

## **SECTION III**

### **MARKET RULE 1**

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

## **APPENDIX A**

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

<b>Table of Contents</b>	<b>Page</b>
III.A.1. Purpose and Objectives.....	7406
III.A.1.1. Thresholds.....	7406
III.A.1.2. Other Conduct.....	7406
III.A.2. Mitigation Principles.....	7408
III.A.2.1. Conduct Subject to Mitigation.....	7408
III.A.2.2. Conditions for the Imposition of Mitigation Measures.....	7408
III.A.2.2.1. Market Impact.....	7408
III.A.2.2.2. Conduct Inconsistent with a Competitive Market.....	7408
III.A.2.3. Categories of Conduct that May Warrant Mitigation.....	7409
III.A.2.3.1. In General.....	7409
III.A.2.3.2. Conduct Not Deemed Anti-Competitive.....	7409
III.A.2.3.3. Physical Withholding by a Market Participant.....	7410
III.A.2.3.4. Other Withholding of Supply Offers.....	7410
III.A.2.3.5. Anti-Competitive Increment Offers and Decrement Bids.....	7411
III.A.2.3.6. Other Conduct.....	7411
III.A.2.4. Other Monitoring Objectives.....	7412
III.A.2.4.1. Monitoring Targets.....	7412
III.A.2.4.2. Reports.....	7413

---

III.A.2.5. Further Changes. ....	7413
III.A.2.6. Duration of Mitigation Measures. ....	7414
III.A.3. Consultation Requirements. ....	7415
III.A.3.1. In General. ....	7415
III.A.3.1.1. Notice and Opportunity to Respond. ....	7415
III.A.3.1.2. Consideration of Information in All Cases. ....	7416
III.A.3.1.3. Advance Consultation by Market Participant. ....	7416
III.A.3.1.4. Market Participant Access to Its Reference Levels. ....	7417
III.A.4. Physical Withholding. ....	7418
III.A.4.1. Identification of Conduct Inconsistent with Competition. ....	7418
III.A.4.2. Thresholds for Identifying Physical Withholding. ....	7418
III.A.4.2.1. Initial Thresholds. ....	7418
III.A.4.2.2. Adjustment to Generating Capacity. ....	7419
III.A.4.2.3. Withholding of Transmission. ....	7419
III.A.4.2.4. Resources in Congestion Areas. ....	7420
III.A.4.3. Hourly Market Impact and Operating Reserve Thresholds. ....	7420
III.A.4.4. Imposition of Mitigation Measures. ....	7421
III.A.5. Economic Withholding and Uneconomic Production. ....	7422
III.A.5.1. Purpose. ....	7422
III.A.5.2. Applicability. ....	7422
III.A.5.2.1. In General. ....	7422
III.A.5.2.2. Pivotal Supplier. ....	7422

III.A.5.3. Thresholds for Identifying Economic Withholding. ....	7423
III.A.5.3.1. General Thresholds. ....	7423
III.A.5.3.2. Reserved. ....	7424
III.A.5.3.3. Additional Thresholds Applicable in Constrained Areas. ....	7424
III.A.5.4. Threshold for Identifying Uneconomic Production. ....	7425
III.A.5.5. Hourly Market Impact and Operating Reserve Thresholds. ....	7426
III.A.5.5.1. Initial Investigation. ....	7426
III.A.5.5.2. Market Impact Thresholds. ....	7427
III.A.5.5.3. Calculation of Price Impact. ....	7427
III.A.5.6. Calculation of Resource Reference Levels. ....	7428
III.A.5.6.1. Methods for Determining Reference Levels. ....	7428
III.A.5.6.2. Insufficient Data. ....	7430
III.A.5.6.3. PUSH Reference Levels. ....	7430
III.A.5.7. Mitigation Measures ....	7431
III.A.5.7.1. Manual Review Prior to Mitigation. ....	7431
III.A.5.7.2. Conditions for Imposition of Mitigation Measures. ....	7431
III.A.5.7.3. Level of Default Offers. ....	7431
III.A.5.7.4. Implementation. ....	7432
III.A.6. Reliability Must-Run Agreements ....	7434
III.A.6.1. Mitigation Agreements. ....	7434
III.A.6.2. Cost-of-Service Agreements. ....	7434
III.A.6.3. Filing with the Commission. ....	7434

III.A.7. Mitigation of Demand Bids .....	7435
III.A.8. Mitigation of Increment Offers and Decrement Bids .....	7436
III.A.8.1. Purpose.....	7436
III.A.8.2. Implementation. ....	7436
III.A.8.2.1. Monitoring of Increment Offers and Decrement Bids. ....	7436
III.A.8.2.2. Mitigation Measures. ....	7437
III.A.8.3. Monitoring and Analysis of Market Design and Rules. ....	7438
III.A.8.4. Cap on FTR Revenues. ....	7438
III.A.9. Mitigation of Installed Capacity Resources .....	7440
III.A.10. ADR Review of ISO Mitigation Actions .....	7441
III.A.10.1. Actions Subject to Review. ....	7441
III.A.10.2. Standard of Review. ....	7441
III.A.11. Reporting .....	7443
III.A.11.1. Data Collection and Retention. ....	7443
III.A.11.2. Periodic Reporting. ....	7444
III.A.11.2.1. Monthly Report. ....	7444
III.A.11.2.2. Quarterly Report for Regulators. ....	7444
III.A.11.3. Annual Reviews.....	7445
III.A.11.4. Other ISO Communications With Government Agencies.....	7445
III.A.11.4.1. Routine Communications. ....	7445
III.A.11.4.2. Additional Communications. ....	7445
III.A.11.4.3. Confidentiality. ....	7446

III.A.11.5. Other Information Available from ISO on Request by Regulators. ....	7447
EXHIBIT 1 <u>MARKET IMPACT AND OPERATING RESERVE THRESHOLDS</u> .....	7449
EXHIBIT 2 <u>DESIGNATED CONGESTION AREAS AND RMR AGREEMENTS</u> .....	7451
EXHIBIT 3 <u>FORM OF RMR MITIGATION AGREEMENT</u> .....	7500
EXHIBIT 4 <u>FORM OF RMR COST-OF-SERVICE AGREEMENT</u> .....	7550

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

### **III.A.1. Purpose and Objectives**

**III.A.1.1. Thresholds.** The mitigation measures set forth in this *Appendix A* for mitigation of market power (“Mitigation Measures”) are intended to provide the means for the ISO, in consultation with the Independent Market Advisor, to mitigate the market effects of any conduct that would substantially distort competitive outcomes in the New England Markets, while avoiding unnecessary interference with competitive price signals and normal market operations. 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*.

**III.A.1.2. Other Conduct.** In addition, the ISO, in consultation with the Independent Market Advisor, 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 ISO. If the ISO, in consultation with the Independent Market Advisor, 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 ISO, in consultation with the Independent Market Advisor, believes warrants mitigation, shall propose a specific Mitigation Measure for the conduct, and shall set forth the ISO’s justification for imposing that Mitigation Measure.



### **III.A.2. Mitigation Principles**

**III.A.2.1. Conduct Subject to Mitigation.** 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.2.2. Conditions for the Imposition of Mitigation Measures.**

**III.A.2.2.1. Market Impact.** 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.4, III.A.5, III.A.6, III.A.7, III.A.8, and III.A.9 below, the ISO shall seek to impose Mitigation Measures only to remedy conduct that:

- (a) is significantly inconsistent with competitive conduct; and
- (b) would result in a material change in one or more prices in the New England Markets or Operating Reserve payments to a Market Participant.

**III.A.2.2.2. 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 not be in the economic interest of the Market Participant in the absence of the ability to affect market price (or Operating Reserve payments).

### **III.A.2.3. Categories of Conduct that May Warrant Mitigation.**

**III.A.2.3.1. In General.** The categories of conduct set forth below, whether conduct by a single Market Participant or by multiple Market Participants acting in concert, including actions involving more than one Resource, may cause a material effect on prices or other payments in the New England Markets if exercised from a position of market power. Accordingly, the ISO shall monitor the New England Markets for such conduct, and shall impose appropriate Mitigation Measures if such conduct is detected and the other applicable conditions for the imposition of Mitigation Measures are met.

**III.A.2.3.2. Conduct Not Deemed Anti-Competitive.** 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.2.3.3. Physical Withholding by a Market Participant.** The detailed procedures relating to physical withholding of Supply Offers are principally contained in Section III.A.4 below. This conduct 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. Such withholding may include, but not be limited to

- (a) falsely declaring that a Resource has been forced out of service or otherwise become unavailable,
- (b) refusing to make a Supply Offer, or schedules for a Resource when it would be in the economic interest absent market power, of the withholding entity to do so,
- (c) operating a Resource in Real-Time to produce an output level that is less than the ISO Dispatch Rate, or
- (d) withholding of capacity by a transmission facility.

**III.A.2.3.4. Other Withholding of Supply Offers.** This conduct includes several subcategories. Detailed procedures are contained in Sections III.A.5 and III.A.6 for conduct involving the withholding of Supply Offers, including:

- (a) *Economic Withholding*, that is, submitting a Supply Offer for Resource that is unjustifiably high 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.

(b) *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.A.2.3.5. Anti-Competitive Increment Offers and Decrement Bids.** This conduct involves 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 and is more fully treated in Section III.A.1.

**III.A.2.3.6. Other Conduct.** The ISO shall monitor the New England Markets for other categories of conduct, whether by a single Market Participant or by multiple Market Participants acting in concert, that have material effects on prices or Operating Reserve payments in the New England Markets. The ISO, in consultation with the Independent Market Advisor, shall: (i) seek to amend the foregoing list as may be appropriate to include any such conduct that would substantially distort or impair the competitiveness of any of the New England Markets administered by the ISO; and (ii) seek such other authorization to mitigate the effects of such conduct from the Commission as may be appropriate.

**III.A.2.4. Other Monitoring Objectives.** The ISO, in consultation with the Independent Market Advisor, will conduct such additional monitoring as it deems necessary.

**III.A.2.4.1. Monitoring Targets.** Among other objectives, the ISO, in consultation with the Independent Market Advisor, will monitor for:

- (a) Anti-competitive Demand Bids, which is treated in greater detail in Section III.A.7;
- (b) Anti-competitive gaming of ICAP Resources, treated in Section III.A.9;
- (c) Conduct and market outcomes that are inconsistent with competitive markets;
- (d) Flaws in market design or software or in the implementation of rules by the ISO that create inefficient incentives or market outcomes;
- (e) Actions in one market that affect price in another market;
- (f) 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
- (g) Rules or behavior that create barriers to entry into a market.

**III.A.2.4.2. Reports.** The ISO will include significant results of such monitoring in its reports under Section III.A.11. Monitoring under this Section III.A.2.4 cannot serve as a basis for mitigation under Sections III.A.4, III.A.6, III.A.7, or III.A.8. If the ISO 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.

**III.A.2.5. Further Changes.** The ISO may, in consultation with the Independent Market Advisor, propose appropriate Mitigation Measures or suggest 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.4, III.A.6, III.A.7, or III.A.8. In considering whether to recommend such changes, the ISO shall evaluate whether the conduct has a significant effect on market prices or Operating Reserve payments as specified below. The ISO will not recommend changes if it determines, from information provided by the Market Participant (or Parties that would be subject to mitigation) or from other information available to the ISO, that the conduct and associated price or Operating Reserve

payments under investigation are attributable to legitimate competitive market forces or incentives.

**III.A.2.6. Duration of Mitigation Measures.** 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 ISO, in consultation with the Independent Market Advisor, 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 Operating Reserve payments in the New England Markets administered by the ISO, the ISO 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 ISO 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 ISO, indicates to the satisfaction of the ISO that the questioned conduct is consistent with competitive behavior, no further action will be taken; and

(c) The ISO 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 ISO 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 ISO 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 ISO 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 ISO, in consultation with the Independent Market Advisor that the questioned conduct is consistent with competitive behavior, no further action will be taken.

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

(a) The ISO 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 systems.

(b) Upon request or at the initiative of the ISO, the ISO 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 ISO, in consultation with the Independent Market Advisor, 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. For energy Resources, only Resources required to offer in the Day-Ahead Energy Market will be evaluated for physical withholding in the Day-Ahead Energy Market. All Resources will be evaluated in the Real-Time Energy Market. Transmission facilities will be evaluated both Day-Ahead and in Real-Time. In addition to being subject to Mitigation Measures contained in this *Appendix A*, Market Participants may be subject to sanctions contained in *Appendix B* to this Market Rule.

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

**III.A.4.2.1. Initial Thresholds.** Except as specified in subsection III.A.4.2.4 below, the following initial thresholds will be employed by the ISO to identify physical withholding of a Resource:

- (a) Withholding that exceeds the lower of 10% or 100 MW of a Resource's capacity;

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

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

**III.A.4.2.2. Adjustment to Generating Capacity.** The amounts of generating capacity considered withheld for purposes of applying the foregoing thresholds shall include unjustified deratings, and the portions of a Resource's available output that is not offered or that exceeds the economic withholding thresholds. 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 ISO as may be appropriate that an outage was forced.

**III.A.4.2.3. Withholding of Transmission.** A transmission facility shall be deemed physically withheld if it is not operated in accordance with ISO instructions and such failure to conform to ISO instructions causes or contributes to 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 ISO as may be appropriate that an outage was forced.

**III.A.4.2.4. Resources in Congestion Areas.** Minimum quantity thresholds shall not be applicable to the identification of physical withholding by a Resource in an area the ISO has determined is congested.

**III.A.4.3. Hourly Market Impact and Operating Reserve Thresholds.** Before imposing a Mitigation Measure with regard to physical withholding identified in accordance with Sections III.A.4.2.1 through III.A.4.2.4 the ISO 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 ISO, the ISO, in consultation with the Independent Market Advisor, will determine whether the offers in question would, if not mitigated, cause a material effect on market clearing prices in the New England Markets or Operating Reserve payments in excess of either of the thresholds in *Exhibit 1*, *Exhibit 2*, or Section III.A.5.3.3, as appropriate.

**III.A.4.4. Imposition of Mitigation Measures.** If the physical withholding would have an effect in excess of either of the thresholds in *Exhibit 1*, *Exhibit 2*, or Section III.A.5.3.3, as appropriate, and has not been satisfactorily explained in accordance with Section III.A.3, the ISO, in consultation with the Independent Market Advisor, may impose sanctions pursuant to *Appendix B* to this Market Rule.

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

**III.A.5.1. Purpose.** This Section defines thresholds of economic withholding in constrained areas. If conduct is detected that exceeds the thresholds specified in Sections III.A.5.3 or III.A.5.4 and the ISO determines that there is a market impact, as provided in 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.

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

**III.A.5.2.1. In General.** Only Resources required to offer in the Day-Ahead market will be evaluated for economic withholding in the Day-Ahead market. All Supply Offers will be evaluated in the Real-Time market. Notwithstanding any provisions to the contrary in Sections III.A.5.3.1 and III.A.5.3.3, any energy offer associated with a DCA Peaking Unit with a PUSH Reference Level shall be reviewed for market impact in accordance with Section III.A.5.5 whenever such energy offer exceeds that DCA Peaking Unit's PUSH Reference Level.

**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 ISO 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 ISO 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) Regulation Offers. A 300 % increase or an increase of \$25/MW of Regulation above the Reference Level, whichever is lower, but excluding bids under \$5.

(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 DCA Peaking Units and other generating Resources located in a DCA during constrained periods), the following thresholds shall be employed by the ISO 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 ISO 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 50% above the Reference Level.

(b) For Supply Offers for the Day-Ahead Market: for all Constrained Hours (as defined above) the ISO 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.5.3.3, the ISO will monitor for actions not consistent with competitive conduct involving uneconomic production. The following thresholds may warrant the imposition of a Mitigation Measure as provided in Section

III.A.5.7.4: (i) Energy scheduled at an LMP that is less than 20% of the applicable Reference Level and causes or contributes to transmission congestion; or (ii) Real-Time output from a Resource that exceeds 110% of the ISO's Dispatch Rate, and causes or contributes to transmission congestion.

#### **III.A.5.5. Hourly Market Impact and Operating Reserve 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 ISO 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 ISO, the ISO, in consultation with the Independent Market Advisor, 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 Operating Reserve 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 ISO will determine whether there is an impact as follows:

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

(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 Operating Reserve 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 Market Monitoring Unit, in consultation with the Independent Market Advisor, shall determine the effect on prices or Operating Reserve payments of questioned conduct through the use of sensitivity analyses performed using the ISO's unit dispatch system software ("UDS"), unit commitment software ("UCS"), scheduling, pricing and dispatch software ("SPD") and such other computer modeling or analytic methods as the ISO, in consultation with the Independent Market Advisor, shall deem appropriate.

(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 ISO, in consultation with the Independent Market Advisor, shall determine the effect on prices or Operating Reserve payments of questioned conduct using the best available data and such models and methods as they shall deem appropriate. 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 Market Monitoring Unit may, in consultation with the Independent Market Advisor, set thresholds below which it need not apply the UDS, UCS, SPD, and other systems 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 ISO 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 ISO 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, and with respect to DCA Peaking Units, Section III.A.5.6.3, subject to the existence of sufficient data:

(a) From the SMD Effective Date until the ISO's hardware and software necessary for calculations in paragraphs (b) through (d) below is functional and the ISO has sufficient data to make appropriate calculations, the ISO will use the interim procedure that it has made available to Market Participants by posting on its website at least thirty (30) days in advance of the SMD Effective Date. The ISO will continue to use the interim procedure until it has given Market Participants advance notice of its ability to use the procedures below, but no earlier than 48 hours after such notice of full functionality has been posted on the ISO's website.

(b) Upon full functionality, the ISO will apply the first of the following procedures for which adequate information is available:

(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 ISO, and provided that the Market Participant has provided data on the Resource's operating costs in accordance with specifications provided by the ISO. The ISO'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 ISO, in

consultation with the Independent Market Advisor, shall reasonably determine to be appropriate based on such data supplied by the Market Participant or otherwise available to the ISO :

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

**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 ISO, in consultation with the Independent Market Advisor, 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.5.6.3. PUSH Reference Levels.** For DCA Peaking Units, the PUSH Reference Level will be calculated in accordance with *Exhibit 2* to this *Appendix A*. If the owner/bidder of such generating Resource does not seek a PUSH Reference Level or fails to follow procedures set forth in Section 2 of *Exhibit 2* to this *Appendix A* for obtaining a PUSH Reference Level, the Reference Level for such generating Resource shall be calculated in accordance with Section III.A.5.6.1 and III.A.5.6.2, as for all other generating Resources.

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

**III.A.5.7.1. Manual Review Prior to Mitigation.** The ISO 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 ISO 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 ISO 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 the physical or economic withholding.



In designing and implementing Default Offers, the ISO 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) When Mitigation Measures are applied to Offer Data, mitigation shall be imposed from the first hour in which the impact test is met to the last hour in which the impact test is met, or for the duration of the mitigated Resource's minimum run time, whichever is longer.

(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.

(g) A Mitigation Measure imposed in a constrained area in accordance with the conduct thresholds of Section III.A.5.3 and the impact thresholds of Section III.A.5.5 shall remain in effect for the duration of any day in which there is an interval for which such mitigation is deemed warranted.

### **III.A.6. Reliability Must-Run Agreements**

**III.A.6.1. Mitigation Agreements.** A Market Participant with the authority to submit Supply Offers for any RMR Resources designated pursuant to Section 3 of *Exhibit 2* as RMR 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 Section 11.5.3.3 of *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. Mitigation of Demand Bids**

If physical or economic withholding of Demand Bids results in a material adverse effect on operations, the ISO, in consultation with the Independent Market Advisor, may impose mitigation procedures to remedy the operational problem after posting on its web site an explanation of the operational problem to be addressed and the specifics of the mitigation procedure.

### **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 ISO 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 may be computed over a rolling four-week period or such other period determined by the ISO, in consultation with the Independent Market Advisor, to be appropriate to achieve the purpose of this Mitigation Measure.

**III.A.8.2.2. Mitigation Measures.** If the ISO, in consultation with the Independent Market Advisor, determines that (i) the relationship between LMPs in the Day-Ahead Energy Market and the Real-Time Energy Market is not what would be expected under conditions of workable competition, and that (ii) the bid and offer practices of one or more Market Participants has contributed to persistent divergence of Day-Ahead and Real-Time LMPs, then the ISO may take the following steps:

(a) The ISO shall, when practicable, request explanations of the relevant bid and offer practices from any Market Participant submitting such bids.

(b) The ISO, in consultation with the Independent Market Advisor, 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 whose bid and offer practices have been determined to contribute to an unwarranted divergence of LMPs between the Day-Ahead and Real-Time Energy Markets.

(i) Prior to imposing a Mitigation Measure, the ISO shall notify the affected Market Participant of the limitation.

(ii) Any such limitation may be set at such level that, and may remain in place for such period as, in the best judgment of the ISO, in consultation with the Independent Market Advisor, would be sufficient to prevent any unwarranted divergence between Day-Ahead and Real-Time LMPs.

(iii) The Mitigation Measure shall be rescinded upon a determination by the ISO that the conditions on which the Mitigation Measure was based are no longer in effect.

**III.A.8.3. Monitoring and Analysis of Market Design and Rules.** The ISO, in consultation with the Independent Market Advisor, 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. Mitigation of Installed Capacity Resources**

If and to the extent that sufficient Installed Capacity is not under a contractual obligation to be available to serve load in the New England Markets and if physical or economic withholding of Installed Capacity would be likely to result in a material change in the price for Installed Capacity in all or some portion of the New England Markets, the ISO, in consultation with the Independent Market Advisor, shall amend this Rule to implement additional appropriate Mitigation Measures for Installed Capacity.

### **III.A.10. ADR Review of ISO Mitigation Actions**

**III.A.10.1. Actions Subject to Review.** A Market Participant may obtain prompt Alternative Dispute Resolution (“ADR”) review of any ISO 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.10.2. Standard of Review.** On the basis of the written record and the presentations of the ISO and the Market Participant, the ADR Neutral (as defined in *Appendix D*) shall review the facts and circumstances upon which the ISO based its decision and the

---

<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.

remedy imposed by the ISO. The ADR Neutral shall remove the ISO's mitigation only if it concludes that the ISO's application of the ISO mitigation policy was clearly erroneous. In considering the reasonableness of the ISO'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 ISO to act quickly to preserve competitive markets.

### **III.A.11. Reporting**

**III.A.11.1. Data Collection and Retention.** Market Participants shall provide the ISO with any and all information within their custody or control that the ISO deems necessary to perform its obligations under this Agreement, subject to applicable confidentiality limitations contained in the ISO New England Information Policy. This would include a Market Participant's cost information if the ISO 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 ISO will use the best information available in carrying out its responsibilities. The ISO may use any and all information it receives in the course of administering the New England Markets as appropriate in its monitoring and mitigation activities.

### **III.A.11.2. Periodic Reporting.**

**III.A.11.2.1. Monthly Report.** The ISO will publish 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.11.2.2. Quarterly Report for Regulators.** The ISO will publish a quarterly report that will be made available 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. The content of the quarterly report will be updated periodically through consensus of the ISO and the regulators. 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 ISO New England Information Policy prevents the inappropriate dissemination of competitively sensitive data to individual Market Participants. The ISO will make available to the public a redacted version.

**III.A.11.3. Annual Reviews.** The ISO will present an annual review of the operations of the New England Markets. 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 ISO 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.11.4. Other ISO Communications With Government Agencies.**

**III.A.11.4.1. Routine Communications.** The periodic reviews are in addition to any routine communications the ISO 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.11.4.2. Additional Communications.** The ISO is not a regulatory or enforcement agency. However, it will monitor market trends, including changes in Resource

ownership as well as market performance. In addition to the information on the market and mitigation provided in the monthly, quarterly and annual reports the ISO shall:

(a) Inform the jurisdictional state and federal regulatory agencies, as well as the Markets Committee, if the ISO 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 ISO receives information from any entity regarding an alleged violation of law, refer the entity to the appropriate state or federal agencies;

(c) If the ISO reasonably concludes, in the normal course of carrying out its monitoring and mitigation responsibilities, that certain market behavior 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.11.4.3. Confidentiality.** Information identifying particular participants required or permitted to be disclosed to jurisdictional bodies under this section shall be provided in a confidential report filed under Section 388.112 of the Commission regulations and corresponding provisions of other jurisdictional agencies. The ISO will include the confidential

report with the quarterly submission it provides to the Commission pursuant to Section III.A.11.2.2..

**III.A.11.5. Other Information Available from ISO on Request by Regulators.** The ISO will normally make its 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”). The ISO shall promptly make available all requested data and information it is permitted under the ISO New England Information Policy to disclose to authorized government agencies, including, but not limited to, requests pursuant to Section 3.3 of the ISO New England Information Policy. The ISO 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 ISO shall notify each party



with an interest in the confidentiality of the information. Unless requested pursuant to Section 3.3 of the ISO New England Information Policy, the ISO shall not disclose the information unless or until (a) the authorized government agency has served the ISO with compulsory process as described above, or (b) the interested party or parties have agreed with the requesting authorized government agency to voluntary disclosure of the data or information subject to reasonable and appropriate terms protecting its confidentiality that are satisfactory to those parties.

## **EXHIBIT 1**

### **MARKET IMPACT AND OPERATING RESERVE 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. OPERATING RESERVE THRESHOLD**

An increase of more than 100 % in Operating Reserve Credits due to the Market Participant facing mitigation in a dispatch day, provided that the increase also exceeds \$10/MWh, compared to the Operating Reserve Credits calculated using Reference Levels as determined in Section 4.5 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
StartupPrice	=	Bid Startup Price (or Reference Level)
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, in consultation with the Independent Market Advisor, shall determine the effect of questioned conduct on prices and Operating Reserve Charges using the best available data and such models and methods, as it deems appropriate.

## **EXHIBIT 2**

### **DESIGNATED CONGESTION AREAS AND RMR 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. The ISO does not intend, barring unforeseen circumstances, to redesignate DCAs prior to termination of the PUSH procedures.

**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.

## **2. PUSH REFERENCE LEVEL CALCULATIONS AND APPLICABILITY**

**2.1 Eligibility for PUSH Reference Level.** Effective June 1, 2003, each DCA Peaking Unit shall be entitled to a PUSH Reference Level upon meeting the following information and filing requirements:

**2.1.1 Information Submitted to ISO.** The owner or other Market Participant responsible for submitting Supply Offers for a DCA Peaking Unit to the ISO shall provide the ISO with information with respect to such DCA Peaking Unit regarding revenues and costs of operation. The ISO has posted a Worksheet for Required Cost Data for PUSH treatment for Supply Offers on its web site at [http://www.iso-http://www.iso-ne.com/ISO\\_Customer\\_Services/special\\_notice.phpne.com/ISO\\_Customer\\_Services/special\\_notice.php](http://www.iso-http://www.iso-ne.com/ISO_Customer_Services/special_notice.phpne.com/ISO_Customer_Services/special_notice.php).

The owner or other Market Participant responsible for submitting Supply Offers for a DCA Peaking Unit may submit, no more than one time, revised cost information to the ISO prior to the establishment of a final fixed cost portion of the PUSH Reference Level by the Commission. The ISO will establish a revised PUSH Reference Level based on the revised cost information. The ISO will not adjust the fixed cost portion of a PUSH reference price after finalization by the Commission without Commission approval.

**2.1.2 ISO Calculation.** No later than five (5) business days following receipt of the information required by Section 2.1.1 of this *Exhibit 2* the ISO shall calculate the applicable PUSH Reference Level for such DCA Peaking Unit in accordance with Section 2.1.5 of this *Exhibit 2* and notify the submitting Market Participant of such level or notify the Market Participant of any deficiency in such information. The PUSH Reference Level will be effective

one business day after delivery by the ISO to the Market Participant of the Effective PUSH Reference Level, which shall be no later than the sixth business day following receipt by the ISO of complete information from the Market Participant.

**2.1.3 Filing Requirement.** No later than ten (10) business days after receipt of notice from the ISO of the effective PUSH Reference Level, the Market Participant shall file with the Commission, pursuant to Section 205 of the Federal Power Act, on a non-confidential basis, all necessary fixed cost information to support the fixed cost portion of the PUSH Reference Level. The Market Participant shall provide the Market Monitoring Unit with a copy of such filing, by hand or electronic mail, concurrently with the filing at the Commission.

**2.1.4 Suspension or Modification of PUSH Reference Level.** Unless the ISO has received a copy of the Market Participant's filing required by Section 2.1.3 of this *Exhibit 2*, the ISO will suspend effectiveness of the PUSH Reference Level until the business day following the day on which such filing has been made and served on the ISO. The PUSH Reference Level shall be subject to modification as ordered by the Commission.

**2.1.5 Calculation of PUSH Reference Level.** Each DCA Peaking Unit PUSH Reference Level for energy Supply Offers shall be calculated as follows:

$$\text{PUSH Reference Level} = \left[ \frac{\text{Fixed Cost}}{\text{Actual 2002 MWh}} \right] + \text{Variable Cost Reference Price}$$

Where:

<b>Fixed Cost</b>	=	Annual fixed cost of unit less estimated annual UCAP value and less other net revenue as appropriate
<b>Variable Cost Reference Price</b>	=	Reference Price as calculated pursuant to Section 5.6.1.b (iii) of <i>Appendix A</i>
<b>Actual 2002 MWh</b>	=	Actual MWh of output in calendar year 2002, as determined by the ISO

The calculated PUSH Reference Level may not exceed \$1,000/MWh. [Other revenues from the markets administered by ISO, primarily Regulation, Black Start, and VAR support, will not reduce Fixed Cost values inasmuch such revenues are *de minimis* amount for DCA Peaking Units and the time required to develop such estimates cannot be justified. Start-Up and No-Load Reference Levels are unaffected by PUSH treatment.

**2.2 Start-Up and No-Load Thresholds.** Start-up and no-load offers are evaluated under Section 5.3 of **Appendix A** without regard to whether or not a Resource has a PUSH Reference Level.

**2.3 Termination Upon Implementation of Location or Deliverability Requirements in the UCAP or Resource Adequacy Market.** The PUSH Reference Level mechanism shall remain in effect until the ISO makes a filing and places into effect a mechanism that implements location or deliverability requirements in the UCAP or resource adequacy market.

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

**3.1 Designation of RMR Units.** Annually, or more often, as required, the ISO, in consultation with the Independent Market Advisor, 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 of Market Rule 1 at any time in the following year (“Reliability Must-Run” or “RMR”) and which ones previously designated are no longer likely to be called.

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

**3.2 Procedure For Negotiation Of RMR Agreements.** Entities designated as an RMR Resource pursuant to Section III.A.6 of *Appendix A* may apply to the ISO for such an agreement (an “RMR Agreement”). For purposes of this procedure, the Market Participant with the authority to submit Supply Offers for such Resource shall be called the “RMR Seller.”

**3.2.1 Information Required with Application.** When seeking a RMR Agreement, the RMR 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 RMR 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 RMR Agreement the RMR Seller believes is appropriate for its Resource:

---

<sup>4</sup> See Reporting of Generating Unit Fuel Cost and Related Data for ISO, in consultation with the Independent Market Advisor, 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.



- |                 |  |
|-----------------|--|
| <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. |

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

**3.2.3 Compensation.** The RMR Agreement shall provide that for each applicable operating hour that the RMR Seller's Resource was designated or used pursuant to Section III.6.2 of Market Rule 1, the RMR 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.

---

<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.

**3.2.4 Limit on Supply Offers or Reference Levels.** The RMR 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 RMR Agreement.

**3.2.5 Term.** For RMR Agreements other than options 3 and 4 in section 3.2.1, the term shall be one year from the effective date. Such RMR Agreement shall provide for renewal for additional one-year terms so long as the ISO determines that the Resource continues to be an RMR Resource. For RMR 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.

**3.2.6 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 RMR 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 RMR Agreements, annually, prior to the execution of the RMR Agreement and at the time of renewal and (ii) for any part-year seasonal shut-down RMR Agreements, prior to execution and at time of renewal.

**3.2.7 Settlement.** The RMR Agreement shall provide for settlement with the RMR Seller in accordance with existing Operating Reserve and other settlement procedures.

**3.2.8 Variation from Pro-Forma.** The RMR 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

---

<sup>6</sup> In other words, where a generator does not reach agreement with the ISO, in consultation with the Independent Market Advisor, 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 Independent Market Advisor that the RMR Agreement does not unreasonably interfere with the competitive and efficient operation of the market.

### **3.2.9 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:**

$$\text{Incremental Operating Cost} = (\text{Fuel} + \text{O\&M} + \text{Other}) \times \text{MWh}$$

$$\text{Fuel} = (\text{Variable Fuel Use for Generation} \times \text{Fuel Index Price}) + \text{Fuel Cost Ancillaries}^1$$

$$\text{O\&M} = \text{Variable O\&M as specified in the RMR Agreement}$$

$$\text{Other} = (\text{SO}_2 \text{ Allowance Adder} + \text{NO}_x \text{ Allowance Adder} + \text{Operating Permit Adder})$$

$$\text{Wear and Tear Adder} = \text{Incremental Operating Cost} \times 0.10$$

$$\text{Stipulated Bid Costs} = \text{Stipulated Marginal Cost} + \text{Stipulated Start-Up Cost} + \text{Stipulated No Load Cost}$$

***Where:***

---

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

$$\begin{aligned} \text{Stipulated Start-Up Cost} &= (\text{Start-Up Fuel Use} \times \text{Fuel Index Price}) \\ &+ \text{Fuel Cost Ancillaries} + \text{Start-Up} \\ &\text{O\&M} + \text{Start-Up Other} \end{aligned}$$

$$\begin{aligned} \text{Stipulated No Load Cost} &= (\text{No Load Fuel Use} \times \text{Fuel Index Price}) \\ &+ \text{Fuel Cost Ancillaries} + \text{No Load} \\ &\text{O\&M} + \text{No Load Other} \end{aligned}$$

**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 RMR 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. RMR Sellers seeking a RMR 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 RMR Seller, either

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

(b) For the term of the RMR Agreement or the avoided shut-down, as determined in the RMR Agreement, a lump sum equal to RMR 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 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.

**3.3 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.

**3.3.1 Determination of Need.**

(a) If the ISO, in consultation with the Independent Market Advisor, 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 RMR Seller is not satisfied with the Reference Level or a RMR Mitigation Agreement,

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

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

(iii) the RMR 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.

**3.3.2 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 will be offset against payments made to the Resource under the Agreement with the ISO; and unless otherwise agreed by the parties, the ICAP revenues attributable to the Resource (the “Stipulated ICAP Revenue”) will equal the total capacity revenues of all Affiliated Resources times the ratio of the output capacity of the RMR Resource to that of all Affiliate Resources (where “Affiliate Resources” are all Resources in the New England Control Area owned by entities that are Affiliates of the RMR Seller).

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