result in
7 the Supply Offer being mitigated to the resource's Reference Levels.

8

9 **Q: PLEASE EXPLAIN WHY THE NEW CONDUCT TEST ONLY IMPOSES**
10 **MITIGATION IF THE MARKET PARTICIPANT EMPLOYS THE**
11 **CONDUCT DESCRIBED ABOVE?**

12 A: The Low Load Cost is calculated using a simple linear formula. The formula has
13 a fixed component (Start-Up Fee) and two time dependent components (No-Load
14 Fee and the price of the offered energy at the resource's Economic Minimum
15 Limit). As illustrated in Table 6 below, if a Market Participant submits a Supply
16 Offer with any component within 110% of the associated Reference Level, then
17 increasing the duration of the Low Load Cost conduct test from the minimum run
18 time to actual run time will not result in the Supply Offer being mitigated under
19 the new conduct test if the Supply Offer has passed the current conduct test.

20

	Reference Level	Supply Offer
Start-Up Fee	\$ 50,000	\$ 55,000
No Load Fee (\$/Hr)	\$ 300	\$ 330
Energy at Eco Min (\$/MWh)	\$ 50	\$ 55
Economic Minimum (MW)		100
Minimum Run Time (Hrs)		4
Low Load Cost (Minimum Run Time)	\$ 71,200	\$ 78,320
Difference		\$ 7,120
Conduct Test Threshold = 10% of LLC at Reference		\$ 7,120
Conduct Test (Difference > Conduct Test Threshold)		Pass

Actual Run Time (Hrs)		10
Low Load Cost (Actual Run Time)	\$ 103,000	\$ 113,300
Difference		\$ 10,300
Conduct Test Threshold = 10% of LLC at Reference		\$ 10,300
Conduct Test (Difference > Conduct Test Threshold)		Pass

3 If the Market Participant submits a Supply Offer with a Start-Up Fee significantly
4 less than the Reference Level and simultaneously increases the No-Load Fee or
5 energy price at Economic Minimum Limit (the time dependent components of the
6 Low Load Cost formula), then increasing the duration of the Low Load Cost
7 conduct test from using the minimum run time to the actual run time will likely
8 result in the Supply Offer being mitigated under the new conduct test; mitigation
9 will occur *only if* the Low Load Cost of the Supply Offer exceeds the Low Load

1 Cost of the Reference Level by more than 10%, which would be the appropriate
2 market outcome. On the other hand, a significant decrease to the Start-Up Fee
3 without a simultaneous increase to the No-Load Fee or price for energy at
4 Economic Minimum Limit, relative to Reference Levels, will not result in the
5 Supply Offer being mitigated under the Actual Run Time Conduct Test. Thus,
6 the Actual Run Time Conduct Test prevents a Market Participant from shifting
7 costs between Supply Offer parameters in a manner that will circumvent the local
8 reliability commitment mitigation tests, but the new test will not prevent a Market
9 Participant from lowering the Supply Offer (*i.e.*, by lowering the Start-Up Fee)
10 should it wish to do so. Nor does the test impose a more stringent standard on
11 resources that operate for a longer (or shorter) duration; the 10% adder naturally
12 increases as the run time and total costs of the unit increase.

13
14 **Q: DOES THE PROPOSED ACTUAL RUN TIME CONDUCT TEST**
15 **PREVENT A MARKET PARTICIPANT FROM MAKING CHANGES TO**
16 **THE START-UP FEE OF ITS SUPPLY OFFER?**

17 A: No. The new conduct test, as with the other mitigation tests in Appendix A, does
18 not prevent changes to Supply Offer parameters. If the Market Participant wants
19 to change its Start-Up Fee for a resource, and is concerned that doing so will run
20 afoul of the mitigation rules, the Market Participant can consult with the Internal
21 Market Monitor pursuant to Section III.A.3 of Market Rule 1, prior to submitting
22 the Supply Offer, to request the Internal Market Monitor adjust the Start-Up Fee

1 Reference Level parameter to reflect a change to the resource's physical or
2 financial characteristics.

3

4 **Q: IF A MARKET PARTICIPANT'S SUPPLY OFFER IS SUBJECT TO**
5 **MITIGATION UNDER THE NEW TEST, HOW WILL THE**
6 **MITIGATION BE IMPOSED?**

7 A: After the completion of the operating day, the Internal Market Monitor will
8 calculate the new Actual Run Time Conduct Test on the Supply Offers of any
9 resource committed for local reliability that was not mitigated under the current
10 minimum run time Conduct Test. If a Supply Offer fails the Actual Run Time
11 Conduct Test the Internal Market Monitor will instruct the ISO to replace all the
12 financial parameters of the resource's Supply Offer with Reference Levels for
13 purposes of calculating the resource's NCPC payments, and the Market
14 Participant will be notified that the Supply Offer has been mitigated. The IMM
15 anticipates that, in the usual course of business, these calculations will be done in
16 time for the mitigated NCPC payments to be reflected on the initial settlement
17 statement that is issued within a few days of the operating day. If there is a delay
18 in releasing the resource's actual run time information the Internal Market
19 Monitor will calculate the new Actual Run Time Conduct Test on the Supply
20 Offers when the information becomes available and, if the Supply Offer is
21 mitigated, the mitigated NCPC payments will be reflected in the 101 day
22 resettlement process.

23

1 **Q: YOU EXPLAINED ABOVE THAT THE PROPOSED MITIGATION**
2 **RULE CHANGES INCLUDE THE DELETION OF THE SO-CALLED**
3 **\$80/MW FACTOR. WHAT IS THE REASON FOR DELETING THIS**
4 **SECOND FACTOR?**

5 A: In the July 1, 2013 filing of ISO tariff changes to increase Supply Offer
6 flexibility, the Filing Parties proposed to remove the fixed \$80/MW factor on
7 grounds that high and volatile fuel prices could result in mitigation being
8 triggered inappropriately.¹ In his supporting testimony in that filing, Mario
9 DePillis, an economist with the IMM, explained the rationale for removing the
10 \$80/MW factor (at page 18 of his testimony). He said:

11 The original design included both a 10% threshold and a threshold
12 based on a total dollar amount of \$80/MW. Historically the
13 \$80/MW threshold has only triggered when the fuel price is
14 expensive, typically oil, and the cost of running the resource at
15 minimum is high compared to its total capacity. These can be
16 described as expensive and inflexible oil fired resources. Since the
17 oil price has been much less volatile than gas, it was not
18 anticipated that a Market Participant would have difficulty bidding
19 competitively and staying within the \$80/MW threshold when it
20 was less than the 10% threshold.

21 During the most recent winter, however, gas prices rose to levels
22 that were higher than oil during certain periods. At the same time
23 gas prices were very volatile. This led to the mitigation of gas-fired
24 generators because of the \$80/MW threshold. Given the volatility
25 at the time, it would have been difficult for Market Participants to
26 avoid violating the conduct test while submitting offers based on
27 widely varying natural gas prices.

28
29
30 We concur with Mr. DePillis's explanation for removing the \$80/MW factor.

31 Furthermore, the IMM anticipates increasing gas price volatility for the upcoming

¹ *ISO New England Inc. and New England Power Pool, Energy Market Offer Flexibility Changes*, Docket No. ER13-1877-000 (filed July 1, 2013), transmittal letter at p. 15.

1 winter that is similar in nature to the volatility experienced last winter. Therefore,
2 rather than waiting until the offer flexibility revisions go into effect in December
3 2014, it is appropriate to remove the \$80/MW factor with the implementation of
4 the Actual Run Time Conduct Test.

5
6 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

7 **A. Yes.**

8
9 I declare under penalty of perjury that the foregoing is true and correct.

10
11 Executed on 9/17/13

12
13
14 

15 David LaPlante

16
17 I declare under penalty of perjury that the foregoing is true and correct.

18
19 Executed on 9/17/2013

20
21
22 

23 Robert Laurita

**SEPTEMBER 13, 2013 PARTICIPANTS COMMITTEE MEETING
VOTE TAKEN TO SUPPORT ISO-PROPOSED
LOCAL RELIABILITY COMMITMENT MITIGATION CHANGES**

TOTAL

Participant Name	VOTE
GENERATION	8.58
TRANSMISSION	17.17
SUPPLIER	14.71
ALTERNATIVE RESOURCES	14.16
PUBLICLY OWNED ENTITY	17.17
END USER	17.17
% IN FAVOR	88.96

GENERATION SECTOR

Participant Name	VOTE
Dominion Energy Marketing, Inc.	A
EquiPower Resources Management, LLC	A
Essential Power, LLC	A
GDF SUEZ Energy Marketing North America	A
Generation Group Member	A
Millennium Power Partners	A
NextEra Energy Resources, LLC	A
NRG Power Marketing, LLC	O
TransCanada Power Marketing Ltd.	F
IN FAVOR (F)	1
OPPOSED (O)	1
TOTAL VOTES	2
ABSTENTIONS (A)	7

TRANSMISSION SECTOR

Participant Name	VOTE
Bangor Hydro-Electric Company	A
New England Power Company	F
Central Maine Power Company	F
The United Illuminating Company	F
NU / NSTAR	F
Vermont Electric Power Company	A
IN FAVOR (F)	4
OPPOSED (O)	0
TOTAL VOTES	4
ABSTENTIONS (A)	2

SUPPLIER SECTOR

Participant Name	VOTE
BP Energy Company	A
Brookfield Energy Mktg /Cross Sound Cable	A
Calpine Energy Services	A
Citigroup Energy Inc.	A
Consolidated Edison Energy, Inc.	A
CP Energy Marketing (US) Inc.	A
DC Energy, LLC	A
DR Power, LLC	A
Dynegy Marketing and Trade, LLC	A
Energy America, LLC	F
Exelon Generation Company	A
Galt Power, Inc.	F
Granite Ridge/Merrill Lynch Commodities	A
H.Q. Energy Services (U.S.) Inc.	A
Hess	F
Integrus Energy Services, Inc.	F
Kimberly-Clark Corporation	F
Linde Energy Services, Inc.	F
LIPA	A
PPL EnergyPlus, LLC	A
PSEG Energy Resources & Trade LLC	O
Vitol Inc.	A
IN FAVOR (F)	6
OPPOSED (O)	1
TOTAL VOTES	7
ABSTENTIONS (A)	15

ALTERNATIVE RESOURCES SECTOR

Participant Name	VOTE
Renewable Generation Sub-Sector	
First Wind Energy Marketing	A
Small RG Group Member	A
Distributed Generation Sub-Sector	
Conservation Services Group	F
Small DG Group Member	F
Load Response Sub-Sector	
EnerNOC, Inc.	A
Vermont Energy Investment Corp.	F
Small LR Group Member	F
LR Provisional Group Voting Member	A
IN FAVOR (F)	4
OPPOSED (O)	0
TOTAL VOTES	4
ABSTENTIONS (A)	4

**SEPTEMBER 13, 2013 PARTICIPANTS COMMITTEE MEETING
VOTE TAKEN TO SUPPORT ISO-PROPOSED
LOCAL RELIABILITY COMMITMENT MITIGATION CHANGES**

PUBLICLY OWNED ENTITY SECTOR

Participant Name	VOTE
Ashburnham Municipal Light Plant	F
Boylston Municipal Light Department	F
Chicopee Municipal Lighting Plant	F
Concord Municipal Light Plant	F
Conn. Municipal Electric Energy Cooperative	F
Groton Electric Light Department	F
Holden Municipal Light Department	F
Holyoke Gas & Electric Department	F
Hudson Light and Power Department	F
Hull Municipal Lighting Plant	F
Ipswich Municipal Light Department	F
Littleton (MA) Electric Light Department	F
New Hampshire Electric Cooperative, Inc.	F
Littleton (NH) Water & Light Department	F
Mansfield Municipal Electric Dept.	F
Marblehead Municipal Light Dept.	F
Mass. Municipal Wholesale Electric Co.	F
Middleborough Gas and Electric Dept.	F
Middleton Municipal Electric Dept.	F
Paxton Municipal Light Department	F
Peabody Municipal Light Plant	F
Princeton Municipal Light Department	F
Rowley Municipal Lighting Plant	F
Russell Municipal Light Department	F
Shrewsbury's Electric & Cable Ops	F
South Hadley Electric Light Dept.	F
Sterling Municipal Electric Light Dept.	F
Taunton Municipal Lighting Plant	F
Templeton Municipal Lighting Plant	F
Wakefield Municipal Gas & Light Dept.	F
West Boylston Municipal Lighting Plant	F
Westfield Gas & Electric Light Dept.	F
Vermont Electric Cooperative	F
IN FAVOR (F)	33
OPPOSED (O)	0
TOTAL VOTES	33
ABSTENTIONS (A)	0

END USER SECTOR

Participant Name	VOTE
Associated Industries of Massachusetts	F
Cianbro Companies	A
Conservation Law Foundation	F
Conn. Office of Consumer Counsel	F
Corinth Wood Pellets, LLC	A
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
LaBree's Inc.	A
Maine Public Advocate Office	F
Marden's Inc.	A
Mass. Attorney General's Office	A
MoArk, LLC	A
NH Office of Consumer Advocate	F
PalletOne of Maine	A
PowerOptions, Inc.	F
Praxair, Inc.	F
St. Anselm College	A
Shipyard Brewing Co., LLC	A
The Energy Consortium	F
Union of Concerned Scientists	F
Utility Services Inc.	A
Westerly Hospital	A
Z-TECH, LLC	A
IN FAVOR (F)	10
OPPOSED (O)	0
TOTAL VOTES	10
ABSTENTIONS (A)	18

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