

**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*. 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.12.4 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.5.10 and Section III.A.7 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.14 and III.A.15 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 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.12 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.14 and/or III.A.15 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 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.14 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.14 and III.A.15 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 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.12 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.8 of this **Appendix A**.

(iv) *Anti-Competitive Demand Bids*, which are addressed in Section III.A.7 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.12 of this **Appendix A**. Monitoring under this Section III.A.2.3(k) cannot serve as a basis for mitigation under Sections III.A.6 or III.A.8 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.2.5.

(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.7, or III.A.8. 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 (“Mitigation Measures”) 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.

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

(a) *Imposing Mitigation.* To achieve the foregoing purpose and objectives, Mitigation Measures should only be imposed to remedy conduct that would substantially distort or impair the competitiveness of any of the markets administered by the ISO. Accordingly, and as more fully described in Sections III.A.5, III.A.6, III.A.8, and III.A.9 below, the ISO shall seek to impose Mitigation Measures only to remedy conduct that:

(i) is significantly inconsistent with competitive conduct as discussed below in Section III.A.2.4.2(b); and

(ii) would result in a change in one or more prices in the New England Markets or NCPC payments to a Market Participant beyond the thresholds defined in *Exhibit 1*, Section III.A.5.3 or Section III.A.5.8 of this *Appendix A*, as appropriate.

(b) *Conduct Inconsistent with a Competitive Market.* In general, the ISO shall consider a Market Participant's conduct to be inconsistent with competitive conduct if the conduct would (i) reduce the net revenue associated with the Resource, but for the effect of the conduct on market outcomes, or (ii) reduce the capability of the Transmission System resulting in a price impact in the New England Markets or NCPC payments in excess of the thresholds in *Exhibit 1*, Section III.A.5.3 or Section III.A.5.8 of this *Appendix A*, as appropriate.

(c) 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, 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, Decrement Bids, and offers relating to Installed Capacity, 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.

### **III.A.3. Consultation Requirements**

**III.A.3.1. In General.** If through the application of an appropriate index or screen or other monitoring of market conditions, conduct is identified that (i) exceeds an applicable threshold, and (ii) has a material effect, as specified below, on one or more prices or NCPC payments in the New England Markets administered by the ISO, the Internal Market Monitor will take the steps set forth in this Section III.A.3:

**III.A.3.1.1. Notice and Opportunity to Respond.** Before imposing mitigation for violation of general market thresholds (excluding thresholds regarding congestion mitigation)

(a) The Internal Market Monitor will, whenever practicable, contact the Market Participant engaging in the identified conduct to request an explanation of the conduct;

(b) If the explanation, if available, considered together with other information available to the Internal Market Monitor, indicates to the satisfaction of the Internal Market Monitor that the questioned conduct is consistent with competitive conduct as discussed above in Section III.A.2.4.2(b)., no further action will be taken; and

(c) The Internal Market Monitor will consider any information a Market Participant submits, but is not required to delay mitigation while waiting for information.

**III.A.3.1.2. Consideration of Information in All Cases.** In every case, the Internal Market Monitor will consider all available explanations of behavior that are based on a Market Participant's cost of providing any market product, including

- (a) Any relevant opportunity costs,
- (b) The need to shape bids and offers for a Limited Energy Resource to maximize the economic value from that Resource over time given the unique characteristics of the Resource, and
- (c) any special price limitations applicable to dual-fuel Resources.

**III.A.3.1.3. Advance Consultation by Market Participant.** If a Market Participant anticipates submitting offers in a market administered by the Internal Market Monitor that will exceed the thresholds specified in Sections III.A.4, III.A.5, III.A.6, III.A.7, or III.A.8 for identifying conduct inconsistent with competition, the Market Participant may contact the Internal Market Monitor to provide an explanation of any legitimate basis for any such changes in the Market Participant's offers. If a Market Participant's explanation of the reasons for its bidding indicates to the satisfaction of the Internal Market Monitor that the questioned conduct is consistent with competitive conduct, no further action will be taken.

#### **III.A.3.1.4. Market Participant Access to Its Reference Levels.**

(a) The Internal Market Monitor will make available to the Market Participant the Reference Levels (as defined in Section III.A.5.6.1) applicable to that Market Participant's offers; the energy components will generally be available on a daily basis, but in all cases Reference Levels will be available upon request. The Market Participant shall not modify such Reference Levels in the ISO's or Internal Market Monitor's systems.

(b) Upon request 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.5.6 for that Market Participant. If cost data or other information submitted by a Market Participant indicates to the satisfaction of the Internal Market Monitor that the Reference Levels for that Market Participant should be changed, revised Reference Levels shall be determined, communicated to the Market Participant, and implemented, as soon as practicable.

### **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.

**III.A.4.2.** 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

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(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.4.3. Thresholds for Identifying Physical Withholding.**

**III.A.4.3.1. Initial Thresholds.** Except as specified in subsection III.A.4.3.4 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.4.3.2. 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.4.3.3. 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.4.3.4. 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.4.4. Hourly Market Impact and NCPC Thresholds.** 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 or NCPC payments in excess of either of the thresholds in *Exhibit 1*, or Section III.A.5.3.3, as appropriate.

[Sheet reserved for future use.]

### **III.A.5. Economic Withholding and Uneconomic Production**

**III.A.5.1. Purpose.** This Section addresses mitigation relating to economic withholding, uneconomic production and reliability commitment. If conduct is detected that exceeds one or more of the thresholds specified in Sections III.A.5.3 or III.A.5.4 and the Internal Market Monitor determines that there is a market impact to the extent required under Section III.A.5.5, the conduct shall be remedied by the prospective application of a Default Offer as described in Section III.A.5.7. If conduct is detected that fails the Commitment Offer Test in Section III.A.5.8.3 relating to reliability commitment mitigation, the conduct shall be remedied by the application of mitigation as described in Section III.A.5.8.4.

#### **III.A.5.2. Applicability.**

**III.A.5.2.1. In General.** Only Resources with Capacity Supply Obligations will be evaluated for economic withholding in the Day-Ahead Energy Market. All Supply Offers will be evaluated in the Real-Time Energy Market. In the event a Mitigation Measure is imposed on a Supply Offer for a Resource pursuant to Section 5.8 of this *Appendix A*, the Resource's NCPC payments shall not be mitigated under Section 5.7 for the same Operating Day.

### **III.A.5.2.1.1. Resources with Partial Capacity Supply Obligations.**

Resources with a Capacity Supply Obligation for less than their full capacity shall be evaluated for mitigation as follows:

(a) all Supply Offer parameters shall be reviewed for economic withholding; notwithstanding the foregoing, the energy price Supply Offer parameter shall be reviewed for economic withholding up to and including the higher of the block containing the Resource's Economic Minimum Limit and the highest block containing megawatts with a Capacity Supply Obligation;

(b) the entire offer block of a Resource shall be treated as having a Capacity Supply Obligation in any case where the block contains megawatts that are subject to a Capacity Supply Obligation;

(c) if a Resource with a partial Capacity Supply Obligation consists of multiple assets, by default the megawatts 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 megawatts 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. Such a proposal shall be rejected by the Internal Market Monitor if the designation would be inconsistent with competitive behavior; and

(d) Day-Ahead Energy Market Mitigation Measures will apply to all hours in the Day-Ahead Energy Market.

**III.A.5.2.2. Pivotal Supplier.** A “Pivotal Supplier” shall mean, for each hour any Market Participant whose aggregate energy Supply Offers (up to and including Economic Max) for such hour are greater than the Supply Margin. The “Supply Margin” for an hour shall mean the total energy Supply Offers (up to and including Economic Max) for such hour, less total system load (as adjusted for net interchange with other Control Areas and including Operating Reserve). Prior to the Day-Ahead clearing process or the Real-Time hourly dispatch, the Internal Market Monitor shall calculate the Supply Margin and designate any Pivotal Suppliers and related generating Resources for each hour in the Day-Ahead Market and the Real-Time Market. In the Day-Ahead Energy Market, an ISO Load Forecast shall be used in making the above determination.

**III.A.5.3. Thresholds for Identifying Economic Withholding.**

**III.A.5.3.1. General Thresholds.** The Internal Market Monitor shall investigate the reasons for and market impact of any offers from a Pivotal Supplier that exceed the following thresholds. Offers from a Pivotal Supplier exceeding these thresholds and market impact thresholds and for which no sufficient explanation has been provided, shall be mitigated to the Default Offer as determined in Section III.A.5.7.3.

(a) Energy Offer Price. A 300 % increase or an increase of \$100/MWh above the Reference Level, whichever is lower, but excluding offers under \$25.

(b) Startup and No-load Offer Price. A 200 % increase above the Reference Level.

(c) Reserved.

(d) Time Based Offer Parameters. An increase greater than 2 hours in elements of a generating Resource's Offer Data that are expressed in time (e.g. minimum run time, minimum down time, cold start time, hot start time) or greater than six hours for any combination of such time-based Offer Data compared to the unit's Reference Levels.

(e) Offer Parameters Expressed Other than in Time or Dollars. A 100 % increase for Offer Data that are minimum values, or a 50 % decrease for Offer Data that are maximum values (including, but not limited to, ramp rates and maximum starts per day).

#### **III.A.5.3.2. Reserved.**

#### **III.A.5.3.3. Additional Thresholds Applicable in Constrained Areas.** In

addition to the thresholds set forth in Section III.A.5.3.1, for generating Resources located in a constrained area (including generating Resources located in a DCA during constrained periods), the following thresholds shall be employed by the Internal Market Monitor to identify economic withholding that may warrant Mitigation Measures. Offers exceeding these conduct thresholds and market impact thresholds and for which no sufficient explanation has

been provided, shall be mitigated to the Reference Level determined as specified in Section III.A.5.6, unless an agreement has been negotiated under the procedures set forth in *Exhibit 2* to this *Appendix A*.

(a) For Supply Offers for the Real-Time Market: for intervals in which a generating Resource is dispatched for the purpose of relieving a transmission constraint above the level at which it otherwise would have been dispatched (“Constrained Hours”), the Internal Market Monitor shall assess the market impact of any Supply Offers (Section III.A.5.5.2(b)) that meet the following thresholds:

(i) Energy Offer Price – an increase of \$25 or 50%, whichever is lower, above the Reference Level; or

(ii) Start-Up or No-Load Price – an increase of 25% above the Reference Level.

(b) For Supply Offers for the Day-Ahead Market: for all Constrained Hours (as defined above) the Internal Market Monitor shall assess the market impact of any Supply Offers for the generating Resource that meet a threshold determined in accordance with the formula specified in subsection (a).

**III.A.5.4. Threshold for Identifying Uneconomic Production.** In addition to the thresholds governing forms of economic withholding in Section III.A.5.3, the Internal Market Monitor will monitor for actions not consistent with competitive conduct, as defined in Section III.A.2.4.2(b), involving uneconomic production. The following thresholds may warrant the imposition of a Mitigation

Measure as provided in Section III.A.5.7: (i) Energy scheduled at an LMP that is less than 20% of the applicable Reference Level and that causes transmission congestion; or (ii) Real-Time output from a Resource that exceeds 110% of the ISO's Dispatch Rate, and causes transmission congestion.

### **III.A.5.5. Hourly Market Impact and General NCPC Thresholds.**

**III.A.5.5.1. Initial Investigation.** Before imposing any Mitigation Measure as permitted in Section III.A.5.7, with regard to offers and bids identified in accordance with Sections III.A.5.3.1, III.A.5.3.3, and III.A.5.4, the Internal Market Monitor shall investigate the reasons for the change in accordance with the applicable provisions of Section III.A.3. If the offers and bids in question are not explained to the satisfaction of the Internal Market Monitor, the Internal Market Monitor will determine whether the offers and bids in question would, if not mitigated, cause a material effect on the LMP at a Node, or clearing prices in the New England Markets or NCPC charges as provided in Sections III.A.5.5.2 and III.A.5.5.3.



**III.A.5.5.2. Market Impact Thresholds.** Before a Mitigation Measure is

imposed on offers exceeding the conduct thresholds, the Internal Market Monitor will determine whether there is an impact as follows:

(a) For offers exceeding the thresholds in Section III.A.5.3.1, a material effect is one in excess of the thresholds in *Exhibit 1*, Section 1 or *Exhibit 1*, Section 2 as applicable.

(b) For offers exceeding thresholds in Section III.A.5.3.3, a material effect is one in excess of the conduct threshold specified in Section III.A.5.3.3 above or NCPC payment thresholds as specified in *Exhibit 1*, Section 2.

**III.A.5.5.3. Calculation of Price Impact.**

(a) When it has the capability to do so, the Internal Market Monitor shall determine the effect on prices in constrained areas as the difference between the LMP at the Resource node and the LMP at the Hub. When it has the capability to do so, the Internal Market Monitor shall determine the effect on prices in unconstrained areas by rerunning the ISO's market settlement software (MSS) through the market operator interface (MOI). The Internal Market Monitor shall determine the effect on NCPC payments of questioned conduct by comparing NCPC payments calculated using actual offers to NCPC payment calculated using the default offer.

(b) When a determination in accordance with paragraph (a) above is not practicable, including, but not limited to when market operations are being performed in the back-up control center during an Emergency, the Internal Market Monitor shall manually determine the effect on prices or NCPC payments of

questioned conduct. The price impact analysis will be performed to allow *ex ante* mitigation in the Day-Ahead Energy Market. *Ex ante* mitigation in the Real-Time Energy Market will be performed as soon as practicable.

(c) The Internal Market Monitor may set thresholds below which it need not apply the MSS and MOI if it is reasonable to conclude that the market impact thresholds are not likely to be violated.

(d) In constrained areas, if appropriate models are not available as the result of limitations in hardware, software, or other technical difficulties, the Internal Market Monitor will manually evaluate the impact to determine if it is at least as large as the threshold value. If that is not practicable, then either of the following will be deemed to be a violation of the market impact screen for a constrained area Resource exceeding a conduct threshold specified in Section III.A.5.3: (i) the scheduling of such Resource, or (ii) if the unit is not scheduled, a determination that the Reference Level for such Resource is less than the offer price of the marginal resource by more than the threshold specified in *Exhibit 2*, Section 2.4, will be deemed to have violated the market impact screen.

### **III.A.5.6. Calculation of Resource Reference Levels.**

**III.A.5.6.1. Methods for Determining Reference Levels.** The Internal Market Monitor will calculate a reference price or, where an element of a bid or offer is not in dollars, the time-based or quantity level (any of which being referred to as a “Reference Level”) for each component of a generator’s bid on the basis of the following procedures:

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(a) The Internal Market Monitor will calculate Reference Levels using the first of the following three procedures for which adequate information is available, with the understanding that, for dollar-based Supply Offer parameters, Reference Levels will be calculated using the third of the three procedures if the Reference Levels calculated using the third procedure are greater than the Reference Levels calculated using either of the first two procedures.

(i) 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 (excluding negative values) or bid components (hereinafter, a "Submitted Offer") 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;

(ii) If that procedure is not applicable due to lack of data, then the mean of the LMP at the Resource's location during the lowest-priced 25 % of the hours that the Resource was dispatched over the previous 90 days for similar hours or load levels, adjusted for changes in fuel prices; or

(iii) A level negotiated with the Market Participant submitting the bid or bids at issue, and intended to reflect the Resource's marginal costs, provided such a level has been negotiated prior to the occurrence of the conduct being examined by the Internal Market Monitor, and provided that the Market Participant has provided data on the Resource's operating costs in accordance with specifications provided by the Internal Market Monitor. The Internal Market Monitor's determination of a generating unit's marginal costs shall include an assessment of the unit's incremental operating costs in accordance with the following formula, and such other factors or adjustments as the Internal Market Monitor shall reasonably determine to be appropriate based on such data supplied by the Market Participant or otherwise available to the Internal Market Monitor:

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

(b) Notwithstanding Section III.A.5.6.1(a), for any Resource that has been flagged as 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 in the previous 90 days, if the ratio of (the sum of the operating hours for flagged

days during the previous 90 days in which the number of Day-Ahead and Real-Time hours operated out of economic merit order exceed the number of Day-Ahead and Real-Time hours operated in economic merit order) divided by (the total number of Day-Ahead and Real-Time operating hours during the previous 90 days) is greater than or equal to 50 percent, then the Resource is not eligible for a Reference Level as described in subsection (i) above and will receive a Reference Level as described in subsection (iii) above. For the purposes of this subsection:

(1) A flagged day is any day in which the Resource has been flagged as 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.

(2) Operating hours are the hours in the Day-Ahead Energy Market for which a Resource has cleared MWs greater than zero and hours in the Real-Time Energy Market for which a Resource has metered MWs greater than zero. For days for which Real-Time Energy Market metered MWs are not yet available in the ISO's or the Internal Market Monitor's systems, telemetered MWs values will be used.

(3) Self-Scheduled hours will be excluded from all of the calculations described in this subsection, including the determination of operating hours.

(4) The determination as to whether a Resource operated in economic merit order during an hour will be based on its incremental energy offer.

**III.A.5.6.2. Insufficient Data.** If sufficient data does not exist to calculate a Reference Level as provided in Section III.A.5.6.1, the Internal Market Monitor may determine a Reference Level on the basis of:

(a) the estimated costs of the generating unit, taking into account appropriate input from the Market Participant; or

(b) an appropriate average of competitive bids of one or more similar generating units.

### **III.A.5.7. Mitigation Measures**

**III.A.5.7.1. Manual Review Prior to Mitigation.** The Internal Market Monitor will manually review a generating Resource's Reference Level before imposition of mitigation where practicable.

**III.A.5.7.2. Conditions for Imposition of Mitigation Measures.** The Internal Market Monitor may impose a Default Offer as set forth in this Section III.A.5.7 if the following conditions have been met:

- (a) A Submitted Offer exceeds an applicable threshold set forth in Sections III.A.5.3 and III.A.5.4 for an available Resource; and the conduct is not explained to the satisfaction of the Internal Market Monitor in accordance with Section III.A.3; and
- (b) The market impact thresholds described in Section III.A.5.5 are exceeded.

**III.A.5.7.3. Level of Default Offers.** A substitute mitigated offer (a "Default Offer") shall be designed to cause a Market Participant to offer as if it faced workable competition during a period when (i) the Market Participant does not face workable competition, and (ii) has responded to such condition by engaging in economic withholding.

In designing and implementing Default Offers, the Internal Market Monitor shall seek to avoid causing a Resource to offer below its marginal cost.

**III.A.5.7.4. Implementation.**

(a) The Default Offer may establish a mitigated value for one or more components of the offer for a given Resource equal to a Reference Level for that component of the Resource's offer determined as specified in Section III.A.5.6.1.

(b) A Resource subject to a Default Offer shall be paid the LMP or other market clearing price applicable to the output from the Resource. Accordingly, a Default Offer shall not limit the price that a Resource may receive or pay unless the Default Offer determines the LMP or other market clearing price applicable to that Resource.

(c) Mitigation Measures shall not be applied if the price effects of the measures would cause the average day-ahead energy price in the mitigated locations or zones to rise over the entire day.

(d) Any mitigation measure imposed under this Section III.A.5.7 will be in effect for the following duration:

(i) For mitigation requiring application of the impact test in Section III.A.5.5 above, Mitigation Measures shall be imposed from the first hour in which the impact test is met through the end of the Operating Day, or from the first hour in which the impact test is met through the end of the mitigated Resource's minimum run time, whichever is longer.

(ii) For mitigation not requiring application of the impact test in Section III.A.5.5 above, (a) mitigation of offer parameters expressed in dollars shall be imposed from the first hour in which the applicable conduct threshold is violated through the end of the Operating Day, or from the first hour in which the applicable conduct threshold is violated through the end of the mitigated Resource's minimum run time, whichever is longer, and (b) mitigation of offer parameters expressed other than in dollars will be in effect for the entire first Operating Day and, if the minimum run time of the Resource carries over to the second Operating Day, the entire second Operating Day.

(e) The posting of the Day-Ahead schedule, rebidding period and reliability commitment run may be delayed if necessary for the completion of mitigation procedures.

(f) Mitigation that does not affect the LMP or a clearing price in another ISO market may be applied in the settlement process.

### **III.A.5.8. Reliability Commitment Mitigation**

**III.A.5.8.1. Applicability.** The Mitigation Measures prescribed in this Section III.A.5.8 shall apply to Supply Offers for Resources that are committed to provide or Resources that are required to remain online to provide:

- (a) outside of the Day-Ahead Energy Market, local first contingency protection or local second contingency protection;
- (b) voltage support or voltage control; or
- (c) Special Constraint Resource Service.

Notwithstanding the foregoing, the Mitigation Measures prescribed in this Section III.A.5.8 shall not apply if an agreement has been negotiated under the procedures set forth in Exhibit 2 to this

#### ***Appendix A.***

**III.A.5.8.2. Duration.** Any Mitigation Measure imposed pursuant to this Section III.A.5.8 will be in effect for the following duration.

- (a) *Resources with a Minimum Run Time Carryover.* For a Resource with a minimum run time that carries over from one Operating Day to the following Operating Day, mitigation will be in effect for the entire first Operating Day through the minimum run time of the Resource. Notwithstanding the foregoing, if the resource is selected for one of the reasons in Section III.A.5.8.1 after the start of the Operating Day, then mitigation will be in effect from the time of such selection.

- (b) *Resources without a Minimum Run Time Carryover.* For a Resource with a minimum run time that does not carry over from one Operating Day to the following Operating Day, mitigation will be in effect for the entire Operating Day, or if the decision to mitigate is made after the start of the Operating Day, then from the time at which the decision is made through the remainder of the Operating Day.

**III.A.5.8.3. Commitment Offer Test.** All Supply Offer parameters expressed in monetary values will be tested by application of the following formula.

$(\text{Low Load Cost at Offer} - \text{Low Load Cost at Mitigation Value}) < \text{Commitment Cost Threshold}$

Where,

Commitment Cost Threshold = the lower of (0.1 times Low Load Cost at Mitigation Value) or (\$80 times the Resource's Economic Maximum).

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

$(\text{Cold Start-Up Fee} + (\text{No Load Fee} * \text{minimum run time}) + (\text{Price of Energy at Economic Min} * \text{Economic Min} * \text{minimum run time}))$

Low Load Cost at Offer = Low Load Cost calculated with unmitigated dollar-based values of the Supply Offer.

Low Load Cost at Mitigation Value = Low Load Cost calculated with dollar-based Mitigation Values of the Supply Offer.

Price of Energy at Economic Min = The price in the Supply Offer for energy at the Resource's Economic Min.

Mitigation Value = Max [Reference Level, cost-based Reference Level as determined in Section III.A.5.6.1(b)(iii)]



If the (Low Load Cost at Offer – Low Load Cost at Mitigation Value) is equal to or greater than the Commitment Cost Threshold, a failure of the Commitment Offer Test will be deemed to have occurred.

If a Resource's combined minimum run time and minimum down time exceed 24 hours, then the Commitment Offer Test will use the greater of 24 hours or the Resource's minimum run time for the minimum run time.

**III.A.5.8.4. Consequence of Failing Commitment Offer Test.** If a Resource fails the Commitment Offer Test and on the basis of its unmitigated Supply Offer would receive NCPC Credits, then Mitigation Values for (a) Start-Up Fee (Cold, Intermediate, or Hot as appropriate) (b) No-Load Fee and (c) energy price shall be used for purposes of calculating NCPC Credits for the Resource in the Day-Ahead Energy Market and Real-Time Energy Market under Appendix F of this Market Rule 1.

### **III.A.5.9. 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 Section III.A.5.3.1 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 Section III.A.5.3.3.

(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 Fee 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.5.9(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.5.9(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.5.10. 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 the Market Rule 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 the Market Rule (or both), shall propose a specific mitigation measure for the conduct or revision to the Market Rule (or both), and shall set forth the Internal Market Monitor's justification for imposing that mitigation measure or revision to the Market Rule (or both).

### **III.A.6. Reliability Agreements**

**III.A.6.1. Mitigation Agreements.** A Market Participant with the authority to submit Supply Offers for any Resources designated pursuant to Section 3 of *Exhibit 2* may initiate with the ISO negotiations for a prospective agreement under the procedures set forth in *Exhibit 2*.

**III.A.6.2. Cost-of-Service Agreements.** For Resources seeking authority permanently to shut-down and identified by the ISO as necessary for reliability, the ISO will negotiate prospective cost of service agreements under the procedures set forth in *Exhibit 2*.

**III.A.6.3. Filing with the Commission.** All agreements negotiated by the ISO under this Section III.A.6 will be filed with the Commission in such form and manner as the Commission from time to time requires.

### **III.A.7. Demand Bids**

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

(a) LMPs in the Day-Ahead and Real-Time Energy Markets 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 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 the Market Rule 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 the Market Rule (or both), shall propose a specific mitigation measure for the conduct or revision to the Market Rule (or both), and shall set forth the Internal Market Monitor's justification for imposing that mitigation measure or revision to the Market Rule (or both).

### **III.A.8. Mitigation of Increment Offers and Decrement Bids**

**III.A.8.1. Purpose.** The provisions of this Section III.A.8 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 the Market Rules and ISO New England Manuals.

#### **III.A.8.2. Implementation.**

**III.A.8.2.1. 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 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.8.2.2. 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 and Real-Time markets, 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 and Real-Time Energy Markets.

**III.A.8.3. 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.

**III.A.8.4. 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.9. Additional Internal Market Monitor Functions Specified in Tariff.**

#### **III.A.9.1. 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) Section III.13.1.1.2.6. Review by Internal Market Monitor of Offers from New Generating Capacity Resources Below 0.75 Times CONE.

(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.9.2. 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.9.3. 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.9.4. 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 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.9.5. 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.10. [Reserved.]**

### **III.A.11. ADR Review of Internal Market Monitor Mitigation Actions.**

**III.A.11.1. 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, but in all cases within the time limits applicable to billing adjustment requests.<sup>1</sup>

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.<sup>2</sup>

**III.A.11.2. 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 (as defined in *Appendix D*) 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

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<sup>1</sup> These deadlines are currently specified in the ISO New England Manuals.

<sup>2</sup> 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.

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.12. Reporting**

**III.A.12.1. 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.

### **III.A.12.2. Periodic Reporting by the ISO and Internal Market Monitor.**

**III.A.12.2.1. 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.12.2.2. 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 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.12.2.3. 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.12.3 of this *Appendix A*.

**III.A.12.3. 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.12.4. 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 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.12.5. Other Internal Market Monitor or External Market Monitor Communications With Government Agencies.**

**III.A.12.5.1. 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.12.5.2. 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.12.5.3. 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.12.2.2..

**III.A.12.6. 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.13. Ethical Conduct Standards**

**III.A.13.1. 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.13.2. 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.13.2.1. 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.13.2.2. 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.13.3. Additional Standards Applicable to External Market Monitor.** In addition to the standards referenced in the remainder of this Section 13 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.14. Protocols on Referrals 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.15. 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.

## **EXHIBIT 1**

### **MARKET IMPACT AND NCPC THRESHOLDS**

#### **1. MARKET IMPACT THRESHOLD**

An increase of 200 % or \$100/MW, whichever is lower, in the LMP and 200 % or \$25, whichever is lower, in any other New England Market.

#### **2. GENERAL NCPC THRESHOLD**

An increase of more than 100 % in NCPC Credits due to the Market Participant exceeding a conduct threshold, provided that the increase also exceeds \$10/MWh, compared to the NCPC Credits calculated using Reference Levels and the physical bid characteristics for the Resource. This calculation is as follows:

$$OR_e = \text{StartupPrice} + \sum_t [\text{NoLoadPrice}_t + (SE_t \times EBB_t) - (SE_t \times LMP_t)]$$

Where:

$OR_e$	=	Operating Reserve Energy Market Component
$\text{StartupPrice}$	=	Bid Startup Price (or Reference Level)
$\text{NoLoad Price}$	=	Bid No-Load Price (or Reference Level)
$SE$	=	Supplied Energy (or Reference Economic Minimum)
$EBB$	=	Energy Bid Block Prices (or Reference Levels)

LMP = Locational Marginal Price

t = Operating Hour of the Resource associated with one continuous start-up/dispatch period when Energy was Supplied (or as determined by Reference Characteristics)

The ISO shall determine the effect of questioned conduct on prices and NCPC Charges using the best available data and the models and methods outlined in Section III.A.5.5.3 of this **Appendix A**.



## **EXHIBIT 2**

### **DESIGNATED CONGESTION AREAS AND RELIABILITY AGREEMENTS**

#### **1. DESIGNATED CONGESTION AREAS**

**1.1 Determination of Designated Congestion Areas.** Based on its evaluation of historic patterns of the operation of the New England Control Area and forecasted requirements for maintaining the reliability of the New England Control Area, the ISO has named three “Designated Congestion Areas” or “DCAs,” i.e. geographic areas in which Resources owned by a limited number of suppliers are regularly required to be run to relieve transmission constraints. Those DCAs are listed on the ISO’s website and were provided to the Commission in an informational filing on January 28, 2003, in Docket No. ER02-2330-008.

**1.2 Procedure.** Should the ISO deem it necessary to modify such designations, the ISO will provide written notice to the Markets Committee of the proposed changes(s) to Designated Congestion Areas and an explanation of the factors used by the ISO to review areas and ultimately to arrive at the proposed designations. In the month following such notice, the ISO will be available to discuss the proposal with the Markets Committee and will accept written comments on the proposal. At any regularly scheduled meeting of the Markets Committee to be held the next meeting following the time period for receipt of comments, the ISO will be available to present its proposed final report on change(s) to the Designated Congestion Areas. No later than the 10th day in the month following the presentation of the final report, the ISO will notify the Market Participants and advise the Commission in an informational filing of the change(s) to Designated Congestion Areas.

Notwithstanding the foregoing, the ISO may determine additional Designated Congestion Areas at any time on an emergency basis or as the result of new or changed circumstances; with such prior notice and opportunity for comment as is practicable under the circumstances.

Reserved for future use.

Reserved for future use.

## **2. NEGOTIATION OF AGREEMENTS WITH RESOURCES IN CONGESTION AREAS**

**2.1 Designation of Units Likely to Be Called Under Section III.6.2.** Annually, or more often, as required, the ISO, in consultation with the External Market Monitor, will designate which Resources (which for purposes of this *Exhibit 2* may include ISO designated portions of a Resource) it determines are likely to be called under Section III.6.2 at any time in the following year and which ones previously designated are no longer likely to be called.

Nothing herein shall prevent the ISO from identifying additional Resources during the year on an emergency basis based on new or changed system information.

**2.2 Procedure For Negotiation Of Reliability Agreements.** Entities designated pursuant to Section 3.1 above may apply to the ISO for such an agreement (a “Reliability Agreement”). For purposes of this procedure, the Market Participant with the authority to submit Supply Offers for such Resource shall be called the “Reliability Seller.”

**2.2.1 Information Required with Application.** When seeking a Reliability Agreement, the Reliability Seller shall provide to the ISO with such cost information (for the prior twelve (12) calendar months in the form used by the ISO for market monitoring purposes)<sup>4</sup> as the ISO determines is reasonably necessary to negotiate and administer the Reliability Agreement. Cost information will include, at a minimum, information to support the proposed Variable O&M Charge. The request shall also designate which of the following four options for a Reliability Agreement the Reliability Seller believes is appropriate for its Resource:

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<sup>4</sup> See Reporting of Generating Unit Fuel Cost and Related Data for ISO, in consultation with the Independent Market Monitoring Unit, New England Market Monitoring & Market Power Mitigation,” [http://www.iso-ne.com/smd/market\\_monitoring\\_and\\_mitigation/reporting\\_of\\_fuel\\_cost\\_and\\_related\\_data/](http://www.iso-ne.com/smd/market_monitoring_and_mitigation/reporting_of_fuel_cost_and_related_data/). This material includes both a procedure and a sample reporting form.

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|-----------------|--|
| <i>Option 1</i> | prospective agreement based on marginal cost, including a wear and tear adder;   |
| <i>Option 2</i> | prospective agreement for Limited Energy Resource;   |
| <i>Option 3</i> | prospective agreement to avoid a seasonal shut-down or other capability-reducing action, using an avoided cost adder; and                  |
| <i>Option 4</i> | prospective agreements to avoid a seasonal shut-down or other capability-reducing action, with a hold-harmless payment subject to true-up. |

**2.2.2 Reliability Agreement Terms.** If the ISO agrees that the Resource is entitled to a Reliability Agreement under Section III.A.6.1 of *Appendix A*, it will negotiate a Reliability Agreement substantially in the form provided in *Exhibit 3*. In general, such agreements shall be effective only prospectively.<sup>5</sup>

**2.2.3 Compensation.** The Reliability Agreement shall provide that for each applicable operating hour that the Reliability Seller's Resource was designated or used pursuant to Section III.6.2 of Market Rule 1, the Reliability Seller shall be entitled to payment based on the highest of: (i) the LMP for such hour; (ii) the lower of the Supply Offer or the applicable Reference Level; or (iii) its Stipulated Bid Cost.

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<sup>5</sup> In all cases subject to applicable FERC requirements, one example of when an agreement might be effective retroactively would be when the parties had agreed in principle but documentation could not be completed until a short time after the effective date, typically within thirty (30) days. Another example would be where a Resource is subjected to unanticipated bid mitigation that produces revenue less than actual incremental operating costs incurred as the result of the unit being dispatched out of merit order under this rule.

**2.2.4 Limit on Supply Offers or Reference Levels.** The Reliability Agreement shall provide that Supply Offers shall not exceed the Stipulated Bid Cost, or may provide that the Reference Level for the Resource shall not exceed the Stipulated Bid Cost or other level established in the Reliability Agreement.

**2.2.5 Term.** For Reliability Agreements other than options 3 and 4 in section 3.2.1, the term shall be one year from the effective date. Such Reliability Agreement shall provide for renewal for additional one-year terms so long as the ISO determines that the Resource continues to be eligible for a Reliability Agreement. For Reliability Agreements to avoid seasonal shut-down, the term shall be as negotiated by the parties, up to one year, with renewal as negotiated by the parties.

**2.2.6 Updating Cost Data.** Cost data for the Resource shall be updated daily in monthly cost reports in the format required by the ISO under procedures posted on the web at [http://www.iso-ne.com/smd/market\\_monitoring\\_and\\_mitigation/reporting\\_of\\_fuel\\_cost\\_and\\_related\\_data/](http://www.iso-ne.com/smd/market_monitoring_and_mitigation/reporting_of_fuel_cost_and_related_data/). Except as otherwise provided in the Reliability Agreement with regard to Stipulated Bid Cost, charges incurred by the Resource as a result of a specific request of the ISO, all operating limits, and the actual cost components of Stipulated Bid Costs shall be reestablished as follows: (i) in the case of year-long Reliability Agreements, annually, prior to the execution of the Reliability Agreement and at the time of renewal and (ii) for any part-year seasonal shut-down Reliability Agreements, prior to execution and at time of renewal.

**2.2.7 Settlement.** The Reliability Agreement shall provide for settlement with the Reliability Seller in accordance with existing NCPD and other settlement procedures.

**2.2.8 Variation from Pro-Forma.** The Reliability Agreement may vary from the form attached hereto upon application by either Party to FERC under Section 206 of the Federal Power Act<sup>6</sup> or, if both parties agree, prior to execution, upon the ISO's determination that

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<sup>6</sup> In other words, where a generator does not reach agreement with the ISO, in consultation with the External Market Monitor, on the terms, the Agreement can go into effect, subject to prospective changes to the *pro forma* terms pursuant to FERC order.

alternative provisions are necessary and appropriate and the ISO has obtained the written opinion of the External Market Monitor that the Reliability Agreement does not unreasonably interfere with the competitive and efficient operation of the market.

### **2.2.9 Stipulated Costs.**

**Formula.** Stipulated costs shall be determined using the generating unit fossil fuel usage and related items for the applicable operating day (or, where applicable, aggregate of days constituting the Agreement’s term), including incremental energy bids and start-up and no-load values as appropriate, as reported to the ISO consistent with its procedures for reporting actual costs for market monitoring purposes, as follows:

$$\begin{array}{lcl} \text{Stipulated Marginal Cost} & & \text{Incremental Operating Cost + Wear \& Tear Adder + Avoided Costs Adder (if} \\ \text{("SMC")} & = & \text{applicable) or Lost Opportunity Cost (if} \\ & & \text{applicable)} \end{array}$$

***Where:***



$$\begin{aligned}\text{Incremental Operating Cost} &= (\text{Fuel} + \text{O\&M} + \text{Other}) \times \text{MWh} \\ \text{Fuel} &= (\text{Variable Fuel Use for Generation} \times \text{Fuel Index Price}) + \text{Fuel Cost Ancillaries}^1 \\ \text{O\&M} &= \text{Variable O\&M as specified in the Reliability Agreement} \\ \text{Other} &= (\text{SO}_2 \text{ Allowance Adder} + \text{NO}_x \text{ Allowance Adder} + \text{Operating Permit Adder}) \\ \text{Wear and Tear Adder} &= \text{Incremental Operating Cost} \times 0.10 \\ \text{Stipulated Bid Costs} &= \text{Stipulated Marginal Cost} + \text{Stipulated Start-Up Cost} + \text{Stipulated No Load Cost}\end{aligned}$$

***Where:***

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<sup>1</sup> Note that the cost reporting procedures separately account for fuel and O&M costs related to start-up and no load.

Stipulated Start-Up Cost = (Start-Up Fuel Use x Fuel Index Price)  
+ Fuel Cost Ancillaries + Start-Up  
O&M + Start-Up Other

Stipulated No Load Cost = (No Load Fuel Use x Fuel Index Price)  
+ Fuel Cost Ancillaries + No Load  
O&M + No Load Other

**Avoided Cost Adder.** The Avoided Costs Adder, if applicable, is intended to ensure the availability of a Resource for which it is in the economic interest of the Reliability Seller, absent market power, to shut down for part of the year or take other actions that would reduce the capability or availability of a Resource and that the ISO determines is needed for the reliability and security of the system. Reliability Sellers seeking a Reliability Agreement and claiming the Avoided Costs Adder will be required to establish that the Resource would have shut down for a demonstrable period. The “Avoided Cost Adder” shall be available only for Resources exercising options for Agreements to avoid a seasonal shut down and shall be, at the election of the Reliability Seller, either

(a) Incremental Operating Cost x .10 for each MWh of production, or

(b) For the term of the Reliability Agreement or the avoided shut-down, as determined in the Reliability Agreement, a lump sum equal to Reliability Resource’s actual incremental cost that would have been avoided had it taken the seasonal shut-down, payable in equal monthly installments, net of all market revenues (including ICAP Payments) during the period of the avoided shut-down.

**Fuel Cost.** Fuel shall be calculated using the applicable daily Fuel Price Index specified in the Agreement.

**Lost Opportunity Cost.** Lost Opportunity Cost will be available only for generating Resources that are subject to output limitations that significantly restrict expected in-merit operation and

will be negotiated on a case-by-case basis to provide the Resource payments intended to approximate the net revenue the Resource would have obtained had it operated solely in the market.

**2.3 Negotiation Of Cost Of Service Agreement.** This Section 3.3 provides the means for ensuring that a Resource previously selling under market-based rates will remain available to the New England Control Area for reliability purposes.

**2.3.1 Determination of Need.**

(a) If the ISO, in consultation with the External Market Monitor, has determined that it requires a particular facility to stay in service for reliability reasons, it may undertake whatever financial arrangements are necessary to ensure that the facility will be available.

(b) The ISO shall make available to the Markets Committee the information on which it has based its reliability determination for the affected Resource prior to finalizing any such financial arrangements.

(c) If the ISO has made such determination and the Reliability Seller is not satisfied with the Reference Level or a Reliability Mitigation Agreement,

(i) the Resource may not be shut down or its maintenance schedules changed except as approved by the ISO;

(ii) the Reliability Seller shall be compensated an amount equal to the cost of continuing to operate the Resource as a reliability Resource; and

(iii) the Reliability Seller shall file for cost-based rates under Section 205 with each party free to take any position it determines appropriate regarding recovery of return of and on investment.

**2.3.2 Terms of Service.** Service shall be subject to the terms of the pro forma agreement set forth in *Exhibit 4*, including (i) the Resource will be dispatched when the ISO calls on it to run and will not be permitted to submit self-schedules; (ii) the Resource shall not enter into any bilateral agreements unless the ISO has been provided with a written copy of the proposed agreement at least 30 days in advance of its effective date; (iii) revenues earned by the Resource (including ICAP Payments during the ICAP Transition Period) will be offset against payments made to the Resource under the Agreement with the ISO.

**2.4 Sunset of Pre-FCM Reliability Agreement Provisions.** The following provisions will sunset on June 1, 2010:

Section III.6.4.4(c);

Section III.A.6;

Section III.A.*Exhibit 2*, including this Section III.A.*Exhibit 2*, Section 2.4;

Section III.A.*Exhibit 3*; and

Section III.A.*Exhibit 4*.

Sheet Nos. 7463 through 7499 are reserved for future use.

## EXHIBIT 5

### ISO NEW ENGLAND INC. CODE OF CONDUCT

As a director, officer or employee (“you”) of ISO New England Inc., a Delaware corporation and the regional transmission organization for New England (the “Company”), it is essential that each of you become familiar and comply with the *Code of Conduct*, which sets forth certain Company policies. As a regional transmission organization, the Company is subject to special scrutiny of certain regulatory agencies, including the Federal Energy Regulatory Commission (“FERC”). The Company’s rules of conduct must, among other things, satisfy special mandates and principles established by FERC that are applicable to regional transmission organizations.

The Company’s mission is to maintain the reliability of the bulk power system in New England, to provide open access to the bulk transmission system in New England and to provide for efficient and balanced wholesale electricity markets in New England, thereby benefiting the people of the region served by RTO-NE.

In carrying out the Company’s mission, including administering the Transmission, Markets and Services Tariff, as amended from time to time (the “Tariff”), you must act with impartiality toward all Market Participants (as that term is defined below). Accordingly, each of you must strictly adhere to the rules and spirit of the *Code of Conduct*, which prescribes certain standards of conduct so that each of you not only comply with such mandates and principles in performing your day-to-day tasks but also conduct the Company’s business legally and ethically. For purposes of the *Code of Conduct*, the term “Market Participants” refers to the following persons (natural or legal) and their Affiliates: any person (other than the Company) which is a party to the Participants Agreement, a Market Participants Service Agreement or a Transmission Service Agreement, other than (i) any Transmission Customer solely taking Through Service under the Tariff, and (ii) FTR Holders Only. The term “Affiliate,” with respect to an entity, means any individual, corporation, partnership, firm, joint venture, association, joint-stock company, trust or unincorporated organization, or other form of entity, directly or indirectly Controlling, Controlled by, or under common Control with, such entity. The term “Control” means the possession, directly or indirectly, of the power to direct the management or policies of an entity. A voting interest of ten percent or more creates a rebuttable presumption of control.

The statements made in this *Code of Conduct* do not constitute an agreement or contract of employment. The Company's requirement that directors comply with this *Code of Conduct* does not make those individuals employees of the Company. It merely means that, in performing your duties and responsibilities to the Company, you must adhere to the rules and policies set forth herein which are applicable to you.

This or any other stated policy may be changed unilaterally by the Company at any time, without prior notice.

The *Code of Conduct* cannot address every situation you may encounter. If you have questions about provisions of the *Code of Conduct* or about legal and ethical practices in general, you should consult with the manager of the Company's Human Resources Department (the "Compliance Officer").

Capitalized terms not otherwise defined herein shall have the meanings given to them in the Tariff.

## **1. SUMMARY OF OBLIGATIONS**

In administering the Tariff and carrying out the Company's mission you must:

1. take all reasonable actions within your authority under the Tariff necessary to comply with all applicable laws, rules and regulations including, without limitation, federal and state environmental laws, the Federal Power Act and FERC rules and regulations, 18 C.F.R. Part 37 and federal securities laws;
2. take all reasonable actions within your authority under the Tariff necessary for the Company to maintain system reliability, administer competitive and efficient markets and provide non-discriminatory open-access transmission service over the New England transmission system pursuant to the Tariff and the agreements filed with FERC;
3. avoid conflicts of interest and improper relationships which could cause or appear to cause a conflict of interest (Section 2);
4. treat confidential information in accordance with the Information Policy (Section 3);

5. refrain from insider trading (Section 4);
6. protect the integrity of Company records (Section 6); and
7. identify and report any illegal or inappropriate conduct or activities of others (Section 8).

## **2. CONFLICTS OF INTEREST**

Certain contacts with Market Participants may constitute or appear to constitute a conflict of interest. Potential conflicts of interest and the Company's ability to restrict actions and duties to avoid potential conflicts are discussed below.

### **2.1 No Prohibited Financial Interests**

In order for the Company to be truly independent and free of any control and appearance of control of decision-making by any individual Market Participant or any one class of Market Participants, you may not have a "Prohibited Financial Interest." You will be deemed to have a "Prohibited Financial Interest" if you, your spouse or minor child owns, controls or holds with the power to vote Securities (defined below) of a Market Participant, whether directly or through participation in mutual funds concentrating in investments in Market Participants.

Prohibited Financial Interests do not include:

- Interests in a publicly traded or publicly available mutual fund or other collective investment fund or in a widely held pension or similar fund, provided that the fund's prospectus does not indicate the objective or practice of concentrating its investment in Market Participants or similar entities and you do not have the ability to exercise control over the financial interests held in the fund; and
- If you are an officer or employee, Securities of a Market Participant which have been purchased by your spouse, who is employed by a Market Participant and is required to purchase Securities of such Market Participant as a part of your spouse's employment. Any such purchase by your spouse must be disclosed to the Audit and Finance Committee of the Company's Board of Directors and the Compliance Officer. The Audit



and Finance Committee of the Company's Board of Directors will have the authority to consider appropriate limitations on your duties, including changing your duties, to avoid an appearance of a conflict of interest.

"Securities" means stocks, stock options, bonds and any other instruments of debt or equity, and includes all interests in debt or equity instruments, including, without limitation, secured and unsecured bonds, debentures, notes, securitized assets, commercial paper, preferred and common stock, any beneficial or legal interest derived from a trust, and any right to acquire any long or short position in such securities, including, without limitation, interests convertible into the aforementioned securities, options, rights, warrants, puts, calls and straddles with respect to such securities.

#### **2.1.1 Compilation of Prohibited Securities List by the Company**

In order to implement this policy and to help you to identify the Market Participants and their prohibited Securities, the Company has posted on its website a list of the current Market Participants whose Securities trade publicly. In addition, the Company will use best efforts to post on its website a list of the then-current Market Participants whose Securities trade publicly within fifteen days of any change in such list.

#### **2.1.2 Divestiture of Prohibited Securities**

If you, your spouse or minor children have a Prohibited Financial Interest described above, divestiture must occur as follows:

- Within six months of the commencement of your relationship with the Company as a director, officer or employee;
- If a Prohibited Financial Interest results from an entity becoming a Market Participant, within six months of receipt of the Company's list referencing such Securities; and
- If a Prohibited Financial Interest results from a gift, inheritance, distribution of marital property or other involuntary acquisition, within six months of the acquisition.

## **2.2 No Association with Market Participants**

You may not be “Associated” with any Market Participant. For the purposes of this paragraph, you will be deemed “Associated” with a Market Participant if:

- You or your spouse is an officer, director, partner, or employee of a Market Participant, provided that you will not be deemed “Associated” with a Market Participant if (i) on July 1, 1997, your spouse was an officer, director, partner, or employee of a Market Participant and you were employed by the Company, and you have disclosed such relationship to the Compliance Officer for review by the Audit and Finance Committee of the Company’s Board of Directors, or (ii) without regard to the provisions of Section 9 hereof, you receive a waiver of compliance from the Audit and Finance Committee of the Company’s Board of Directors, and provided further that, in either of the exclusions described in the preceding proviso, the Audit and Finance Committee of the Company’s Board of Directors may consider appropriate limitations on your duties, including changing your duties, to avoid an appearance of a conflict;
- You are an officer or employee and you served as a former executive officer of a Market Participant and are receiving continuing benefits under an existing employee benefit plan (other than a defined benefit pension plan or other plan pursuant to which the benefits are independent of the financial condition of the Market Participant and pension payments are distributed to you by a trustee, not as compensation but in accordance with the rules of the pension plan), arrangement or policy of the Market Participant;
- You are a member of the Company’s Board of Directors and you served as a former executive officer or director of a Market Participant either (i) within the two-year period immediately preceding your proposed election to the Company’s Board of Directors or (ii) you continue to receive benefits (other than customary retirement-related benefits including, but not limited to, benefits under ERISA plans, supplemental retirement plans or non-pension post-retirement benefit plans) from a Market Participant; or

- You have a material ongoing business or professional relationship with a Market Participant (including employees of Market Participants).

The Audit and Finance Committee of the Company's Board of Directors has the authority on behalf of the Company's Board of Directors to determine whether a business or professional relationship between a director, officer or employee and a Market Participant is a material ongoing business or professional relationship. If you have any questions in this regard, consult the Compliance Officer.

### **2.3 Non-Participation in Market Transactions**

To ensure that the Company and each of you maintain independence from any Market Participant, the Company and each of you are prohibited from engaging in any market transactions other than in the performance of duties under the Tariff. This provision shall not, however, prevent the Company or any of you from purchasing electricity, power and energy as retail customers for its or your own account and consumption from a Market Participant.

### **2.4 Political Activities**

You are not restricted from participating in any legal political activity so long as you do not purport, directly or indirectly, to represent the Company without authorization. You should not participate in political activities as a representative of the Company unless specifically authorized to do so, or use corporate funds or resources for support of particular political parties or candidates or seek reimbursement from the Company for political contributions.

You are not precluded from holding public office as long as you notify the Compliance Officer or his or her designee in writing upon accepting public office. Your work in the public office must not detract from the your performance in connection with the Company, and you may not represent the Company in your capacity as a public official or use Company resources for work related to the public office. If you hold a public office, you must abstain from voting or participating in any debate or in matters relating to the Company as part of your duties in public office.

## **2.5 Secondary Employment and Other Activities**

If you are an employee of the Company, you may not take on any secondary employment (whether part-time, full-time or project-related) unless the employment:

1. Will not embarrass or discredit the Company;
2. Will not interfere with your duties or involve the use of Company resources, materials or assets;
3. Will not create a conflict of interest for the Company or you;
4. Will not result in any Market Participant receiving an advantage, real or apparent, over other Market Participants with respect to the Company; and
5. Is fully disclosed to the Company prior to commencement of any secondary employment and the Compliance Officer or his or her designee determines that the criteria of (1) through (4) are met and then authorizes the secondary employment in writing.

If you take secondary employment with a non-Market Participant, you may not transact business with the Company on behalf of the secondary employer.

It will be considered a conflict of interest for you to engage in any outside activity that interferes with or materially decreases your impartiality, judgment, effectiveness, productivity or ability to perform your duties and functions at the Company.

It will also be considered a conflict of interest if, while you are simultaneously employed or engaged in other business activities with any other person, business, enterprise or concern, you engage other Company directors, officers or employees in any outside business activity that interferes with or materially decreases impartiality, judgment or effectiveness or creates a conflict of interest, an appearance of a conflict of interest or interferes with the productivity or ability of such other persons to perform their duties and functions at the Company.

The Company's policy on secondary employment and other activities is not intended to discourage or prohibit you from engaging or participating in civic, church or other charitable organizations, provided such activities or positions do not interfere with your duties and functions at the Company.

## **2.6 Other Conflicts of Interest**

Conflicts of interest can occur when your position or responsibilities in the Company present or appear to present an opportunity for personal gain, or when your personal interests or the interests of your family or people with whom you cohabitate are, or appear to be, inconsistent with Company interests. This includes not only a conflict of interest but also any action that could reasonably be expected to create an appearance of a conflict of interest. Under all circumstances you are expected to adhere to and maintain the highest ethical standards when conducting Company business. In meeting this requirement, you must be careful to avoid any situations or relationships that can cause actual, potential or perceived conflicts of interest. Your position in the Company may never be used to improperly benefit yourself, family members or people with whom you cohabitate.

It will be considered a conflict of interest if you request or accept anything with a value of more than \$50 (“Nominal Value”), including but not limited to money, a loan or discount, vacations, property, contributions, goods or services from a Market Participant or any other person or entity doing business with the Company. Such gifts should be returned or offers declined, with an appropriate explanation.

If a gift is not returnable (e.g., perishable), such gift should be given to a supervisor or the Compliance Officer or his or her designee for donation to a charity or destruction. Acceptance of an occasional business-related meal or entertainment is permissible when the value involved is not significant and clearly will not place you under any obligation to the donor.

It will be considered a conflict of interest if you offer anything of more than Nominal Value, including Company property, loans, contributions, or unpaid services to a representative of a Market Participant, member of the public or governmental official or entity (foreign or domestic) without prior authorization from a Company officer.

If you are seeking other employment, or have an arrangement concerning prospective employment, with a Market Participant, you must notify your supervisor and disqualify yourself from participating in any matter that will have an effect on the financial interests of such Market Participant.

It will be considered a conflict of interest for you, or your spouse or minor children, or, to your knowledge, any other member of your family or relative, to have an interest in any contractor, company, business, or enterprise which has, or is seeking to establish, business relations with the Company, unless that relationship has been disclosed to the Compliance Officer or his or her designee and approved by the Audit and Finance Committee of the Company's Board of Directors.

## **2.7 Consultants and Contractors**

The Audit and Finance Committee of the Company's Board of Directors shall apply reasonable and objective criteria when issuing conflicts of interest screening guidelines for consultants and contractors. In applying the guidelines to individual cases, the Audit and Finance Committee of the Company's Board of Directors will consider the nature of the services provided by the consultant or contractor, the length of the engagement, whether the consultant or contractor is required to comply with his or her own professional conflict of interest standard (e.g., attorneys, accountants, etc.), and whether the consultant or contractor will have access to confidential information. The screening guidelines will be made known to the appropriate Company personnel authorized to enter into contracts for outside services, and implementation of the Audit and Finance Committee's criteria will be monitored by the Compliance Officer or his or her designee.

## **3. TREATMENT OF CONFIDENTIAL INFORMATION**

You must treat all Confidential Information (as defined in the Information Policy) in accordance with the Information Policy posted on the Company website. Failure to do so will be considered a violation of this *Code of Conduct*.

## **4. INSIDER TRADING**

This Section defines insider trading, explains your duties and describes behavior that is prohibited under securities laws.

#### **4.1 Insider Information**

Federal laws prohibit the purchase or sale of any publicly traded security by a person in possession of important information about the security or its issuer that is not publicly known. These laws have special significance to the Company because you routinely learn Confidential Information about Market Participants and others. This circumstance creates two duties for each of you: (1) a duty not to trade while in possession of “material, nonpublic information,” also known as “inside information” or “insider information,” as defined below, and (2) a duty not to communicate such information to anyone outside of the Company, also known as “tipping.” It has been and remains the policy of the Company that there be scrupulous compliance with each of these duties.

*Material:* Information obtained about Market Participants may be material information under the law. Information is material if a reasonable investor would consider it important in determining whether to buy or sell the securities of the company involved. The information may be either positive or negative. If the information would affect the price of the securities, it is material. If the information makes anyone consider buying or selling the securities, that is probably the best indication that it is material. Some examples of information that could be considered material are key personnel changes, earnings information, proposed mergers or acquisitions and financial or credit status. If in doubt, one should assume that any information that could have any significance to an investor is material, and should not purchase or sell or allow anyone else to purchase or sell the securities in question until such information has been made public.

*Nonpublic:* Information that has not been disclosed to the public generally is nonpublic. To show that information is public, one should be able to point to some evidence that it is widely disseminated. Information would generally be deemed widely disseminated if it has been disclosed, for example, in the Dow Jones broad tape; news wire services such as AP or Reuters; radio or television; newspapers or magazines; the OASIS (the Company’s Open Access Same Time Information System); or widely circulated public disclosure documents filed with the Securities and Exchange Commission, such as prospectuses or proxies.

Although it is natural to “talk shop,” no Confidential Information (as defined in the Information Policy posted on the Company’s website) should be given to outsiders; for this purpose, outsiders include one’s spouse, children, relatives, friends and anyone else other than those working on the matter at the Company. In general, Company matters should not be

discussed with any outside individuals. Particular care is necessary in discussing Company matters in elevators, restaurants, taxicabs, trains, commercial aircraft and other public places where names and other scraps of information might be overhead. Care should also be taken not to expose nonpublic papers in such places or leave them lying around in conference rooms or other places, even within the Company.

#### **4.2 Penalties for Trading on Insider Information**

It is against Company policy and a violation of law to make use of insider information for personal advantage in securities trading or to disclose such information to an outsider. Each of you who has any knowledge of insider trading activities or improper disclosure committed by others must notify the Compliance Officer or his or her designee immediately. Each of you who has engaged in insider trading or has provided insider information to outsiders will be terminated immediately. In addition, both you and the Company may be subject to severe civil and criminal penalties as a result of insider trading by you or by an outsider who has received insider information from you.

### **5. TRAINING**

The Company will develop procedures to train you on the *Code of Conduct* and to assess the effectiveness of the *Code of Conduct* in preventing insider trading and conflicts of interest. Each of you will receive periodic training for as long as you remain associated with the Company. Each person attending such training sessions will be required to sign a certificate stating that they attended the training, understand the *Code of Conduct*, and will not violate it. In addition, the Compliance Officer or his or her designee will maintain a log of all training sessions held along with their respective dates, topics addressed and attendees at each session.

### **6. COMPANY RECORDS**

The Company requires that honest and accurate business records be maintained. It has always been Company policy to maintain the integrity of its business records. Company business records must always be prepared accurately and reliably and stored properly. All transactions must be executed in accordance with the Company's general or specific authorization. The Company's books, records, accounts and financial information must be maintained in reasonable detail, must appropriately reflect all of its transactions and all other



events that are the subject of a specific regulatory record-keeping requirement and must conform both to applicable legal requirements and to the Company's system of internal controls. Records should always be retained or destroyed according to the Company's record retention policies. In accordance with those policies, in the event of litigation or governmental investigation, please consult the Company's General Counsel.

## **7. VIOLATIONS OF THE CODE OF CONDUCT**

If you violate the *Code of Conduct* or fail to report a known violation you may be subject to disciplinary action, including suspension from duties and termination of your relationship with the Company, unless such violation involves insider trading, in which case such violation will result in the termination of your relationship with the Company. In addition, if you willfully and knowingly violate the *Code of Conduct*, you may be required to provide restitution to the Company for financial injury suffered by the Company as a result of the violation.

The Audit and Finance Committee of the Company's Board of Directors, except with respect to matters involving directors, in which case the Board of Directors of the Company, will oversee the administration of this *Code of Conduct* and ensure that prompt action is taken to investigate any potential violations of or noncompliance with the Company's policies. The Compliance Officer, on behalf of the Audit and Finance Committee of the Company's Board of Directors, will have the day-to-day responsibility for reviewing compliance with the *Code of Conduct*, including interpreting the *Code of Conduct*, advising directors, officers and employees regarding potential conflicts of interest and following up on all suspected violations.

## **8. OBLIGATION TO REPORT; REPORTING PROCEDURES AND NON-RETALIATION POLICY**

You have an obligation to identify any illegal or inappropriate conduct or activities of another officer, employee or director of the Company that do not comply with the *Code of Conduct* and to report them to the Compliance Officer. The Company's policy is to encourage employees to identify and report illegal or inappropriate actions; information reported will be used only for appropriate purposes and you will not be subject to retaliatory actions for doing so.

The Company is committed to complying with all applicable legal requirements, avoiding conflicts of interest, preparing and disclosing full and fair financial statements and providing a workplace conducive to open discussion of its business practices. The purpose of this policy is to establish procedures for:

- The receipt, retention and treatment of reports received by the Company regarding accounting, internal accounting controls or auditing matters in connection with the Company (“Accounting Matters”), and reports of any violations or potential violations of the *Code of Conduct* or any applicable law, rule or regulation (collectively, “Reports”);
- The confidential, anonymous submission of concerns regarding questionable Accounting Matters or behavior that is questionable under the *Code of Conduct* or any applicable law, rule or regulation, in each case, in connection with the Company (“Submissions”); and
- The full and fair investigation of all Reports and Submissions.

Moreover, the purpose of this policy is to make it clear that it is Company policy to comply with all applicable laws that protect you against unlawful discrimination or retaliation by the Company as a result of your submission of any Reports or Submissions or your lawfully reporting information regarding, or participating in investigations involving, corporate fraud or other violations by the Company or its agents of federal or state law.

## **8.1 Scope**

These procedures relate to Reports or Submissions by you relating to (1) any questionable Accounting Matters, including without limitation fraud or deliberate errors, misrepresentation or false statements, deficiencies or noncompliance with the Company’s internal controls, or irregularities in or deviation from full and fair financial reporting, and (2) any questionable ethical or illegal behavior, including any behavior that has violated or may violate any applicable law, rule or regulation or this *Code of Conduct*.

## **8.2 Procedures**

You may make Reports and Submissions, on a confidential or anonymous basis, to the Company’s General Counsel or Compliance Officer. Your Report or Submission will be kept confidential to the fullest extent possible, consistent with the need to conduct an adequate investigation and take appropriate corrective action.

You should include in any Report or Submission specific information and facts so that a proper investigation can be made. This is particularly important if you make an anonymous Report or Submission as there will be no way to contact you for additional information. Whenever possible, you should include in your Report or Submission the following:

- When and where the incident occurred;
- Whether the issue or incident is ongoing;
- What the incident consisted of;
- Who was/is involved in the incident (either by name, job title or both); and
- Whether the issue or incident has been brought to the attention of anyone at the Company.

In the event that you receive any Report or Submission, you must forward such Report or Submission promptly to both the Company's General Counsel and the Compliance Officer.

Any Report or Submission regarding Accounting Matters will be brought to the attention of the Chair of the Audit and Finance Committee of the Company's Board of Directors and the treatment or response to such Report or Submission will be handled or supervised by the Audit and Finance Committee of the Company's Board of Directors. The evaluation process followed and actions taken by the Audit and Finance Committee of the Company's Board of Directors and the Company in response to such Report or Submission will be documented in the records of the Audit and Finance Committee and provided to the Company's General Counsel.

The evaluation process followed and actions taken by the Company in response to any Report or Submission (other than regarding an Accounting Matter) will be documented by the Compliance Officer and provided to the General Counsel of the Company.

### **8.3 Reporting and Retention of Reports and Submissions**

The Company's General Counsel shall maintain a log of all Reports and Submissions and all related documentation, which log tracks their receipt, investigation and resolution, and shall prepare a periodic summary report thereof for the Audit and Finance Committee of the Company's Board of Directors. Copies of all Reports, Submissions and related documentation as well as such log will be maintained in accordance with the Company's record retention policy.

#### **8.4 Non-Retaliation Policy**

The Company will not discharge, demote, suspend, threaten, harass or in any manner discriminate against you in the terms and conditions of your relationship with the Company based upon any lawful actions you take with respect to the good faith filing of Reports or Submissions.

Notwithstanding the foregoing, if you file a Report or Submission or provide evidence which you know to be false or without reasonable belief in the truth and accuracy of such information, you will not be protected by the above policy statement and may be subject to disciplinary action. In addition, except to the extent required by law, the Company does not intend this policy to protect you if you violate your confidentiality obligations with regard to the Company's proprietary and trade secret information or the Information Policy (posted on the Company's website). If you are considering providing information that may reveal Company proprietary or trade secret information or violates the Information Policy, you are advised to consult with counsel.

If you believe you have been subjected to any action that violates this policy, you may file a complaint with your supervisor or the General Counsel of the Company. If it is determined that you have experienced any improper action in violation of this policy, you will be entitled to appropriate corrective action.

#### **9. WAIVER**

The Audit and Finance Committee of the Company's Board of Directors may grant a waiver of compliance from a specific provision of the *Code of Conduct* to you to avoid unjust or unreasonable results. In granting any such waiver, the Audit and Finance Committee of the Company's Board of Directors may consider appropriate limitations on your duties and responsibilities to avoid a conflict of interest.

#### **10. ANNUAL COMPLIANCE CERTIFICATE**

In order to ensure that you are complying with the *Code of Conduct*, you will be required to sign an annual compliance certificate, in the form attached as Exhibit A. The Compliance Officer or his or her designee will be required to keep records of executed certificates to ensure that you execute a certificate each year.

**Exhibit A**

**Annual Compliance Certificate**

I have received the *Code of Conduct* which I have read and fully understand. I will comply with the *Code of Conduct* during and, to the extent required by the *Code of Conduct*, after association with the Company.

I am ☐ a Director ☐ an Officer ☐ an Employee ☐ Other (\_\_\_\_\_)

a. I have no Prohibited Financial Interests other than those that, in accordance with divestiture policy, I still have time to divest, or for which I have been granted a hardship exception.

b. I have no other financial or business relationship with a Market Participant that would create a conflict of interest as defined in the *Code of Conduct* (or if I do, I have been granted a waiver by the Audit and Finance Committee or the Compliance Officer or his or her designee).

c. Since I last signed a Compliance Certificate, I have complied with the rules and policies contained in the *Code of Conduct*, except for the following matters which I disclose (if none, so state):

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Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Name (print): \_\_\_\_\_

Title/Position: \_\_\_\_\_

[Sheet Nos. 7595 - 7599 are reserved for future use.]