SECTION III

MARKET RULE 1

STANDARD MARKET DESIGN

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STANDARD MARKET DESIGN

III.1 Market Operations

III.1.1 Introduction. This Market Rule sets forth the scheduling, other procedures, and certain general provisions applicable to the operation of the New England Markets within the New England Control Area. The ISO shall operate the New England Markets in compliance with NERC, NPCC and ISO reliability criteria. This Market Rule addresses each of the three time frames pertinent to the daily operation of the New England Markets: Pre-scheduling, Scheduling, and Dispatch. This Market Rule shall become effective on the Operations Date.

III.1.2 [Reserved.]

III.1.3 Definitions.

III.1.3.1 Existing Definitions. Unless otherwise provided for in Section III.1.3.2 of this Market Rule, capitalized terms used but not defined in this Market Rule are as defined in the ISO New England Filed Documents.

III.1.3.2 Definitions. For purposes of this Market Rule, the following capitalized terms shall have the meanings set forth below.

"ADR" is alternative dispute resolution.

"Administrative Sanctions" is defined in Section III.B.4.1.2 of ***Appendix B*** of this Market Rule.

"Affiliate Resources" is defined in Section 3.3.2 of Exhibit 2 to ***Appendix A*** of this Market Rule.

"Accepted Electric Industry Practice", sometimes referred to as Good Utility Practice, shall mean any of the practices, methods, and acts engaged in or approved by a significant portion of the electric generation and transmission industry during the relevant time period, or any of the practices, methods, and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Accepted Electric Industry Practice is not limited to a single, optimum practice method or act to the exclusion of others, but rather is intended to include practices, methods, or acts generally accepted in the region.

"Asset Related Demand" is a physical load that has been discretely modeled within the ISO's dispatch and settlement systems and that settles at a Node.

"Amount Interrupted" is, for purposes of the Load Response Program, the calculated difference between the Customer Baseline and the actual customer load. For generating assets, metered at the generator output, the Amount Interrupted is the generator output. For a profiled customer, the Customer Baseline is defined in the Measurement and Verification Plan, referred to in Section III.E.1.5 of this Market Rule.

"Auction Revenue Right (ARR)" is a right to receive FTR Auction Revenues in accordance with ***Appendix C*** of this Market Rule.

"Auction Revenue Right Allocation (ARR Allocation)" is defined in Section 1 of ***Appendix C*** of this Market Rule.

"Auction Revenue Right Holder (ARR Holder)" is an entity which is the record holder of an Auction Revenue Right in the register maintained by the ISO.

"Automatic Response Rate" is the response rate, in MW/Minute, at which a Market Participant is willing to have a generating unit change its output while providing Regulation between the Regulation High Limit and Regulation Low Limit.

"Cancellation Fee" is defined in Section III.1.10.2(d).

"Capability Period" shall mean a period of time defined by the ISO for the purposes of rating and auditing Installed Capacity Resources. There are two Capability Periods, a Summer Capability Period and a Winter Capability Period. The dates defining the start and end of these periods are set forth in the ISO New England Manuals.

"Capability Year" shall mean a year's period beginning on June 1 and ending May 31, for which the ISO will assign, on a monthly basis, each Market Participant an Unforced Capacity Requirement.

"Capacity-to-Service Ratio" is defined in Section III.3.2.2(h) of this Market Rule.

"CARL Data" is Control Area reliability data submitted to the ISO to permit an assessment of the ability of an external Control Area to provide energy to the New England Control Area in support of Unforced Capacity offered to the New England Control Area by that external Control Area.

"Commission" is the Federal Energy Regulatory Commission.

"Congestion Component" is the component of the nodal price that reflects the marginal cost of congestion at a given Node or External Node relative to the reference point. When used in connection with Zonal Price and Hub Price, the term Congestion Component refers to the Congestion Components of the nodal prices that comprise the Zonal Price and Hub Price weighted and averaged in the same way that nodal prices are weighted to determine Zonal Price and averaged to determine the Hub Price.

"Congestion Cost" is the cost of congestion as measured by the difference between the Congestion Components of the Locational Marginal Prices at different Locations and/or Reliability Regions on the New England Transmission System.

"Congestion Paying LSE" is, for the purpose of the allocation of FTR Auction Revenues to ARR Holders as provided for in ***Appendix C*** of this Market Rule, a Market Participant or Non-Market Participant Transmission Customer that is responsible for paying for Congestion Costs as a Transmission Customer paying for Regional Network Service or Long-Term Firm Point-to-Point Transmission Service under the Transmission, Markets and Services Tariff, unless such Transmission Customer has transferred its obligation to supply load in accordance with ISO New England System Rules, in which case the Congestion Paying LSE shall be the Market Participant supplying the transferred load obligation. The term Congestion Paying LSE shall be deemed to include, but not be limited to, the seller of internal bilateral transactions that transfer Real-Time Load Obligations under the ISO New England System Rules.

"Control Area" is an electric power system or combination of electric power systems to which a common automatic generation control scheme is applied in order to: (i) match, at all times, the power output of the generators within the electric power system(s) and capacity and energy purchased from entities outside the electric power system(s), with the load within the electric power system(s); (ii) maintain scheduled interchange with other Control Areas, within the limits of Accepted Electric Industry Practice; (iii) maintain the frequency of the electric power system(s) within reasonable limits in accordance with Accepted Electric Industry Practice and the criteria of the applicable regional reliability council or the NERC; and (iv) provide sufficient generating capacity to maintain operating reserves in accordance with Accepted Electric Industry Practice.

"Customer Baseline" is, for purposes of the ISO New England Load Response Program Manual, the average aggregate hourly load, rounded to the nearest kWh, for each of the 24 hours in a day for each Individual Customer.

"DCA Peaking Unit" means a generating Resource, located in a DCA whose capacity factor in calendar year 2002 was ten percent (10%) or less, as determined by the ISO.

"Day-Ahead" is the calendar day immediately preceding the Operating Day.

"Day-Ahead Adjusted Load Obligation" is defined in Section III.3.2.1(a)(iii) of this Market Rule.

"Day-Ahead Congestion Revenue" is defined in Section III.3.2.1(f) of this Market Rule.

"Day-Ahead Energy Market" shall mean the schedule of commitments for the purchase or sale of energy, payment of Congestion Costs, and payment for losses developed by the ISO as a result of the offers and specifications submitted in accordance with Section III.1.10 of this Market Rule.

"Day-Ahead Energy Market Congestion Charge/Credit" is defined in Section III.3.2.1(d) of this Market Rule.

"Day-Ahead Energy Market Energy Charge/Credit" is defined in Section III.3.2.1(d) of this Market Rule.

"Day-Ahead Energy Market Loss Charge/Credit" is defined in Section III.3.2.1(d) of this Market Rule.

"Day-Ahead Generation Obligation" is defined in Section III.3.2.1(a)(ii) of this Market Rule.

"Day-Ahead Load Obligation" is defined in Section III.3.2.1(a)(i) of this Market Rule.

"Day-Ahead Locational Adjusted Net Interchange" is defined in Section III.3.2.1(a)(iv) of this Market Rule.

"Day-Ahead Loss Charges or Credits" is defined in Section III.3.2.1(h) of this Market Rule.

"Day-Ahead Loss Revenue" is defined in Section III.3.2.1(g) of this Market Rule.

"Day-Ahead Prices" shall mean the Locational Marginal Prices resulting from the Day-Ahead Energy Market.

"Decrement Bid" shall mean a bid to purchase energy at a specified Location in the Day-Ahead Energy Market which is not associated with a physical load. An accepted

Decrement Bid results in scheduled load at the specified Location in the Day-Ahead Energy Market.

"Deficiency Rate" shall mean the rate determined by the ISO that serves as a cap on the Deficiency Auction's clearing price as defined in Section III.8.5.1(d). The Deficiency Rate is also used to charge those Market Participants that are deficient in meeting their Unforced Capacity requirement.

"Demand Bid" shall mean a request to purchase an amount of energy, at a specified Location, or an amount of energy at a specified price, that is associated with a physical load. A cleared Demand Bid in the Day-Ahead Energy Market results in scheduled load at the specified Location. Demand Bids submitted for use in the Real-Time Energy Market are specific to Dispatchable Asset Related Demands only.

"Demand Resource" shall mean any resource associated with the Load Response Program as defined in ***Appendix E*** to this Market Rule.

"Designated Congestion Area" or **"DCA"** is defined in ***Exhibit 2*** to ***Appendix A*** to this Market Rule.

"Dispatch Instruction" shall mean directions given by the ISO to Market Participants, which may include instructions to start up, shut down, raise or lower generation, change External Transactions, or change the status of a Dispatchable Asset Related Demand in accordance with the Resource's or contract's Supply Offer or Demand Bid parameters. Such instructions may also require a change to the operation of a Pool Transmission Facility. Such instructions are given through either electronic or verbal means.

"Dispatch Rate" shall mean the control signal, expressed in dollars per MWh and/or megawatts, calculated and transmitted to direct the output level of each generating Resource and each Dispatchable Asset Related Demand dispatched by the ISO in accordance with the Offer Data.

"Dispatchable Asset Related Demand" is any portion of an Asset Related Demand of a Market Participant that meets the requirements of the ISO New England Manuals to have its energy consumption modified in Real-Time because of its ability to respond to remote dispatch instructions from the ISO. A Dispatchable Asset Related Demand must have Electronic Dispatch Capability, must be able to increase or decrease energy consumption between its Minimum Consumption Limit and Maximum Consumption Limit in accordance with ISO dispatch instructions and must meet the technical requirements specified in the ISO New England Manuals.

"Economic Maximum Limit" or **"Economic Max"** shall be the maximum generation, in MW, of a Market Participant's generating unit during non-Emergency Condition. This represents the highest available output from the unit for economic dispatch and is based on the physical operating characteristics and operating permits of the unit as submitted as part of a Resource's Offer Data.

"Economic Minimum Limit" or **"Economic Min"** shall be the maximum of the following values: (i) the Emergency Minimum Limit; (ii) a level supported by environmental and/or operating permit restrictions; or (iii) a level that addresses any significant economic penalties associated with operating at lower levels that can not be adequately represented by three part bidding (Start-Up Fee, No-Load Fee and incremental energy price). In no event shall the Economic Minimum Limit submitted as part of a generating unit's Offer Data be higher than the generation level at which a generating unit's incremental heat rate is minimized (i.e., transitioning from decreasing as output increases to increasing as output increases) except that a Self-Scheduled Resource may modify its Economic Minimum Limit on an hourly basis, as part of its Supply Offer, in order to indicate the desired level of Self-Scheduled MWs.

"Effective Offer Price" is defined in Sections III.3.2.3 (l), (m), and (n).

"Electronic Dispatch Capability" is the ability to provide for the electronic transmission, receipt, and acknowledgment of data relative to the dispatch of generating units and Dispatchable Asset Related Demands and the ability to carry out the real-time dispatch processes from ISO issuance of Dispatch Instructions to the actual increase or decrease in output of dispatchable Resources.

"Eligible Customer" is defined in Section II.1.20 of the Transmission, Markets and Services Tariff.

"Eligible FTR Bidder" is an entity that has satisfied applicable financial assurance criteria, and shall not include the auctioneer, its affiliates, and their officers, directors, employees, consultants and other representatives.

"Emergency" is an abnormal system condition requiring manual or automatic action to maintain system frequency, or to prevent the involuntary loss of load, equipment damage, or tripping of system elements that could adversely affect the reliability of an electric system or the safety of persons or property; or a fuel shortage requiring departure from normal operating procedures in order to minimize the use of such scarce fuel; or a condition that requires implementation of Emergency procedures as defined in the ISO New England Manuals.

“Emergency Condition” shall mean an Emergency has been declared by the ISO in accordance with the procedures set forth in the ISO New England Manuals and ISO New England Administrative Procedures.

“Emergency Minimum Limit” or **“Emergency Min”** shall mean the minimum generation amount, in MWs, that a generating unit can deliver for a limited period of time without exceeding specified limits of equipment stability and operating permits.

“Energy Component” shall mean the Locational Marginal Price at the reference point.

“Enrolling Participant” is the Market Participant that registers Customers for the Load Response Program.

“Equivalent Demand Forced Outage Rate” shall mean the portion of time a unit is in demand, but is unavailable due to forced outages.

"Excepted Transaction" is a transaction specified in Section II.40 of the Transmission, Markets and Services Tariff for the applicable period specified in that Section.

"Exempt Real-Time Generation Obligation" shall mean that portion of a Participant's Real-Time Generation Obligation that is not included in the calculation of Minimum Generation Emergency Credits pursuant to Appendix F of this Market Rule.

"External Node" is a proxy bus or buses used for establishing a Locational Marginal Price for energy received by Market Participants from, or delivered by Market Participants to, a neighboring Control Area or for establishing Locational Marginal Prices associated with energy delivered through the New England Control Area by Non-Market Participants for use in calculating Non-Market Participant Congestion Costs and loss costs.

"External Resource" shall mean a generation resource located outside the metered boundaries of the New England Control Area.

"External Transaction" is a purchase by a Market Participant of energy external to the New England Control Area or a sale by a Market Participant of energy external to the New England Control Area in the Day-Ahead Energy Market and/or Real-Time Energy Market or a through transaction scheduled by a Non-Market Participant in the Real-Time Energy Market.

“Fast Start Generator” shall mean a generating unit that the ISO may dispatch within the hour through electronic dispatch and that meets the following criteria: (i) minimum run time does not exceed one hour; (ii) minimum down time does not exceed one hour; (iii) time to start does not exceed 30 minutes; (iv) available for dispatch and manned or has automatic remote dispatch capability; (v) capable of receiving and acknowledging a start-up or shut-down dispatch instruction electronically; and (vi) has satisfied its minimum down time.

“Final Forward Reserve Obligation” is calculated in accordance with Section III.9.8(a) of this Market Rule.

“Financial Transmission Right” or **“FTR”** shall mean a financial instrument that evidences the rights and obligations specified in Section III.5.2.2 of this Market Rule.

“Formal Warning” is defined in Section III.B.4.1.1 of ***Appendix B*** of this Market Rule.

"Formula-Based Sanctions" is defined in Section III.B.4.1.3 of ***Appendix B*** of this Market Rule.

"Forward Reserve" shall mean TMNSR and TMOR purchased by the ISO on a forward basis on behalf of Market Participants as provided for in Section III.9 of this Market Rule.

"Forward Reserve Assigned Megawatts" is the amount of Forward Reserve, in megawatts, that a Market Participant assigns to eligible Forward Reserve Resources to meet its Forward Reserve Obligation as defined in Section III.9.4 of this Market Rule.

"Forward Reserve Auction" is the periodic auction conducted by the ISO in accordance with Section III.9 of this Market Rule to procure Forward Reserve.

"Forward Reserve Auction Offers" are offers to provide Forward Reserve to meet system and Reserve Zone requirements as submitted by a Market Participant in accordance with Section III.9.3 of this Market Rule.

"Forward Reserve Charge" is a Market Participant's share of applicable system and Reserve Zone Forward Reserve costs attributable to meeting the Forward Reserve requirement as calculated in accordance with Section III.9.9 of this Market Rule.

"Forward Reserve Clearing Price" is the clearing price for TMNSR or TMOR, as applicable, for the system and each Reserve Zone resulting from the Forward Reserve Auction as defined in Section III.9.4 of this Market Rule.

"Forward Reserve Credit" is the credit received by a Market Participant that is associated with that Market Participant's Final Forward Reserve Obligation as calculated in accordance with Section III.9.8 of this Market Rule.

"Forward Reserve Delivered Megawatts" are calculated in accordance with Section III.9.6.5 of this Market Rule.

"Forward Reserve Delivery Period" is defined in Section III.9.1.2 of this Market Rule.

"**Failure-to-Activate Penalty"** is the penalty associated with a Market Participant's failure to activate Forward Reserve when requested to do so by the ISO and is defined in Section III.9.7.2 of this Market Rule.

"Forward Reserve Failure-to-Activate Penalty Rate" is specified in Section III.9.7.2 of this Market Rule.

"Forward Reserve Failure-to-Reserve Penalty" is the penalty associated with a Market Participant's failure to reserve Forward Reserve and is defined in Section III.9.7.1 of this Market Rule.

"Forward Reserve Failure-to-Reserve Megawatts" are calculated in accordance with Section III.9.7.1(a) of this Market Rule.

"Forward Reserve Failure-to-Reserve Penalty Rate" is specified in Section III.9.7.1(b)(ii) of this Market Rule.

“Forward Reserve Fuel Index” is the index or set of indices used to calculate the Forward Reserve Threshold Price as defined in Section III.9.6.2 of this Market Rule.

“Forward Reserve Heat Rate” is the heat rate that is used to calculate the Forward Reserve Threshold Price.

“**Forward Reserve Obligation**” is a Market Participant’s amount, in megawatts, of Forward Reserve that cleared in the Forward Reserve Auction and adjusted, as applicable, to account for bilateral transactions that transfer Forward Reserve Obligations.

“Forward Reserve Obligation Charge” is defined in Section III.10.4 of this Market Rule.

“Forward Reserve Offer Cap” is $14,000/megawatt-month.

“Forward Reserve Payment Rate” is defined in Section III.9.8 of this Market Rule.

“Forward Reserve Procurement Period” is defined in Section III.9.1.1 of this Market Rule.

"Forward Reserve Qualifying Megawatts" refer to all or a portion of a Forward Reserve Resource's capability offered into the Real-Time Energy Market at energy offer prices above the applicable Forward Reserve Threshold Price that are calculated in accordance with Section III.9.6.4 of this Market Rule.

"Forward Reserve Resource" is a Resource that meets the eligibility requirements defined in Section III.9.5.1 of this Market Rule that has been assigned Forward Reserve Obligation by a Market Participant.

"Forward Reserve Threshold Price" is the minimum price at which assigned Forward Reserve Megawatts are required to be offered into the Real-Time Energy Market as calculated in Section III.9.6.2 of this Market Rule.

"FTR Auction" is the periodic auction of FTRs conducted by the ISO in accordance with Section III.7 of this Market Rule.

"FTR Auction Revenue" is the revenue collected from the sale of FTRs in FTR Auctions. FTR Auction Revenue is payable to FTR Holders who submit their FTRs for sale in the FTR Auction in accordance with Section III.7 of this Market Rule and to ARR Holders in accordance with ***Appendix C*** of this Market Rule.

"FTR Holder" is an entity that acquires an FTR through the FTR Auction or a subsequent bilateral arrangement pursuant to Section III.7 of this Market Rule and registers with the ISO as the holder of the FTR in accordance with Section III.7 of this Market Rule and applicable ISO New England Manuals.

"GADS Data" shall mean data submitted to the NERC for collection into the NERC's Generating Availability Data System ("GADS").

"Generator Forced Outage" shall mean an immediate reduction in output or capacity or removal from service, in whole or in part, of a generating unit by reason of an Emergency or threatened Emergency, unanticipated failure, or other cause beyond the control of the owner or operator of the facility, as specified in the relevant portions of the ISO New England Manuals and ISO New England Administrative Procedures. A reduction in output or removal from service of a generating unit in response to changes in market conditions that is approved by the

ISO shall not constitute a Generator Forced Outage. See Section III.8.3.6(c) for additional exceptions.

"Generator Maintenance Outage" shall mean the scheduled removal from service, in whole or in part, of a generating unit in order to perform necessary repairs on specific components of the facility, if removal of the facility meets the guidelines specified in the ISO New England Manuals and ISO New England Administrative Procedures.

"Generator Planned Outage" shall mean the scheduled removal from service, in whole or in part, of a generating unit for inspection, maintenance or repair with the approval of the ISO in accordance with the ISO New England Manuals and ISO New England Administrative Procedures.

"Hub" is a specific set of pre-defined Nodes for which a Locational Marginal Price will be calculated for the Day-Ahead Energy Market and Real-Time Energy Market and which can be used to establish a reference price for energy purchases and the transfer of Day-Ahead Adjusted Load Obligations and Real-Time Adjusted Load Obligations and for the designation of FTRs.

"Hub Price" is calculated in accordance with Section III.2.8 of this Market Rule.

"Hydro Quebec Interconnection Capability Credits" are credits that are granted to a Market Participant or group of Market Participants in accordance with the ISO New England

System Rules, which may be used to satisfy the Market Participant's Unforced Capacity requirement as determined in accordance with Section III.8.2 of this Market Rule 1, where the value of such credits is determined in accordance with the ISO New England Manuals.

"ICAP Resource" or **"Installed Capacity Resource"** shall mean a generating unit, a Dispatchable Asset Related Demand, an External Resource, an External Transaction or Demand Resource that meets the qualification requirements of this Market Rule and has been designated as an ICAP Resource by a Market Participant (i.e., has not fully de-listed as provided for in Section III.8 hereof and the ISO New England Manuals) for the ICAP Period in question, in accordance with the ISO New England Manuals. (Dispatchable Asset Related Demand reduces obligations).

"Inadvertent Energy Revenue" is defined in Section III.3.2.1(j) of this Market Rule.

"Inadvertent Energy Revenue Charges or Credits" is defined in Section III.3.2.1(j) of this Market Rule.

"Inadvertent Interchange" shall mean the difference between net actual energy flow and net scheduled energy flow into or out of the New England Control Area.

"Increment Offer" shall mean an offer to sell energy at a specified Location in the Day-Ahead Energy Market. An accepted Increment Offer results in scheduled generation at the specified Location in the Day-Ahead Energy Market.

"Independent Market Monitoring Unit" or "IMMU" shall mean the independent market monitoring unit selected by and reporting to the ISO Board pursuant to Section 9.4.2 of the Participants Agreement.

"Installed Capacity" or **"ICAP"** shall mean a MW capability from a qualifying ICAP Resource that meets the requirements set forth in this Market Rule and the ISO New England Manuals.

"Installed Capacity Equivalent" shall mean the Resource capability that corresponds to Unforced Capacity, calculated in accordance with ISO Procedures.

"Installed Capacity Requirement" shall mean the level of capacity required to meet the reliability requirements defined for the New England Control Area and calculated in accordance with Section III.8 of this Market Rule. The Installed Capacity Requirement is used to determine an Unforced Capacity Requirement for the New England Control Area and individual Market Participants.

"Intermittent Power Resource" shall mean Resources whose output amount and availability are not subject to the control of the ISO or the plant operator because of the source of fuel (e.g., wind, solar), or contractual obligations (e.g. qualifying facilities) or Resources less than 5 MWs operating within the distribution system.

"Internal Market Monitoring Unit" or "INTMMU" shall mean the staff of the ISO designated to implement Mitigation Measures.

"ISO" shall mean ISO New England Inc.

"ISO New England Administrative Procedures" shall mean procedures adopted by the ISO to fulfill its responsibilities to apply and implement ISO New England System Rules.

"ISO New England Billing Policy" shall have the meaning set forth in Section I of the Transmission, Markets and Services Tariff.

"ISO New England Filed Documents" shall mean the Transmission, Markets and Services Tariff, including but not limited to this Market Rule, the Participants Agreement, the

Transmission Operating Agreement or other documents that affect the rates, terms and conditions of service.

"ISO New England Information Policy" shall mean the policy on file with the Commission (Attachment D to the Transmission, Markets and Services Tariff) establishing guidelines regarding the information received, created and distributed by Market Participants and the ISO in connection with the New England Markets and the New England Transmission System.

"ISO New England Manuals" shall mean the manuals implementing this Market Rule, as amended from time to time in accordance with the Participants Agreement. Any elements of the ISO New England Manuals that substantially affect rates, terms, and/or conditions of service shall be filed with the Commission under Section 205 of the Federal Power Act.

"ISO New England System Rules" are this Market Rule, the ISO New England Information Policy, the ISO New England Administrative Procedures, the ISO New England Manuals and any other system rules, procedures or criteria for the operation of the New England

Transmission System and administration of the New England Markets and the Transmission, Markets and Services Tariff.

"Limited Energy Resource" shall mean resources that, due to design considerations, environmental restriction on operations, cyclical requirements, such as the need to recharge or refill or manage water flow, or fuel limitations, are unable to operate continuously at full output on a daily basis.

"Load Asset" shall mean a physical load that has been registered in accordance with the Asset Registration Process.

"Local Second Contingency Protection Resource" is defined in Section III.6.1 of this Market Rule.

"Load Response Program" shall mean the program implemented and administered by the ISO to promote demand side response as described in ***Appendix E*** to this Market Rule.

"Load-shifting" shall mean the movement of load between Market Participants, where one Market Participant's Real-Time Load Obligation decreases as load leaves to obtain service from another Market Participant whose Real-Time Load Obligation increases.

"Load Zone" is a Reliability Region, except as otherwise provided for in Section III.2.7 of this Market Rule.

"Location" is a Node, External Node, Load Zone or Hub.

"Locational Marginal Price" or **"LMP"** as defined in Section III.2 of this Market Rule. The Locational Marginal Price for a Node is the nodal price at that Node; the Locational Marginal Price for an External Node is the nodal price at that External Node; the Locational Marginal Price for a Load Zone or Reliability Region is the Zonal Price for that Load Zone or Reliability Region, respectively; and the Locational Marginal Price for a Hub is the Hub Price for that Hub.

"Loss Component" is the component of the nodal LMP at a given Node or External Node on the PTF that reflects the cost of losses at that Node or External Node relative to the reference point. The Loss Component of the nodal LMP at a given Node on the non-PTF system reflects the relative cost of losses at that Node adjusted as required to account for losses on the non-PTF system already accounted for through tariffs associated with the non-PTF. When used in connection with Hub Price or Zonal Price, the term Loss Component refers to the Loss Components of the nodal LMPs that comprise the Hub Price or Zonal Price, which Loss Components are averaged or weighted in the same way that nodal LMPs are averaged to determine Hub Price or weighted to determine Zonal Price.

"**Maximum Consumption Limit**" is the maximum amount, in MW, available from the Dispatchable Asset Related Demand for economic dispatch and is based on the physical characteristics as submitted as part of a Resource's Offer Data except that a Self-Scheduled Dispatchable Asset Related Demand may modify its Minimum Consumption Limit on an hourly basis, as part of its Demand Bid, in order to indicate the desired level of Self-Scheduled MW.

"**Minimum Consumption Limit**" is the minimum amount, in MW, available from a Dispatchable Asset Related Demand that is not available for economic dispatch and is based on the physical characteristics as submitted as part of a Resource's Offer Data.

"Market Participant" means a participant in the New England Markets that has executed a Market Participant Service Agreement, or on whose behalf an unexecuted Market Participant Service Agreement has been filed with and accepted or approved by the Commission.

"Market Participant Service Agreement" or **"MPSA"** means an agreement between ISO and a Market Participant, in the form specified in Attachment B to the Transmission, Markets and Services Tariff.

"Market Participant Obligations" is defined in Section III.B.1.1 of ***Appendix B*** of this Market Rule.

"Minimum Generation Emergency" shall mean an Emergency declared by the ISO in which the ISO anticipates requesting one or more generating Resources to operate at or below Economic Minimum Limit, in order to manage, alleviate, or end the Emergency.

"Minimum Generation Emergency Charge" shall mean the charge used to allocate the cost of Minimum Generation Emergency Credits. Minimum Generation Emergency Charges are discussed in Appendix F of this Market Rule.

"Minimum Generation Emergency Credits" are credits calculated pursuant to Appendix F of this Market Rule to compensate certain generating Resources for operation in excess of their Economic Minimum Limits during a Minimum Generation Emergency.

"Mitigation Measures" is defined in Section III.A.1.1 of ***Appendix A*** of this Market Rule.

"MW" is megawatt.

"MWh" is megawatt-hour.

"NEMA" is The Northeast Massachusetts Reliability Region.

"NEMA Contract" is a contract described in ***Appendix C*** of this Market Rule and listed in ***Exhibit 1*** of ***Appendix C*** of this Market Rule.

"NEMA Load Serving Entity" or **"NEMA LSE"** is a Transmission Customer or Congestion Paying LSE Entity that serves load within NEMA.

"Net Commitment Period Compensation" or "NCPC" is the compensation methodology for Resources that is described in Appendix F to this Market Rule 1.

"NCPC Credit" means the payment made to a Resource as provided in Section III.3.2.3, Section III.6.4 and Appendix F.

"NCPC Charge" means the charges to Market Participants as provided in Section III.3.2.3, Section III.6.4 and Appendix F.

"New England Control Area" is the integrated electric power system to which a common automatic generation control scheme and various operating procedures are applied by or under the supervision of the ISO in order to: (i) match, at all times, the power output of the generators within the electric power system and capacity and energy purchased from entities outside the electric power system, with the load within the electric power system; (ii) maintain scheduled interchange with other interconnected systems, within the limits of Accepted Electric Industry Practice; (iii) maintain the frequency of the electric power system within reasonable limits in accordance with Accepted Electric Industry Practice and the criteria of the NPCC and NERC; and (iv) provide sufficient generating capacity to maintain operating reserves in accordance with Accepted Electric Industry Practice.

"New England Markets" shall have the meaning set forth in Section I of the Transmission, Markets and Services Tariff.

"New England Transmission System" is the system of transmission facilities within the New England Control Area under the ISO's operational jurisdiction.

"NERC" is the North American Electric Reliability Council.

"No-Load Fee" is the amount, in dollars per hour, for a generating unit that must be paid to Market Participants with an Ownership Share in the unit for being scheduled in the New England Markets, in addition to the Start-Up Fee and price offered to supply energy, for each hour that the generating unit is scheduled in the New England Markets.

"Node" is a point on the New England Transmission System at which LMPs are calculated.

"Non-Market Participant Transmission Customer" is any entity which is not a Market Participant but is a Transmission Customer.

"Nominated Consumption Limit" is the consumption level specified by the Market Participant for a Dispatchable Asset Related Demand for use in the ICAP Market.

"NPCC" is the Northeast Power Coordinating Council.

"Obligation Month" shall mean a time period of one calendar month for which Market Participants are required to satisfy their Unforced Capacity Requirements.

"Offer Data" shall mean the scheduling, operations planning, dispatch, new Resource, and other data, including generating unit and Dispatchable Asset Related Demand operating limits based on physical characteristics, and information necessary to schedule and dispatch generating and Dispatchable Asset Related Demand Resources for the provision of energy and other services and the maintenance of the reliability and security of the transmission system in the New England Control Area, and specified for submission to the New England Markets for such purposes by the ISO.

“Operating Data” shall mean, pursuant to Section III.8.3.5 of this Market Rule, GADS Data, data equivalent to GADS Data, CARL Data, metered Load data, or actual system failure occurrences data, all as described in the ISO Procedures.

“Operating Day” shall mean the calendar day period beginning at midnight for which transactions on the New England Markets are scheduled.

“Operating Reserve” shall mean Ten-Minute Spinning Reserve (TMSR), Ten-Minute Non-Spinning Reserve (TMNSR) and Thirty-Minute Operating Reserve (TMOR).

"Operations Date" shall have the meaning set forth in Section I of the Transmission, Markets and Services Tariff.

"Ownership Share" is a right or obligation, for purposes of settlement, to a percentage share of all credits or charges associated with a generating unit asset or Load Asset, where such unit or load is interconnected to the New England Transmission System.

"Participants Agreement" means the Participants Agreement among the ISO, the New England Power Pool, and the Individual Participants (as defined therein), as the same may be amended from time to time.

"Phase I/II HVDC-TF" shall have the meaning given to it in Schedule 20A to Section II of this Tariff.

"Pivotal Supplier" is defined in Section III.A.5.2.2 of ***Appendix A*** of this Market Rule.

"Pool RNS Rate" is the transmission rate determined in accordance with paragraph (2) of Schedule 9 of Section II of the Transmission, Markets and Services Tariff.

"Pool-Scheduled Resources" has the meaning specified in Section III.1.10.2 of this Market Rule.

"Pool Transmission Facilities" or **"PTF"** shall have the meaning set forth in Section II of the Transmission, Markets and Services Tariff.

"PUSH Reference Level" means the Reference Level for a DCA Peaking Unit, as calculated by the ISO pursuant to ***Exhibit 2*** to ***Appendix A*** to this Market Rule.

“Qualified Upgrade Awards” are revenues associated with the additional FTRs made possible in an FTR Auction by transmission upgrades, which increase transfer capability on the New England Transmission System, where such transmission upgrades are initially placed in-service on or after March 1, 1997 and paid for by an entity and are not paid for through the Pool RNS Rate.

“Real-Time” is a period in the current Operating Day for which the ISO dispatches Resources for energy and Regulation, designates Resources for Regulation and Operating Reserve and, if necessary, commits additional Resources.

“Real-Time Adjusted Load Obligation” is defined in Section III.3.2.1(b)(iii) of this Market Rule.

“Real-Time Commitment Periods” are periods of continuous operation bounded by a start-up and the earlier to occur of a shut-down or a unit trip used to determine eligibility for Real-Time NCPC Credit.

“Real-Time Congestion Revenue” is defined in Section III.3.2.1(f) of this Market Rule.

“Real-Time Energy Market” shall mean the purchase or sale of energy, payment of Congestion Costs, and payment for losses for quantity deviations from the Day-Ahead Energy Market in the Operating Day and designation of and payment for provision of Operating Reserve in Real-Time.

“Real-Time Energy Market Deviation Congestion Charge/Credit” is defined in Section III.3.2.1(e) of this Market Rule.

“Real-Time Energy Market Deviation Energy Charge/Credit” is defined in Section III.3.2.1(e) of this Market Rule.

“Real-Time Energy Market Deviation Loss Charge/Credit” is defined in Section III.3.2.1(e) of this Market Rule.

“Real-Time Generation Obligation” is defined in Section III.3.2.1(b)(ii) of this Market Rule.

“Real-Time Generation Obligation Deviation” is defined in Section III.3.2.1(c)(ii) of this Market Rule.

"Real-Time Load Obligation" is defined in Section III.3.2.1(b)(i) of this Market Rule.

"Real-Time Load Obligation Deviation" is defined in Section III.3.2.1(c)(i) of this Market Rule.

"Real-Time Locational Adjusted Net Interchange" is defined in Section III.3.2.1(b)(iv) of this Market Rule.

"Real-Time Locational Adjusted Net Interchange Deviation" is defined in Section III.3.2.1(c)(iv) of this Market Rule.

"Real-Time Loss Revenue" is defined in Section III.3.2.1(i) of this Market Rule.

"Real-Time Loss Revenue Charges or Credits" is defined in Section III.3.2.1(l) of this Market Rule.

"Real-Time Prices" shall mean the Locational Marginal Prices resulting from the ISO's dispatch of the New England Markets in the Operating Day.

“Real-Time Reserve Clearing Price” is the Real-Time TMSR, TMNSR or TMOR clearing price, as applicable, for the system and each Reserve Zone that is calculated in accordance with Section III.2.4 of this Market Rule.

“Real-Time Reserve Charge” is a Market Participant’s share of applicable system and Reserve Zone Real-Time Operating Reserve costs attributable to meeting the Real-Time Operating Reserve requirement as calculated in accordance with Section III.10 of this Market Rule.

“Real-Time Reserve Credit” is a Market Participant’s compensation associated with that Market Participant’s Resources’ Real-Time Reserve Designation as calculated in accordance with Section III.10 of this Market Rule.

“Real-Time Reserve Designation” is the amount, in MW, of Operating Reserve designated to a Resource in Real-Time by the ISO as adjusted after-the-fact utilizing revenue quality meter data as described under Section III.10 of this Market Rule.

"Real-Time Reserve Opportunity Cost" shall have the meaning specified in Section III.2.8(b) of this Market Rule.

"Real-Time Reserve Energy Obligation Credit" is defined in Section III.10.5 of this Market Rule.

"Reference Level" is defined in Section III.A.5.6.1 of ***Appendix A*** of this Market Rule.

“Regulation” shall mean the capability of a specific generating unit with appropriate telecommunications, control and response capability to increase or decrease its output in response to a regulating control signal, in accordance with the specifications in the ISO New England Manuals and ISO New England Administrative Procedures.

“Regulation Capability” or **“REGCAP”** shall mean the amount of Regulation capability available on a Market Participant’s Resource as calculated by the ISO based upon that Resource’s Automatic Response Rate and the available regulating range as specified in ISO New England Manual M-11.

“Regulation Clearing Price” shall have the meaning specified in Section III.3.2.2(e) of this Market Rule.

“Regulation High Limit” is the maximum amount of energy that a generating unit can reliably produce when that unit is providing Regulation. The Regulation High Limit may be less than or equal to the unit’s Economic Maximum Limit.

“Regulation Low Limit” is the minimum amount of energy that a generating unit can reliably produce when that unit is providing Regulation. The Regulation Low Limit may be greater than or equal to the unit’s Economic Minimum Limit.

“Regulation Opportunity Cost” shall have the meaning specified in Section III.3.2.2(i) of this Market Rule.

“Regulation Rank Price” is calculated in accordance with Section III.1.11.5(b) of this Market Rule.

“Regulation Requirement” is the hourly amount of Regulation MWs required by the ISO to maintain system control and reliability as calculated and posted on the ISO website.

“Regulation Service Credit” is the credit associated with provision of Regulation Service Megawatts and is calculated in accordance with Section III.3.2.2(c) of this Market Rule.

“Regulation Service Megawatts” are calculated in accordance with Section III.3.3.3(f) of this Market Rule.

“Reliability Agreement” shall mean an agreement entered into between the ISO and a Market Participant as provided for in Appendix A to Market Rule 1.

“Reliability Region” shall mean any one of the regions identified on the ISO’s website. Reliability Regions are intended to reflect the operating characteristics of, and the major transmission constraints on, the New England Transmission System.

“Reliability Seller” shall mean the Market Participant with the authority to submit Supply Offers for Resources pursuant to a Reliability Agreement.

“Replacement Reserve” shall mean reserve other than TMSR, TMNSR or TMOR as defined in the ISO New England Manuals.

"Reserve Constraint Penalty Factors" or "RCPFs" are rates, in $/MWh, that are used within the Real-Time dispatch and pricing algorithm to reflect the value of Operating Reserve shortages and are defined in Section III.2.8 of this Market Rule.

"**Reserve Zone**" is defined in Section III.2.7 of this Market Rule.

"Resource" means a generating unit, a Dispatchable Asset Related Demand, an External Resource or an External Transaction.

"Reviewable Action" is defined in Section III.D.1.1 of ***Appendix D*** of this Market Rule.

"Sanctionable Behavior" is defined in Section III.B.3 of ***Appendix B*** of this Market Rule.

"Self-Schedule" is the action of a Market Participant in committing and/or scheduling its Resource, in accordance with applicable ISO New England Manuals, to provide service in an hour, whether or not in the absence of that action the Resource would have been scheduled or dispatched by the ISO to provide the service.

"Self-Scheduled MW" is an amount, in megawatts, that is Self-Scheduled and is equal to the greater of: (i) the Resource's Economic Minimum Limit; or (ii) the Resource's Minimum Consumption Limit; or (iii) for a generating Resource for which the Regulation Self-Schedule flag is set for the hour and the unit was on Regulation for at least 20 minutes during the applicable hour of the Operating Day, the median value of all Regulation setpoints (Desired Dispatch Point) used by the Resource while regulating.

"Settlement Only Resources" are generators of less than 5 MW that have elected Settlement Only Resource treatment as described in Section 5 of Attachment D to ISO New England Manual 20 – Installed Capacity.

“SPD” means the ISO’s Scheduling, Pricing, and Dispatch software, as more fully described in Section III.A.5.5.3 of ***Appendix A*** of this Market Rule.

“Special Case Resources” shall mean Limited Energy Resources, certain non-dispatchable qualifying facilities as defined in ISO New England Manual M-20, certain generating units having a capacity of less than 5 MWs as defined in ISO New England Manual M-20 and Intermittent Power Resources treated in accordance with Section III.8.3.11 of this Market Rule.

“Special Constraint Resources” are Resources that provide Special Constraint Resource Service under Schedule 19 of Section II of the Transmission, Markets and Services Tariff.

"Start-Up Fee" is the amount, in dollars, that must be paid for a generating unit to Market Participants with an Ownership Share in the unit each time the unit is scheduled in the New England Markets to start-up.

"State Estimator" shall mean the computer model of power flows specified in Section III.2.3 of this Market Rule.

"Stipulated ICAP Revenue" is defined in Section 3.3.2 of ***Exhibit 2*** to ***Appendix A*** of this Market Rule.

"Submitted Offer" is defined in Section III.A.5.6.1 of ***Appendix A*** of this Market Rule.

"Summer Capability Period" shall mean one of two time periods defined by the ISO for the purposes of rating and auditing ICAP Resources. The time period associated with the Summer Capability Period is defined in the ISO New England Manuals.

"Supply Margin" is defined in Section III.A.5.2.2 of ***Appendix A*** of this Market Rule.

"Supply Offer" is a proposal to furnish energy at a Node or Regulation from a Resource that meets the applicable requirements set forth in the ISO New England Manuals submitted to the ISO by a Market Participant with authority to submit a Supply Offer for the Resource. The Supply Offer will be submitted pursuant to this Market Rule and applicable ISO New England Manuals, and include a price and information with respect to the quantity proposed to be furnished, technical parameters for the Resource, timing and other matters. A Supply Offer is a subset of the information required in a Market Participant's Offer Data.

"Ten-Minute Non-Spinning Reserve" or TMNSR" is the reserve capability of a generating unit that can be converted fully into energy within ten minutes from the request of the ISO, and is provided by generating units that are either electrically synchronized or not electrically synchronized to the New England Transmission System or the reserve capability of a Dispatchable Asset Related Demand that can be fully utilized within ten minutes from the request of the ISO to reduce consumption.

"Ten-Minute Spinning Reserve" or "TMSR" is the reserve capability of a generating unit that can be converted fully into energy within ten minutes from the request of the ISO or a Dispatchable Asset Related Demand pump that can reduce energy consumption to provide reserve capability within ten minutes from the request of the ISO , and is provided by generating units and Dispatchable Asset Related Demand pumps electrically synchronized to the New England Transmission System.

"Thirty-Minute Operating Reserve" or "TMOR" shall mean the reserve capability of a generating unit that can be converted fully into energy within thirty minutes from the request of the ISO , and is provided by generating units that are either not electrically synchronized or synchronized to the New England Transmission System or the reserve capability of a Dispatchable Asset Related Demand that can be fully utilized within thirty minutes from the request of the ISO to reduce consumption.

"Time-on-Regulation Credit" is the credit associated with provision of Time-on-Regulation Megawatts and is calculated in accordance with Section III.3.2.2(b) of this Market Rule.

"Time-on-Regulation Megawatts" is the amount of Regulation capability provided during one hour calculated in accordance with Section III.3.2.2(g) of this Market Rule.

Reserved for future use.

"Transmission Congestion Credit" shall mean the allocated share of total Transmission Congestion Revenue credited to each holder of Financial Transmission Rights, calculated and allocated as specified in Section III.5.2 of this Market Rule.

"Transmission Congestion Revenue" is defined in Section III.5.2.5(a) of this Market Rule.

"Transmission Customer" shall have the meaning set forth in Section I of the Transmission, Markets and Services Tariff.

"Transmission Forced Outage" shall mean an immediate removal from service of a transmission facility by reason of an Emergency or threatened Emergency, unanticipated failure, or other cause beyond the control of the owner or operator of the transmission facility, as specified in the relevant portions of the ISO New England Manuals and ISO New England

Administrative Procedures. A removal from service of a transmission facility at the request of the ISO to improve transmission capability shall not constitute a Transmission Forced Outage.

"Transmission, Markets and Services Tariff" is the ISO New England Inc. Transmission, Markets and Services Tariff, FERC Electric Tariff, Volume No. 2, as amended from time to time.

"Transmission Operating Agreement" shall mean the transmission operating agreement among the ISO and the Transmission Owners that are parties thereto, as the same may be amended from time to time.

"Transmission Owner" is defined in Section II of the Transmission, Markets and Services Tariff.

"Transmission Planned Outage" shall mean any transmission outage scheduled in advance for a pre-determined duration and which meets the notification requirements for such outages specified in the ISO New England Manuals and ISO New England Administrative Procedures.

"Transmission Provider" is defined in Section II of the Transmission, Markets and Services Tariff.

"UCAP Deficiency Auction" shall mean an auction conducted pursuant to Section III.8.5.1(a) of this Market Rule and the ISO New England Manuals to procure sufficient Unforced Capacity to cover the remainder of Market Participants' Unforced Capacity requirements for an Obligation Month.

"UCAP Monthly Auction" shall mean an auction administered by the ISO according to Section III.8.4 of this Market Rule and the ISO New England Manuals for Market Participants serving load to procure Unforced Capacity and for qualified Resources to supply Unforced Capacity.

"UCS" is Unit Commitment Software as more fully defined in Section III.A.5.5.3 of ***Appendix A*** of this Market Rule.

"UDS" is Unit Dispatch System Software, as more fully defined in Section III.A.5.5.3 of ***Appendix A*** of this Market Rule.

“Unforced Capacity” or **“UCAP”** shall mean the measure by which: 1) Installed Capacity suppliers will be rated, in accordance with the formulae set forth in the ISO New England Manuals, to quantify the extent of their contribution to satisfy the ISO Installed Capacity Requirement, and 2) the measure to determine if a Market Participant has met its procurement obligations relating to the Installed Capacity Requirement.

“Unforced Capacity Requirement” shall mean the amount of Unforced Capacity determined by the ISO in megawatts for the Summer Capability Period and Winter Capability Period for the New England Control Area as a whole as calculated in accordance with the ISO New England Manuals.

“Winter Capability Period” shall mean one of two time periods defined by the ISO for the purposes of rating and auditing ICAP Resources. The time period associated with the Winter Capability Period is defined in the ISO New England Manuals.

“Zonal Price” is calculated in accordance with Section III.2.7 of this Market Rule.

III.1.3.3 [Reserved]

III.1.4 [Reserved.]

III.1.5 [Reserved.]

III.1.6 [Reserved.]

III.1.6.1 [Reserved.]

III.1.6.2 [Reserved.]

III.1.6.3 [Reserved.]

III.1.6.4 ISO New England Manuals and ISO New England Administrative Procedures. The ISO shall prepare, maintain and update the ISO New England Manuals and ISO New England Administrative Procedures consistent with the ISO New England Filed Documents. The ISO New England Manuals and ISO New England Administrative Procedures shall be available for inspection by the Market Participants, regulatory authorities with jurisdiction over the ISO or any Market Participant, and the public.

III.1.7 General.

III.1.7.1 [Reserved.]

III.1.7.2 [Reserved.]

III.1.7.3 Agents. A Market Participant may participate in the New England Markets through an agent, provided that such Market Participant informs the ISO in advance in writing of the appointment of such agent. A Market Participant using an agent shall be bound by all of the acts or representations of such agent with respect to transactions in the New England Markets, and shall ensure that any such agent complies with the requirements of the ISO New England Manuals and ISO New England Administrative Procedures and the ISO New England Filed Documents.

III.1.7.4 [Reserved.]

III.1.7.5 [Reserved.]

III.1.7.6 Scheduling and Dispatching.

(a) The ISO shall schedule Day-Ahead and schedule and dispatch in Real-Time Resources economically on the basis of least-cost, security-constrained dispatch and the prices and operating characteristics offered by Market Participants. The ISO shall schedule and dispatch sufficient Resources of the Market Participants to serve the New England Markets energy purchase requirements under normal system conditions of the Market Participants and meet the requirements of the New England Control Area for ancillary services provided by such Resources. The ISO shall use a joint optimization process to serve Real-Time Energy Market energy requirements and meet Real-Time Operating Reserve requirements based on a least-cost, security-constrained economic dispatch.

(b) Scheduling and dispatch shall be conducted in accordance with the ISO New England Filed Documents.

(c) The ISO shall undertake, together with Market Participants, to identify any conflict or incompatibility between the scheduling or other deadlines or specifications applicable to the New England Markets, and any relevant procedures of another Control Area, or any tariff (including the Transmission, Markets and Services Tariff). Upon determining that any such conflict or incompatibility exists, the ISO shall propose tariff or procedural changes, or undertake such other efforts as may be appropriate, to resolve any such conflict or incompatibility.

III.1.7.7 Energy Pricing. The price paid for energy bought and sold in the New England Markets will reflect the hourly Locational Marginal Price at each Location, determined by the ISO in accordance with the ISO New England Filed Documents. Congestion Costs, which shall be determined by differences in the Congestion Component of Locational Marginal Prices in an hour caused by constraints, shall be calculated and collected, and the resulting revenues disbursed, by the ISO in accordance with this Market Rule. Loss costs associated with Pool Transmission Facilities, which shall be determined by the differences in Loss Components of the Locational Marginal Prices in an hour, shall be calculated and collected, and the resulting revenues disbursed, by the ISO in accordance with this Market Rule.

III.1.7.8 Market Participant Resources. A Market Participant may elect to Self-Schedule its Resources in accordance with and subject to the procedures specified in this Market Rule and the ISO New England Manuals.

III.1.7.9 Real-Time Reserve Prices. The price paid for the provision of Real-Time Operating Reserve in the New England Markets will reflect the integrated hourly Real-Time Reserve Clearing Prices determined by the ISO in accordance with the ISO New England Filed Documents for the system and each Reserve Zone.

III.1.7.10 Other Transactions.

(a) Market Participants may enter into internal bilateral transactions and External Transactions for the purchase or sale of energy or other products to or from each other or any other entity, subject to the obligations of Market Participants to make ICAP Resources available for dispatch by the ISO. External Transactions that contemplate the physical transfer of energy or obligations to or from a Market Participant shall be reported to and coordinated with the ISO in accordance with this Market Rule and the ISO New England Manuals.

(b) [Reserved.]

(c) [Reserved.]

III.1.7.11 [Reserved.]

III.1.7.12 [Reserved.]

III.1.7.13 [Reserved.]

III.1.7.14 [Reserved.]

III.1.7.15 [Reserved.]

III.1.7.16 [Reserved.]

III.1.7.17 Operating Reserve. The ISO shall schedule to the Operating Reserve and load-following requirements of the New England Control Area and the New England Markets in scheduling Resources pursuant to this Market Rule. Reserve requirements for the Forward Reserve Market are determined in accordance with the methodology specified in Section III.9.2 of this Market Rule. Operating Reserve requirements for Real-Time dispatch within an Operating Day are determined in accordance with ISO New England Operating Procedure No. 8, Operating Reserve and Regulation.

III.1.7.18 Regulation.

(a) Regulation shall be supplied from generators located within the metered electrical boundaries of the New England Control Area. Market Participants offering Regulation shall comply with applicable standards and requirements for Regulation capability and dispatch specified in the ISO New England Manuals and ISO New England Administrative Procedures.

(b) The ISO shall obtain and maintain an amount of Regulation equal to the New England Control Area Regulation objective as specified in the ISO New England Manuals and ISO New England Administrative Procedures.

(c) The Regulation range of a unit shall be at least twice the amount of Regulation assigned and no less than the minimum specified in the ISO New England Manuals and ISO New England Administrative Procedures.

(d) A unit that is providing Regulation shall have its energy dispatch range reduced by twice the amount of the Regulation provided. The amount of Regulation provided by a unit shall serve to redefine the Economic Minimum Limit and Economic Maximum Limit of that unit, in that the amount of Regulation shall be added to the unit's Economic Minimum Limit or automatic low limit while regulating, whichever is greater, and subtracted from its Economic Maximum Limit or automatic high limit, which ever is less. Qualified Regulation must satisfy the verification tests described in the ISO New England Manuals and ISO New England Administrative Procedures.

III.1.7.19 **Ramping.** A generating unit dispatched by the ISO pursuant to a control signal appropriate to increase or decrease the unit's megawatt output level shall be able to change output at the ramping rate specified in the Offer Data submitted to the ISO for that unit and shall be subject to sanctions for failure to comply as described in ***Appendix B***.

III.1.7.19A Real-Time Reserve

(a) Real-Time TMSR, TMNSR, TMOR and Real-Time Replacement Reserve, if applicable, shall be supplied from Resources located within the metered boundaries of the New England Control Area subject to the condition set forth in Section III.1.7.19A(c) below. The ISO shall designate Operating Reserve in Real-Time only to Market Participant Resources that comply with the applicable standards and requirements for provision and dispatch of Operating Reserve capability as specified in the ISO New England Manuals and ISO New England Administrative Procedures.

(b) The ISO shall endeavor to procure and maintain an amount of Operating Reserve in Real-Time equal to the system and locational Operating Reserve requirements as specified in the ISO New England Manuals and ISO New England Administrative Procedures.

(c) External Resources will be permitted to participate in the Real-Time Reserve Market when the respective Control Areas implement the technology and processes necessary to support recognition of Operating Reserves from external Resources.

III.1.7.20 Information and Operating Requirements.

(a) [Reserved.]

(b) Market Participants selling from Resources within the New England Control Area shall: report to the ISO sources of energy available for operation; supply to the ISO all applicable Offer Data; report to the ISO units that are Self-Scheduled; report to the ISO External Transaction sales; confirm to the ISO bilateral sales to Market Participants within the New England Control Area; respond to the ISO's directives to start, shutdown or change output levels of generating units, or change scheduled voltages or reactive output levels; continuously maintain all Offer Data concurrent with on-line operating information; and ensure that, where so equipped, generating equipment is operated with control equipment functioning as specified in the ISO

New England Manuals and ISO New England Administrative Procedures.

(c) Market Participants selling from Resources outside the New England Control Area shall: provide to the ISO all applicable Offer Data, including offers specifying amounts of energy available, hours of availability and prices of energy and other services; respond to ISO directives to schedule delivery or change delivery schedules; and communicate delivery schedules to the source Control Area and any intermediary Control Areas.

(d) Market Participants, as applicable, shall: respond or ensure a response to ISO directives for load management steps; report to the ISO the ICAP Resources they have provided to satisfy their capacity obligations that are available for pool operation; report to the ISO all bilateral purchase transactions including External Transaction purchases; and respond or ensure a response to other ISO directives such as those required during Emergency operation.

(e) Market Participant, as applicable, shall provide to the ISO requests to purchase specified amounts of energy for each hour of the Operating Day during which it intends to purchase from the Day-Ahead Energy Market, along with Dispatch Rate levels above which it does not desire to purchase.

III.1.8 [Reserved.]

III.1.9 Pre-scheduling.

III.1.9.1 [Reserved.]

III.1.9.2 [Reserved.]

III.1.9.3 [Reserved.]

III.1.9.4 [Reserved.]

III.1.9.5 [Reserved.]

III.1.9.6 [Reserved.]

III.1.9.7 Market Participant Responsibilities. Market Participants authorized and intending to request market-based Start-Up and No-Load Fees in their Offer Data shall submit a specification of such fees to the ISO for each generating unit as to which the Market Participant intends to request such fees. Any such specification shall identify the applicable period and be submitted on or before the applicable deadline specified in the ISO New England Manuals and ISO New England Administrative Procedures and shall remain in effect without change throughout each such period for which a specification was submitted. The

ISO shall reject any request for Start-Up and No-Load Fees in a Market Participant's Offer Data that does not conform to the Market Participant's specification on file with the ISO.

III.1.9.8 [Reserved.]

III.1.10 Scheduling.

III.1.10.1 General.

(a) The ISO shall administer scheduling processes to implement a Day-Ahead Energy Market and a Real-Time Energy Market.

(b) The Day-Ahead Energy Market shall enable Market Participants to purchase and sell energy through the New England Markets at Day-Ahead Prices and enable Market Participants to submit External Transactions conditioned upon Congestion Costs not exceeding a specified level. Market Participants whose purchases and sales and External Transactions are scheduled in the Day-Ahead Energy Market shall be obligated to purchase or sell energy or pay Congestion Costs and costs for losses, at the applicable Day-Ahead Prices for the amounts scheduled.

(c) In the Real-Time Energy Market,

(i) Market Participants that deviate from the amount of energy purchases or sales scheduled in the Day-Ahead Energy Market shall be obligated to purchase or sell energy in the amount of the deviations at the applicable Real-Time Prices, unless otherwise specified by this Market Rule, and

(ii) Non-Market Participant Transmission Customers shall be obligated to pay Congestion Costs and costs for losses for the amount of the scheduled transmission uses in the Real-Time Energy Market at the applicable Real-Time Congestion Cost Component and Loss Component price differences, unless otherwise specified by this Market Rule.

(d) The following scheduling procedures and principles shall govern the commitment of Resources to the Day-Ahead Energy Market and the Real-Time Energy Market over a period extending from one week to one hour prior to the Real-Time dispatch. Scheduling encompasses the Day-Ahead and hourly scheduling process, through which the ISO determines the Day-Ahead Energy Market schedule and determines, based on changing forecasts of conditions and actions by Market Participants and system constraints, a plan to serve the hourly energy and reserve requirements of the New England Control Area in the least costly manner, subject to maintaining the reliability of the New England Control Area. If the ISO's forecast for the next seven days projects a likelihood of Emergency Condition, the ISO may commit, for all or part of such seven day period, to the use of generating Resources with notification time greater than 24 hours as necessary in order to alleviate or mitigate such Emergency, in accordance with the Market Participants' binding Supply Offers for such units, as submitted in accordance with Section 1.10.1A(f), for such periods and the specifications in the ISO New England Manuals and ISO New England Administrative Procedures and such Resources shall be treated as Pool-Scheduled Resources and shall be eligible to receive NCPC Credits under Section III.3.2.3 in accordance with the binding Supply Offers submitted.

III.1.10.1A Day-Ahead Energy Market Scheduling. The following actions shall occur not later than 12:00 noon on the day before the Operating Day for which transactions are being scheduled, or such other deadline as may be specified by the ISO in order to comply with the practical requirements and the economic and efficiency objectives of the scheduling process specified in this Market Rule.

(a) Each Market Participant may submit to the ISO specifications of the amount and location of its customer loads and/or energy purchases to be included in the Day-Ahead Energy Market for each hour of the next Operating Day, such specifications to comply with the requirements set forth in the ISO New England Manuals and ISO New England Administrative Procedures. Each Market Participant shall inform the ISO of (i) the prices, if any, at which it desires not to include its load in the Day-Ahead Energy Market rather than pay the Day-Ahead Price, (ii) hourly schedules for Resource increments, including hydropower units, Self-Scheduled by the Market Participant; and (iii) the Decrement Bid at which each such

Self-Scheduled Resource will disconnect or reduce output, or confirmation of the Market Participant's intent not to reduce output. Price-sensitive Demand Bids and Decrement Bids must be equal to or greater than zero and shall not exceed the energy Supply Offer limitation specified in this Section.

(b) [Reserved.]

(c) All Market Participants shall submit to the ISO schedules for any External Transactions involving use of generating Resources or the New England Transmission System as specified below, and shall inform the ISO whether the transaction is to be included in the Day-Ahead Energy Market. Any Market Participant that elects to include an External Transaction in the Day-Ahead Energy Market may specify the price (such price not to exceed the maximum price that may be specified in the ISO New England Manuals and ISO New England Administrative Procedures), if any, at which it will be curtailed rather than pay Congestion Costs. The foregoing price specification shall apply to the price difference between the Locational Marginal Prices for specified External Transaction source and sink points in the Day-Ahead scheduling process only. Any Market Participant that deviates from its Day-Ahead External Transaction schedule or elects not to include its External Transaction in the Day-Ahead Energy Market shall be subject to Congestion Costs in the Real-Time Energy Market in order to complete any such scheduled External Transaction. Scheduling of External Transactions shall be conducted in accordance with the specifications in the ISO New England Manuals and ISO New England Administrative Procedures and the following requirements:

(i) Market Participants shall submit schedules for all External Transaction purchases for delivery within the New England Control Area from Resources outside the New England Control Area;

(ii) Market Participants shall submit schedules for External Transaction sales to entities outside the New England Control Area from Resources within the New England Control Area;

(iii) If the sum of all submitted fixed External Transaction purchases less External Transaction sales exceeds the import capability associated with the applicable External Node, the offer prices for all fixed External Transaction purchases at the applicable External Node shall be set equal to $0.0/MWh; and

(iv) If the sum of all submitted fixed External Transaction sales less External Transaction purchases exceeds the export capability associated with the applicable External Node, the offer prices for all fixed External Transaction sales at the applicable External Node shall be set equal to $1,000/MWh.

(d) Market Participants wishing to sell into the New England Markets, from either internal Resources or External Resources, shall submit Supply Offers for the supply of energy (including energy from hydropower units), and Demand Bids for the consumption of energy, Regulation, Operating Reserve or other services as applicable, for the following Operating Day. Supply Offers shall be submitted to the ISO in the form specified by the ISO and shall contain the information specified in the ISO's Offer Data specification, as applicable. For External Resources that have not implemented dynamic scheduling with the ISO, Market Participants may only submit Offer Data and Supply Offer parameters, which allow for the External Resource to be block loaded as an External Transaction at the relevant External Node on an hour-to-hour basis. The ISO shall not consider Start-up Fees, No-Load Fees, notification times or any other inter-temporal parameters in scheduling or dispatching these resources. Market Participants owning or controlling the output of an ICAP Resource that has not been rendered unavailable by a

Generator Planned Outage, a Generator Maintenance Outage, or a Generator Forced Outage or, in the case of a Dispatchable Asset Related Demand, by a condition that renders the Resource incapable of reducing consumption, shall submit Supply Offers or Demand Bids for the available capacity of such ICAP Resource, including any portion that is Self-Scheduled by the Market Participant claiming the Resource as an ICAP Resource. The submission of Supply Offers for Resources that are not ICAP Resources shall be optional, but any such Supply Offers must contain the information specified in the ISO's Offer Data specification, as applicable. Energy offered from generating Resources that are not ICAP Resources shall not be supplied from Resources that are included in or otherwise committed to supply the operating reserve requirements of another Control Area. The foregoing Supply Offers and Demand Bids for ICAP Resources, as applicable and non ICAP Resources:

(i) Shall specify the Resource and energy for each hour in the offer period;

(ii) Shall specify the amounts and prices for the entire Operating Day for each Resource offered by the Market Participant to the ISO;

(iii) If based on energy from a specific generating unit internal to the New England Control Area, may specify Start-Up and No-Load Fees equal to the specification of such fees for such unit on file with the ISO (Market Participant changes to the Start-Up Fee and No-Load Fee can only occur during the open periodic bidding enrollment periods (twice a month));

(iv) Shall set forth any special conditions upon which the Market Participant proposes to supply a Resource increment;

(v) Shall specify a minimum run time to be used for scheduling purposes that does not exceed 24 hours for a generating Resource;

(vi) Shall constitute an offer to submit the generating Resource increment to the ISO for scheduling and dispatch in accordance with the terms of the Supply Offer, where such Supply Offer, with regard to operating limits, shall specify changes to the Economic Maximum Limit, Economic Minimum Limit and Emergency Minimum Limit from those submitted as part of the Resource's Offer Data to reflect the physical operating characteristics and/or availability of the Resource, except that, for a Self-Scheduled Resource, the Economic Minimum Limit may be revised to reflect the Self-Scheduled output level of the Resource and for a Limited Energy Resource, the Economic Maximum Limit may be revised to reflect maximum energy available for the Operating Day, which offer shall remain open through the Operating Day for which the Supply Offer is submitted;

(vii) Shall constitute an offer to submit the Dispatchable Asset Related Demand Resource increment to the ISO for scheduling and dispatch in accordance with the terms of the Demand Bid, where such Demand Bid, with regard to operating limits, shall specify changes to the Maximum Consumption Limit and Minimum Consumption Limit from those submitted as part of the Resource's Offer Data to reflect the physical operating characteristics and/or availability of the Resource, except that, for a Self-Scheduled Resource, the Minimum Consumption Limit may be revised to reflect the Self-Scheduled consumption level of the Resource;

(viii)Shall be final as to the price or prices at which the Market Participant proposes to supply or consume energy or other services to the New England Markets, such price or prices for Resources or portions of Resources scheduled in the Day-Ahead Energy Market being guaranteed by the Market Participant for the period extending through the end of the following Operating Day or, in the case of a generating Pool-Scheduled Resource continuing to run into the second Operating Day to satisfy its minimum run time, such price or prices being guaranteed by the Market Participant for the period extending into the second Operating Day that satisfies the Resource's minimum run time; and

(ix)Shall not specify an energy offer or bid price below $0/MWh or above $1,000/MWh.

(e) A Market Participant that wishes to make a Resource available to sell Regulation service shall submit a Supply Offer for Regulation that shall specify the Automatic Response Rate in megawatts per minute, the price in dollars per MWh of the Regulation capability being offered, such Regulation capability as calculated by the ISO by multiplying the submitted Automatic Response Rate by five minutes, and such other information specified by the ISO as may be necessary to evaluate the Supply Offer and the generating Resource's Regulation Opportunity Costs. The price of the Supply Offer shall not exceed $100/MWh. Qualified Regulation capability must satisfy the verification tests specified in the ISO New England Manuals and ISO New England Administrative Procedures. Regulation capability amounts will be adjusted as necessary in the case where a generating unit's compliance rating is less than 90%. The audited Regulation capability will be deemed equal to the most recently calculated compliance rating times the 5-minute

Regulation capability quantities utilized in that compliance rating calculation, rounded to the nearest whole megawatt. The Resource's Automatic Response Rate will then be adjusted based upon the audited Regulation capability.

(f) Each Market Participant owning or controlling the output of an ICAP Resource shall submit a forecast of the availability of each such ICAP Resource for the next seven days. A Market Participant (i) may submit a non-binding forecast of the price at which it expects to offer a generating Resource increment to the ISO over the next seven days, and (ii) shall submit a binding Supply Offer for energy, along with Start-Up and No-Load Fees, if any and if applicable, for the next seven days, for any ICAP Resource with a minimum notification time greater than 24 hours.

(g) Each Supply Offer or Demand Bid by a Market Participant of a Resource shall remain in effect for subsequent Operating Days until superseded or canceled except in the case of an External Resource and an External Transaction purchase, in which case, the Supply Offer shall remain in effect for the applicable Operating Day and shall not remain in effect for subsequent Operating Days.

(h) The ISO shall post on the internet the total hourly loads including Decrement Bids scheduled in the Day-Ahead Energy Market, as well as the ISO's estimate of the Control Area hourly load for the next Operating Day.

(i) All Market Participants may submit Increment Offers and/or Decrement Bids that apply to the Day-Ahead Energy Market only. Such offers and bids must comply with the requirements set forth in the ISO New England Manuals and ISO New England Administrative Procedures and must specify amount, location and price, if any, at which the

Market Participant desires to purchase or sell energy in the Day-Ahead Energy Market.

III.1.10.2 Pool-Scheduled Resources. Pool-Scheduled Resources are those Resources for which Market Participants submitted Supply Offers to sell energy in the Day-Ahead Energy Market and which the ISO scheduled in the Day-Ahead Energy Market as well as generators committed by the ISO subsequent to the Day-Ahead Energy Market. Such Resources shall be committed to provide energy in the Real-Time dispatch unless the schedules for such units are revised pursuant to Sections III.1.10.9 or III.1.11. Pool-Scheduled Resources shall be governed by the following principles and procedures.

(a) Pool-Scheduled Resources shall be selected by the ISO on the basis of the prices offered for energy and related services, Start-Up Fees, No-Load Fees, and the specified operating characteristics, offered by Market Participants to the ISO by the offer deadline specified in Section III.1.10.1A.

(b) The ISO shall optimize the dispatch of energy from Limited Energy Resources by request to minimize the as-bid production cost for the New England Control Area. In implementing the use of Limited Energy Resources, the ISO shall use its best efforts to select the most economic hours of operation for Limited Energy Resources, in order to make optimal use of such Resources in the Day-Ahead Energy Market consistent with the Supply Offers of other Resources, the submitted Demand Bids and Decrement

Bids and Operating Reserve and Replacement Reserve requirements.

(c) Market Participants offering energy from hydropower or other facilities with fuel or environmental limitations may submit data to the ISO that is sufficient to enable the ISO to determine the available operating hours of such facilities.

(d) The Market Participant seller whose Resource is selected as a Pool-Scheduled Resource shall receive payments or credits for energy or related services, or for Start-Up and No-Load Fees, from the ISO on behalf of the Market Participant buyers in accordance with Section III.3 of this Market Rule. Additionally, the Market Participant seller shall receive for Pool-Scheduled Resources scheduled in the Real-Time Energy Market that were not Scheduled in the Day-Ahead Energy Market, a pro-rata share of its applicable Start-Up Fee if the ISO cancels its selection of the Resource as a Pool-Scheduled Resource and so notifies the Market Participant seller before the Resource is synchronized ("Cancellation Fee").

(e) Market Participants shall make available their Pool-Scheduled Resources to the ISO for coordinated operation to supply the needs of the New England Control Area for energy and ancillary services.

(f) Eligibility for NCPC in the Day-Ahead Market under Section III.3.2.3 is affected by Resource Self-Schedules. The specific rules related to the impact of Resource Self-Schedules on eligibility for NCPC may be found in ***Appendix F*** of this Market Rule.

(g) Eligibility for NCPC in the Real-Time Market under Section III.3.2.3 is affected by Resource Self-Schedules. The specific rules related to the impact of Resource Self-Schedules on eligibility for NCPC may be found in ***Appendix F*** of this Market Rule.

(h) Eligibility for NCPC in the Real-Time Market under Section III.3.2.3 may be affected by Resource trips. The specific rules related to the impact of Resource trips on eligibility for NCPC may be found in ***Appendix F*** of this Market Rule.

(i) Eligibility for NCPC in the Real-Time Energy Market under Section III.3.2.3 is affected by ramping up in response to a start-up instruction and ramping down in response to a shutdown instruction. The specific rules related to the ramping impacts on eligibility for NCPC may be found in ***Appendix F*** of this Market Rule.

III.1.10.3 Self-Scheduled Resources. Self-Scheduled Resources shall be governed by the following principles and procedures.

(a) [Reserved.]

(b) The offered prices of Resources or portions of Resource that are Self-Scheduled, or otherwise not following the dispatch orders of the ISO, shall not be considered by the ISO in determining Locational Marginal Prices.

(c) Market Participants shall make available their Self-Scheduled ICAP Resources, including increments available above Self-Scheduled increments, to the ISO for coordinated operation to supply the needs of the New England Control Area for energy and ancillary services.

Market Participants shall submit Supply Offers for non-ICAP Resources for the entire capability range of the Resource in excess of the portion of the Resource exported as non-recallable energy or otherwise Self-Scheduled in the Real-Time Energy Market.

(d) A Market Participant Self-Scheduling a Resource in the Day-Ahead Energy Market that does not deliver the energy in the Real-Time Energy Market, shall replace the energy not delivered with energy from the Real-Time Energy Market or an internal bilateral transaction and shall pay for such energy not delivered, net of any internal bilateral transactions, at the applicable Real-Time Price.

III.1.10.4 ICAP Resources.

(a) An ICAP Resource selected as a Pool-Scheduled Resource shall be made available for scheduling and dispatch at the direction of the ISO. Any generating Resource that does not deliver energy as scheduled shall be deemed to have experienced a Generator Forced Outage to the extent such energy is not delivered except that a reduction in output or removal from service of a generating unit in response to changes in market conditions that is approved by the ISO shall not constitute a Generator Forced Outage. A Market Participant offering such a generating Resource in the Day-Ahead Energy Market shall replace the energy not delivered with energy from the Real-Time Energy Market or an internal bilateral transaction and shall pay for such energy not delivered, net of any internal bilateral transactions, at the applicable Real-Time Price.

(b) Energy from an ICAP Resource that has not been scheduled in the Day-Ahead Energy Market may be sold on a bilateral basis by the Market Participant, may be Self-Scheduled, or may be offered for dispatch during the Operating Day in accordance with the procedures specified in this Market Rule. An ICAP Resource that has not been scheduled in the Day-Ahead Energy Market and that has been scheduled as an External Transaction sale must be made available upon request to the ISO for scheduling and dispatch during the Operating Day if the ISO declares an Emergency Condition. Any such Resource so scheduled and dispatched shall receive the applicable Real-Time Price for energy delivered.

III.1.10.5 External Resources.

(a) Market Participants with External Resources that have dynamic scheduling and dispatch capability with the ISO may submit Supply Offers to the New England Markets, in accordance with the Day-Ahead and Real-Time scheduling processes specified above. An External Resource with dynamic scheduling and dispatch capability with the ISO selected as a Pool-Scheduled Resource shall be made available for scheduling and dispatch at the direction of the ISO and shall be compensated on the same basis as other Pool-Scheduled Resources. Resources external to the New England Control Area that are not capable of dynamic scheduling and dispatch shall, if selected by the ISO on the basis of the Market Participant's Supply Offer, be block loaded on an hourly scheduled basis and shall be compensated on the same basis as External Transactions. Market Participants shall offer External Resources to the New England Markets on a Resource-specific basis. A Market Participant whose External Resource does not deliver the energy scheduled in the Day-Ahead Energy Market shall replace such energy not delivered as scheduled in the Day-Ahead Energy Market with energy from the Real-Time Energy Market or an internal bilateral transaction and shall pay for such energy not delivered, net of any internal bilateral transactions, at the applicable Real-Time Price.

(b) Supply Offers for External Resources with dynamic scheduling and dispatch capability with the ISO shall specify the Resource being offered, along with the information specified in the Offer Data as applicable.

III.1.10.6 [Reserved.]

III.1.10.7 External Transactions.

(a) External Transactions scheduled in the Real-Time Energy Market shall continue to be implemented during periods of congestion, except as may be necessary to respond to emergencies.

(b) All Real-Time External Transactions shall be scheduled and curtailed in accordance with the ISO New England Manuals and all applicable tariffs.

III.1.10.8 ISO Responsibilities.

(a) The ISO shall use its best efforts to determine (i) the least-cost means of satisfying hourly purchase requests for energy, the projected hourly requirements for Operating Reserve, Replacement Reserve and other ancillary services of the Market Participants, including the reliability requirements of the New England Control Area, of the Day-Ahead Energy Market, and (ii) the least-cost means of satisfying the Operating Reserve, Replacement Reserve and other ancillary service requirements for any portion of the load forecast of the ISO for the Operating Day in excess of that scheduled in the Day-Ahead Energy Market. In making these determinations, the ISO shall take into account: (i) the ISO's forecasts of New England Markets and New England Control Area energy requirements, giving due consideration to the energy requirement forecasts and purchase requests submitted by Market Participants for the Day-Ahead Energy Market; (ii) the offers and bids submitted by Market Participants; (iii) the availability of Limited Energy Resources; (iv) the capacity, location, and other relevant characteristics of Self-Scheduled Resources; (v) the requirements of the New England Control Area for Operating Reserve and Replacement Reserve, as specified in the ISO New England Manuals and ISO New England Administrative Procedures; (vi) the requirements of the New England Control Area for Regulation and other ancillary services, as specified in the ISO New England Manuals and ISO New England Administrative Procedures; (vii) the benefits of avoiding or minimizing transmission constraint control operations, as specified in the ISO New England Manuals and ISO New

England Administrative Procedures; and (viii) such other factors as the ISO reasonably concludes are relevant to the foregoing determination. The ISO shall develop a Day-Ahead Energy schedule based on the applicable portions of the foregoing determination, and shall determine the Day-Ahead Prices resulting from such schedule.

(b) Not later than 4:00 p.m. of the day before each Operating Day, or such earlier deadline as may be specified by the ISO in the ISO New England Manuals and ISO New England Administrative Procedures or such later deadline as necessary to account for software failures or other events, the ISO shall: (i) post the aggregate Day-Ahead Energy schedule; (ii) post the Day-Ahead Prices; and (iii) inform the Market Participants of their scheduled injections and withdrawals. In the event of an Emergency, the ISO will notify Market Participants as soon as practicable if the Day-Ahead Energy Market can not be operated.

(c) Following posting of the information specified in Section III.1.10.8(b), the ISO shall revise its schedule of Resources to reflect updated projections of load, conditions affecting electric system operations in the New England Control Area, the availability of and constraints on limited energy and other Resources, transmission constraints, and other relevant factors.

(d) Market Participants shall pay and be paid for the quantities of energy scheduled in the Day-Ahead Energy Market at the Day-Ahead Prices.

III.1.10.9 Hourly Scheduling.

(a) Following the initial posting by the ISO of the Locational Marginal Prices resulting from the Day-Ahead Energy Market, and subject to the right of the ISO to schedule and dispatch Pool-Scheduled Resources and to direct that schedules be changed in an Emergency, a Resource re-offer period shall exist from 4:00 p.m. to 6:00 p.m. on the day before each Operating Day or such other re-offer period as necessary to account for software failures or other events. During the re-offer period, Market Participants may submit revisions to generation Supply Offers and revisions to Demand Bids for any Dispatchable Asset Related Demand Resource. Resources scheduled subsequent to the closing of the re-offer period shall be settled at the applicable Real-Time Prices, and shall not affect the obligation to pay or receive payment for the quantities of energy scheduled in the Day-Ahead Energy Market at the applicable Day-Ahead Prices.

(b) A Market Participant may adjust the schedule of a Resource under its dispatch control on an hour-to-hour basis beginning at 10:00 p.m. of the day before each Operating Day, provided that the ISO is notified not later than 60 minutes prior to the hour in which the adjustment is to take effect (or such shorter period, up to 20 minutes prior to the hour, when the ISO has notified the Market Participants that it has the necessary hardware, software, and procedures in place to implement the shorter notice period), as follows:

(i) A Market Participant may Self-Schedule any of its Resources consistent with the ISO New England Manuals and ISO New England Administrative Procedures;

(ii) A Market Participant may request the scheduling of an External Transaction; or

(iii) [Reserved]; or

(iv) A Market Participant may remove from service a Resource increment, that it had previously designated as Self-Scheduled, provided that the ISO shall have the option to schedule energy from any such Self-Scheduled Resource increment that is an ICAP Resource at the price offered in the scheduling process, with no obligation to pay any Start-Up Fee.

(c) **[Reserved.]**

(d) **[Reserved.]**

(e) For each hour in the Operating Day, as soon as practicable after the deadlines specified in the foregoing subsection of this Section III.1.10, the ISO shall provide Market Participants and parties to External Transactions with any revisions to their schedules for the hour.

III.1.11 Dispatch. The following procedures and principles shall govern the dispatch of the Resources available to the ISO.

III.1.11.1 Resource Output. The ISO shall have the authority to direct any Market Participant to adjust the output of any Pool-Scheduled

Resource increment within the operating characteristics specified in the Market Participant's Offer Data, Supply Offer or Demand Bid. The ISO may cancel its selection of, or otherwise release, Pool-Scheduled Resources, subject to an obligation to pay any applicable Start-Up, No-Load or Cancellation Fees. The ISO shall adjust the output of Pool-Scheduled Resource increments as necessary: (a) to maintain reliability, and subject to that constraint, to minimize the cost of supplying the energy, reserves, and other services required by the Market Participants and the operation of the New England Control Area; (b) to balance load and generation, maintain scheduled tie flows, and provide frequency support within the New England Control Area; and (c) to minimize unscheduled interchange that is not frequency related between the New England Control Area and other Control Areas.

III.1.11.2 Operating Basis. In carrying out the foregoing objectives, the ISO shall conduct the operation of the New England Control Area and shall, in accordance with the ISO New England Manuals and ISO New England Administrative Procedures, (i) utilize available Operating Reserve and replace such Operating Reserve when utilized; and (ii) monitor the availability of adequate Operating Reserve.

III.1.11.3 Pool-dispatched Resources.

(a) The ISO shall optimize the dispatch of energy from Limited Energy Resources by request to minimize the as-bid production cost for the New England Control Area. In implementing the use of Limited Energy Resources, the ISO shall use its best efforts to select the most economic hours of operation for Limited Energy Resources, in order to make optimal use of such Resources consistent with the dynamic load-following requirements of the New England

Control Area and the availability of other Resources to the ISO.

(b) The ISO shall implement the dispatch of energy from other Pool-Scheduled Resource increments and the designation of Real-Time Operating Reserve to Pool-Scheduled Resource increments, including generation increments from ICAP Resources the remaining increments of which are Self-Scheduled, by sending appropriate signals and instructions to the entity controlling such Resources, in accordance with the ISO New England Manuals and ISO New England Administrative Procedures. Each Market Participant shall ensure that the entity controlling a Pool-Scheduled Resource offered or made available by that Market Participant complies with the energy dispatch signals and instructions transmitted by the ISO.

(c) The ISO shall have the authority to modify a Market Participant's operational related Offer Data if the ISO observes that the Market Participant's Resource is not operating in accordance with such Offer Data. The ISO shall modify such operational related Offer Data based on observed performance and such modified Offer Data shall remain in effect until either (i) the affected Market Participant requests a test to be performed, and coordinates the testing pursuant to the procedures specified in the ISO New England Manuals, and the results of the test justify a change to the Market Participant's Offer Data or (ii) the ISO observes, through actual performance, that modification to the Market Participant's Offer Data is justified. During each hour of any tests performed under Section III.1.11.3(c),(i), the Resources under test shall be considered Self-Scheduled Resources for the purposes of calculating NCPC Credits. Procedures related to the ISO's modification of operational related Offer Data and Market Participant requests for testing shall be as defined in the ISO New England Manuals.

(d) Market Participants shall exert all reasonable efforts to operate, or ensure the operation of, their Resources in the New England Control Area as close to desired output levels as practical, consistent with Accepted Electric Industry Practice.

III.1.11.4 Emergency Condition. If the ISO anticipates or declares an Emergency Condition, all sales out of the New England Control Area from ICAP Resources may be interrupted, in accordance with the ISO New England Manuals, in order to serve load and Operating Reserve in the New England Control Area.

III.1.11.5 Regulation.

(a) A Market Participant may satisfy its Regulation obligation from its own Resources capable of performing Regulation service, by contractual arrangements with other Market Participants, or by purchases from the New England Markets at the rates set forth in Section III.3.2.2.

(b) The ISO shall obtain Regulation service from the least-cost alternatives available from either Pool-Scheduled or Self-Scheduled Resources as needed to meet New England Control Area requirements not otherwise satisfied by the Market Participants. The ISO assigns Regulation to eligible generating units using the ISO Regulation assessment software. The Regulation assessment software calculates, at five minutes after the hour and on demand as needed, the optimal set of generating units required to meet the Regulation Requirement. The software first calculates a Regulation Rank Price, based on estimates of Time-on-

Regulation Credits, Regulation Service Credits, estimated Regulation Opportunity Costs, Regulation Capability and other factors, as specified below, that consider the impact of Regulation assignment on the Real-Time Energy Market. An interim Regulation Clearing Price is then calculated and the Regulation Rank Prices are updated using this interim Regulation Clearing Price to recognize that actual payments for Regulation are based upon the Regulation Clearing Price and not the Regulation offer price. The software continues to iterate in this manner until convergence is reached, resulting in an optimal selection of generating units for Regulation assignment. The ISO utilizes the output from this software when evaluating the set of generating units for Regulation assignment. In the event that one or more generating units to be selected have equal Regulation Rank Prices, the ISO shall select the generating unit for Regulation assignment with the largest Regulation Capability. Details of the process and calculations are described below.

(1) At the start of each operating hour, the ISO calculates an initial Regulation Rank Price for each eligible unit offering to provide Regulation using the ISO's Regulation assignment software. The initial Regulation Rank Price for each unit is equal to the sum of the following calculations divided by that unit's Regulation Capability:

(a) Time-on-Regulation Credit estimate calculated as the product of the Regulation Capability times the Regulation offer price;

(b) Regulation Service Credit estimate is set equal to the Time-on-Regulation Credit estimate to meet the 50/50 revenue mix objective as determined by the ISO in accordance with procedures specified in the ISO New England Manuals and ISO New England Administrative Procedures;

(c) Regulation Opportunity Cost estimate calculated as the product of the opportunity cost MW times the opportunity cost price differential where:

(i) Opportunity cost MW is calculated as the absolute value of the difference between the highest output level corresponding to the most recent Real-Time nodal LMP of the unit when constrained by Economic Max and Economic Min, and EstRegGen.

(ii) EstRegGen is the highest output level corresponding to the most recent Real-Time nodal LMP of the unit when constrained by RSETHI and RSETLO. RSETHI is equal to the Regulation High Limit – Regulation Capability. RSETLO is equal to the Regulation Low Limit + Regulation Capability.

(iii) To more accurately estimate the actual Regulation Opportunity Cost that will be paid, EstRegGen is further constrained as follows to account for units with large regulating ranges and slow response rates: if actual generation is less than EstRegGen and EstRegGen is greater than RSETLO, then

EstRegGen is constrained up by the greater of (actual output + (SlowWideTime * Automatic Response Rate)) and RSETLO; if actual generation is greater than EstRegGen and EstRegGen is less than RSETHI, then EstRegGen is constrained down by the lesser of (actual output – (SlowWideTime * Automatic Response Rate)) and RSETHI. The SlowWideTime is determined by the ISO based upon empirical studies. The initial SlowWideTime value, and subsequent updates, shall be posted on the ISO's website.

(iv) Opportunity cost price differential is calculated as the absolute value of the difference between the average offer price of the opportunity MW and the Real-Time nodal LMP of the unit.

(d) Change in system production cost estimate is calculated similar to the Regulation Opportunity Cost estimate, except that rate-constrained versions of Economic Max and Economic Min are used to reflect achievable average hourly output levels with respect to the current actual generation.

(e) Lookahead penalty estimate. The lookahead calculation assigns a cost penalty to units in the selection process if there is a change in energy offer prices near EstRegGen. It is calculated as the greater of:

(i) the unit's energy offer price at a higher output level (LookupRegGen as defined below) minus its energy offer price at EstRegGen, multiplied by (LookupRegGen – EstRegGen);

and

(ii) the unit's energy offer price at EstRegGen minus its energy offer price at a lower output level (LookdownRegGen as defined below), multiplied by (EstRegGen - LookdownRegGen),

where,

LookupRegGen = (EstRegGen + (LookAheadMinutesUp * Automatic Response Rate)) as bounded by Regulation High Limit; and

LookdownRegGen = (EstRegGen – (LookAheadMinutesDown * Automatic Response Rate) as bounded by Regulation Low Limit),

And where the initial values of LookAheadMinutesUp and LookAheadMinutesDown, and subsequent updates, will be posted on the ISO's website.

(f) A tiebreaker adder is calculated for both pool-scheduled and Self-Scheduled Regulation units. The tiebreaker adder is equal to a tiebreaker multiplier (.000001) times the difference between a tiebreaker megawatt reference value (500 MW) and the Regulation Capability of the unit.

For Self-Scheduled Regulation, all values calculated under this Section III.1.11.5(b)(1) are set equal to zero except for the tiebreaker adder.

(2) The ISO's Regulation assignment software creates an initial merit order stack of eligible Regulation Capability by sorting the generating units by the initial Regulation Rank Prices calculated under Section III.1.11.5(b)(1) in ascending order. Generating units are then selected in rank order until the Regulation Requirement is met. An initial Regulation Clearing Price is then calculated based upon the highest Regulation offer price associated with the initial set of generating units selected to meet the Regulation Requirement. Updated Regulation Rank Prices are then recalculated for generating units with Regulation offer prices that are less than the initial Regulation Clearing Price by substituting the initial Regulation Clearing Price for the generating unit's Regulation offer price, recalculating the Time-On-Regulation Credit and the Regulation Service Credit estimates; adding the

originally calculated values under Sections III.1.11.5(b)(1)(c), (d), (e), and (f) to these recalculated values and dividing this total by the unit's Regulation Capability. These updated Regulation Rank Prices are utilized along with the initial Regulation offer prices that are greater than or equal to the initial Regulation Clearing Price to create an updated generating unit list sorted by ascending Regulation Rank Prices. An updated Regulation Clearing Price is then calculated and the software continues to iterate in this manner until convergence is reached producing an optimal generating unit rank order list for use in assigning Regulation.

(3) Shortly after the start of an hour and during the hour as needed, the ISO updates the generating unit rank order list using the ISO's Regulation assignment software based on any changes to Regulation Capability eligibility and other current information, including any changes to Self-Schedule Regulation. The ISO uses this updated Regulation rank order list to assign Regulation for the upcoming hour and to make changes to Regulation assignments within the hour.

(c) The ISO shall dispatch Resources for Regulation by sending Regulation signals and instructions to Resources from which Market Participants, in accordance with the ISO New England Manuals and ISO New England Administrative Procedures, have offered Regulation service. Market Participants shall comply with Regulation dispatch signals and instructions transmitted by the ISO and, in the event of conflict, Regulation dispatch signals and instructions shall take precedence over energy dispatch signals and instructions. Market Participants shall exert all reasonable efforts to operate, or ensure the operation of, their Resources supplying load in the New England Control Area as close to desired output levels as practical, consistent with Accepted Electric Industry Practice.

III.1.11.6 [Reserved]

III.1.12 Dynamic Scheduling. Dynamic Scheduling can be requested and may be implemented in accordance with the following procedures:

(a) An entity that owns or controls a generating Resource in the New England Control Area may electrically remove all or part of the generating Resource's output from the New England Control Area through dynamic scheduling of the output to load outside the New England Control Area. Such output shall not be available for economic dispatch by the ISO.

(b) An entity that owns or controls a generating Resource outside of the New England Control Area may electrically include all or part of the generating Resource's output into the New England Control Area through dynamic scheduling of the output to load inside the New England Control Area. Such output shall be available for economic dispatch by the ISO.

(c) An entity requesting dynamic scheduling shall be responsible for arranging for the provision of signal processing and communication from the generating unit and other participating Control Area and complying with any other procedures established by the ISO regarding dynamic scheduling as set forth in the ISO New England Manuals. Allocation of costs associated with dynamic scheduling shall be determined and filed with the Commission following the first request.

(d) An entity requesting dynamic scheduling shall be responsible for reserving amounts of appropriate transmission service necessary to deliver the range of the dynamic transfer and any ancillary services.

III.2 Calculation Of Locational Marginal Prices and Real-Time Reserve Clearing Prices

III.2.1 Introduction. The ISO shall calculate the price of energy at Nodes, Load Zones and Hubs in the New England Control Area and at External Nodes on the basis of Locational Marginal Prices and shall calculate the price of Operating Reserve in Real-Time for each Reserve Zone on the basis of Real-Time Reserve Clearing Prices as determined in accordance with this Market Rule. Locational Marginal Prices for energy shall be calculated on a Day-Ahead basis for each hour of the Day-Ahead Energy Market, and every five minutes during the Operating Day for the Real-Time Energy Market. Real-Time Reserve Clearing Prices shall be calculated on a Real-Time basis every five minutes as part of the joint optimization of energy and Operating Reserve during the Operating Day.

III.2.2 General. The ISO shall determine the least cost security-constrained unit commitment and dispatch, which is the least costly means of serving load at different Locations in the New England Control Area based on scheduled or actual conditions, as applicable, existing on the power grid and on the prices at which Market Participants have offered to supply and consume energy in the New England Markets. Day-Ahead Locational Marginal Prices for energy for the applicable Locations will be calculated based on the unit commitment and economic dispatch and the prices of energy offers and bids. Real-Time Locational Marginal Prices for energy and Real-Time Reserve Clearing Prices will be calculated based on a jointly optimized economic dispatch of energy and designation of Operating Reserve utilizing the prices of energy offers and bids, and Reserve Constraint Penalty Factors when applicable.

Except as further provided in Section III.2.6, the process for the determination of Locational Marginal Prices shall be as follows:

(a) To determine operating conditions, in the Day Ahead Energy Market or Real-Time Energy Market, on the New England Transmission System, the ISO shall use a computer model of the interconnected grid that uses scheduled quantities or available metered inputs regarding generator output, loads, and power flows to model remaining flows and conditions, producing a consistent representation of power flows on the network. The computer model employed for this purpose in the Real-Time Energy Market, referred to as the State Estimator program, is a standard industry tool and is described in Section III.2.3. It will be used to obtain information regarding the output of generation supplying energy and Operating Reserve to the

New England Control Area, loads at busses in the New England Control Area, transmission losses, penalty factors, and power flows on binding transmission and interface constraints for use in the calculation of Day-Ahead and Real-Time Locational Marginal Prices and Real-Time Reserve Clearing Prices. Additional information used in the calculation of Real-Time Locational Marginal Prices and Real-Time Reserve Clearing Prices, including Dispatch Rates, Real-Time Operating Reserve designations and Real-Time schedules for External Transactions, will be obtained from the ISO's dispatch software and dispatchers.

(b) Using the prices at which Market Participants offer and bid energy to the New England Markets, the ISO shall determine the offers and bids of energy that will be considered in the calculation of Day-Ahead Prices, Real-Time Prices and Real-Time Reserve Clearing Prices. As described in Section III.2.4, every offer of energy by a Market Participant from a generating Resource, an External Transaction purchase Resource and a Dispatchable Asset Related Demand Resource that is following economic dispatch instructions of the ISO will be utilized in the calculation of Real-Time Locational Marginal Prices and Real-Time Reserve Clearing Prices. As described in Section III.2.6, every offer and bid by a Market Participant that is scheduled in the Day-Ahead Energy Market will be utilized in the calculation of Day-Ahead Locational Marginal Prices.

III.2.3 Determination of System Conditions Using the State Estimator. Power system operations, including, but not limited to, the determination of the least costly means of serving load and system and locational Real-Time Operating Reserve requirements, depend upon the availability of a complete and consistent representation of generator outputs, loads, and power flows on the network. In calculating Day-Ahead Prices, the ISO shall base the system conditions on the expected transmission system configuration and the set of offers and bids submitted by Market Participants. In calculating Real-Time Locational Marginal Prices and Real-Time Reserve Clearing Prices, the ISO shall obtain a complete and consistent description of conditions on the electric network in the New England Control Area by using the most recent power flow solution produced by the State Estimator, which is also used by the ISO for other functions within power system operations. The State Estimator is a standard industry tool that produces a power flow model based on available Real-Time metering information, information regarding the current status of lines, generators, transformers, and other equipment, bus load distribution factors, and a representation of the electric network, to provide a complete description of system conditions, including conditions at Nodes and External Nodes for which Real-Time information is unavailable. In calculating Real-Time Locational Marginal Prices and Real-Time Reserve Clearing Prices, the ISO shall obtain a State Estimator solution every five minutes, which shall provide the megawatt output of generators and the loads at Locations in the New England Control Area, transmission line losses, penalty factors, and actual flows or loadings on constrained transmission facilities. External Transactions between the New England Control Area and other Control Areas shall be included in the Real-Time Locational Marginal Price calculation on the basis of the Real-Time transaction schedules implemented by the ISO's dispatcher.

III.2.4 Determination of Energy Offers Used in Calculating Real-Time Prices and Real-Time Reserve Clearing Prices.

(a) During the Operating Day, Real-Time nodal Locational Marginal Prices and Real-Time Reserve Clearing Prices derived in accordance with this Section shall be determined every five minutes and integrated hourly values of such determinations shall be the basis of the settlement of sales and purchases of energy in the Real-Time Energy Market, the settlement associated with the provision of Operating Reserve in Real-Time and the settlement of Congestion Costs and costs for losses under the Transmission, Markets and Services Tariff not covered by the Day-Ahead Energy Market.

(b) To determine the energy offers submitted to the New England Markets that shall be used during the Operating Day to calculate the Real-Time nodal Locational Marginal Prices and Real-Time Reserve Clearing Prices, the ISO shall determine which generating Resources, External Transaction purchases and Dispatchable Asset Related Demand Resources are following its economic dispatch instructions. A generating Resource, External

Transaction purchase or Dispatchable Asset Related Demand Resource will be considered to be following economic dispatch instructions and shall be included in the calculation of Real-Time Prices if:

(i) the applicable Supply Offer price submitted by a Market Participant for energy from the generating Resource or External Transaction purchase is less than or equal to the Dispatch Rate associated with that generating Resource or External Transaction purchase; and

(ii) the applicable Demand Bid price submitted by a Market Participant for energy from the Dispatchable Asset Related Demand Resource is greater than or equal to the Dispatch Rate associated with that Dispatchable Asset Related Demand Resource; and

(iii) the generating Resource, other than a Fast Start Generator, is operating above its Economic Minimum Limit; or

(iv) the Fast Start Generator is operating at or above its Economic Minimum Limit and the applicable Supply Offer price submitted by a Market Participant for energy from the Fast Start Generator is less than or equal to the Dispatch Rate associated with that Fast Start Generator; or

(v) the generating Resource, External Transaction purchase or Dispatchable Asset Related Demand Resource is specifically requested to operate or reduce consumption by the ISO's dispatcher and the associated energy offers or bids submitted are otherwise eligible to be included in the calculation of Real-Time Location Marginal Prices.

(c) In determining whether a generating Resource or External Transaction purchase satisfies the condition described in III.2.4(b), the ISO will determine the Supply Offer price associated with an energy offer by comparing the actual megawatt output of the generating unit or External Transaction purchase with the Market Participant's Supply Offer price curve for that generating unit or External Transaction purchase. Because of practical generator response limitations, a generating unit whose megawatt output is not more than ten percent above the megawatt level specified in the Supply Offer price curve for the applicable Dispatch Rate shall be deemed to be following economic dispatch instructions, but the energy price offer used in the calculation of Real-Time Prices shall not exceed the applicable Dispatch Rate.

(d) In determining whether a Dispatchable Asset Related Demand Resource satisfies the condition described in III.2.4(b), the ISO will determine the Demand Bid price associated with a Demand Bid by comparing the actual megawatt consumption of the Dispatchable Asset Related Demand Resource with the Market Participant's Demand Bid price curve for that Dispatchable Asset Related Demand Resource. Because of practical Dispatchable Asset Related Demand Resource response limitations, a Dispatchable Asset Related Demand Resource whose megawatt consumption is greater than or equal to ninety percent of the megawatt level specified in the Demand Bid price curve for the applicable Dispatch Rate shall be deemed to be following economic dispatch instructions, but the energy demand bid price used in the calculation of Real-Time Prices shall not be lower than the applicable Dispatch Rate.

III.2.5 Calculation of Real-Time Nodal Prices.

(a) The ISO shall determine the least costly means of obtaining energy to serve the next increment of load at each Node internal to the New England Control Area represented in the State Estimator and each External Node Location between the New England Control Area and an adjacent Control Area, based on the system conditions described by the most recent power flow solution produced by the State Estimator program and the energy offers that are determined to be eligible for consideration under Section III.2.4 in connection with the Real-Time dispatch. This calculation shall be made by applying an incremental linear optimization method to minimize energy, Operating Reserve, congestion and transmission loss costs, given actual system conditions, a set of energy offers and bids, and any binding transmission and Operating Reserve constraints that may exist. In performing this calculation, the ISO shall calculate the cost of serving an increment of load at each Node and External Node from all available generating Resources, External Transaction purchases and Dispatchable Asset Related Demand Resources with an eligible energy offer as the sum of: (1) the price at which the Market Participant has offered to supply an additional increment of energy from the Resource; (2) the effect on Congestion Costs (whether positive or negative) associated with increasing the output of the Resource or reducing consumption of the Resource

, based on the effect of increased generation from that Resource or reduced consumption from that Resource on transmission line loadings; and (3) the effect on Congestion Costs (whether positive or negative) associated with increasing the Operating Reserve requirement, based on the effect of Resource re-dispatch on transmission line loadings; (4) the effect on Congestion Costs (whether positive or negative) associated with a deficiency in Operating Reserve, based on the effect of the Reserve Constraint Penalty Factors described under Section III.2.8; and (5) the effect on transmission losses caused by the increment of load and generation. The energy offer or offers and energy bid or bids that can jointly serve an increment of load and an increment of Operating Reserve requirement at a Location at the lowest cost, calculated in this manner, shall determine the Real-Time Price at that Node or External Node.

(b) During the Operating Day, the calculation set forth in this Section III.2.5 shall be performed every five minutes, using the ISO's Locational Marginal Price program, producing a set of nodal Real-Time Prices based on system conditions during the preceding interval. The prices produced at five-minute intervals during an hour will be integrated to determine the nodal Real-Time Prices for that hour.

(c) For any interval during any hour in the Operating Day that the ISO has declared a Minimum Generation Emergency, the affected nodal Real-Time Prices calculated under this Section III.2.5. shall be set equal to zero for all Nodes within the New England Control Area and all External Nodes if the Minimum Generation Emergency was declared on a New England Control Area wide basis or shall be set equal to zero for all Nodes and External Nodes within a sub-region if the Minimum Generation Emergency was declared within the sub-region.

Reserved for future use.

Reserved for future use.

III.2.6 Calculation of Day-Ahead Nodal Prices.

(a) For the Day-Ahead Energy Market, Day-Ahead Prices shall be determined on the basis of the least-cost, security-constrained unit commitment and dispatch, model flows and system conditions resulting from the load specifications submitted by Market Participants, Supply Offers and Demand Bids for Resources, Increment Offers, Decrement Bids, and External Transactions submitted to the ISO and scheduled in the Day-Ahead Energy Market.

Such prices shall be determined in accordance with the provisions of this Section applicable to the Day-Ahead Energy Market and shall be the basis for the settlement of purchases and sales of energy, costs for losses and Congestion Costs resulting from the Day-Ahead Energy Market. This calculation shall be made for each hour in the Day-Ahead Energy Market by applying a linear optimization method to minimize energy, congestion and transmission loss costs, given scheduled system conditions, scheduled transmission outages, and any transmission limitations that may exist. In performing this calculation, the ISO shall calculate the cost of serving an increment of load at each Node and External Node from each Resource associated with an eligible energy offer or bid as the sum of: (1) the price at which the Market Participant has offered to supply an additional increment of energy from the Resource or reduce consumption from the Resource; (2) the effect on transmission Congestion Costs (whether positive or negative) associated with increasing the output of the Resource or reducing consumption of the Resource, based on the effect of increased generation from that Resource or reduced consumption from a Resource on transmission line loadings; and (3) the effect on transmission losses caused by the increment of load and generation. The energy offer or offers and energy bid or bids that can serve an increment of load at a Node or

External Node at the lowest cost, calculated in this manner, shall determine the Day-Ahead Price at that Node.

(b) Energy deficient conditions. If the sum of Day-Ahead fixed Demand Bids and fixed External Transaction sales cannot be satisfied with the sum of all scheduled External Transaction purchases, cleared Increment Offers, and available generation at its Economic Maximum Limit, the technical software issues an Emergency Condition warning message due to a shortage of economic supply in the Day-Ahead Energy Market. The following steps shall then be performed to achieve power balance:

(i) All fixed External Transaction sales are considered to be dispatchable at $1,000/MWh;

(ii) Reduce any remaining price-sensitive Demand Bids (including External Transaction sales) and Decrement Bids from lowest price to highest price to zero MW until power balance is achieved (there may be some price sensitive bids that are higher priced than the highest Supply Offer or Increment Offer price cleared). Set LMP values equal to the highest price-sensitive Demand Bid or Decrement Bid that was cut in this step. If no price-sensitive Demand Bid or Decrement Bid was reduced in this step, the LMP values are set equal to highest offer price of all on-line generation, Increment Offers or External Transaction purchases; and

(iii) If power balance is not achieved after step (ii), reduce all remaining fixed Demand Bids proportionately (by ratio of load MW) until balance is achieved. Set LMP values equal to the highest offer price of all on-line generation, Increment Offers or External Transaction purchases or the price from step (ii), whichever is higher.

(c) Excess energy conditions. If the sum of Day-Ahead cleared Demand Bids, Decrement Bids and External Transaction sales is less than the total system wide generation MW (including Fixed External Transaction purchases) with all possible generation off and with all remaining generation at their Economic Minimum Limit, the technical software issues a Minimum Generation Emergency warning message due to an excess of economic generation in the Day-Ahead Energy Market. The following steps shall then be performed to achieve power balance:

(i) All fixed External Transaction purchases are considered to be dispatchable at $0/MWh and reduced pro-rata, as applicable, until power balance is reached;

(ii) If power balance is not reached in step (i), reduce all committed generation down proportionately by ratio of Economic Minimum Limits but not below Emergency Minimum Limits. If power balance is achieved prior to reaching Emergency Minimum Limits, set LMP values equal to the lowest offer price of all on-line generation; and

(iii) If power balance not achieved in step (ii), set LMP values to zero and reduce all committed generation below Emergency Minimum Limits proportionately (by ratio of Emergency Minimum Limits) to achieve power balance.

III.2.7 Reliability Regions, Load Zones, Reserve Zones, Zonal Prices and External Nodes.

(a) The ISO shall calculate Zonal Prices for each Load Zone for both the Day-Ahead and Real-Time Energy Markets for each hour using a load-weighted average of the Locational Marginal Prices for the Nodes within that Load Zone. The load weights used in calculating the Day-Ahead Zonal Prices for the Load Zone shall be determined in accordance with applicable Market Rules and shall be based on historical load usage patterns. The load weights do not reflect Demand Bids or Decrement Bids that settle at the Node level in the Day-Ahead Market. The ISO shall determine, in accordance with applicable ISO New England Manuals, the load weights used in Real-Time based on the actual Real-Time load distribution as calculated by the State Estimator, and shall exclude any Asset Related Demand from the load weights used to calculate the applicable Real-Time Zonal Prices.

(b) Each Load Zone shall initially be approximately coterminous with a Reliability Region.

(c) Reserve Zones shall be established by the ISO which represent areas within the New England Transmission System that require local 30 minute contingency response as part of normal system operations in order to satisfy local 2nd contingency response reliability criteria.

(d) A Reserve Zone shall be established by the ISO which represent the remaining areas within the New England Transmission System that are not included within the Reserve Zones established under Section III.2.7(c).

(e) Each Reserve Zone shall be completely contained within a Load Zone or shall be defined as a subset of the Nodes contained within a Load Zone.

(f) The ISO shall calculate Forward Reserve Clearing Prices and Real-Time Reserve Clearing Prices for each Reserve Zone.

(g) After consulting with the Market Participants, the ISO may reconfigure Reliability Regions, Load Zones and Reserve Zones and add or subtract Reliability Regions, Load Zones and Reserve Zones as necessary over time to reflect changes to the grid, patterns of usage, changes in local TMOR contingency response requirements and intrazonal Congestion. The ISO shall file any such changes with the Commission.

(h) In the event the ISO makes changes to a Reliability Region or Load Zone or adds or subtracts Reliability Regions and Load Zones, for settlement purposes and to the extent practicable, Load Assets that are physically located in one

Reliability Region and electrically located within another Reliability Region shall be located within the Reliability Region to which they are electrically located.

(i) External Nodes are the nodes at which External Transactions settle. As appropriate and after consulting with Market Participants, the ISO will establish and re-configure External Nodes taking into consideration appropriate factors, which may include: tie line operational matters, FTR modeling and auction assumptions, market power issues associated with external contractual arrangements, impacts on Locational Marginal Prices, and inter-regional trading impacts.

(j) On or about the 20th calendar day of each month, the ISO shall publish the Real-Time nodal load weights (expressed in MW) used to calculate the load-weighted Real-Time

Zonal Prices for the preceding month. Nodal load weights will be published for all nodes used in the calculations except for those nodes identified by customers as nodes for which publication would provide individual customer usage data. Any individual customer whose usage data would be revealed by publication of load weight information associated with a specific Node must submit a written request to the ISO to omit the applicable Node from the publication requirement. The request must identify the affected Node and, to the best of the customer's knowledge, the number of customers taking service at the affected Node and the estimated percentage of the total annual load (MWh) at the affected Node period that is attributable to the customer. The information contained in the request must be certified in writing by an officer of the customer's company (if applicable), by an affidavit signed by a person having knowledge of the applicable facts, or by representation of counsel for the customer. The ISO will grant a customer request if it determines based on the information provided that no more than two customers are taking service at the affected Node or that the percentage of the customer's annual load (MWh) at the affected Node. If a customer request is granted and that customer request is the only such customer request within a Load Zone, then the ISO shall randomly select one other Node and not disclose hourly load information for the randomly selected Node unless and until another customer request within the Load Zone is granted. A request to suspend publication for a month must be received by the ISO on or before the 10th calendar day of the following month in order to be effective for that month. Upon receipt of a request, the ISO will suspend publication of the load weight data for the specified Node. The ISO may, from time to time, require customer confirmation that continued omission from publication of load weight data for a particular Node is required in order to avoid disclosure of individual customer usage data. If customer confirmation is not received within a reasonable period not to exceed 30 days, the ISO may publish load weight data for the applicable Node.

III.2.7A Calculation of Real-Time Reserve Clearing Prices.

(a) The ISO shall determine the least costly means of obtaining Operating Reserve in Real-Time to serve the next increment of Operating Reserve requirement for each Reserve Zone on a jointly optimized basis with the calculation of Real-Time Nodal Prices specified under Section III.2.5, based on the system conditions described by the most recent power flow solution produced by the

State Estimator program and the energy offers that are determined to be eligible for consideration under Section III.2.4 in connection with the Real-Time dispatch. This calculation shall be made by applying an incremental linear optimization method to minimize energy, Operating Reserve, congestion and transmission loss costs, given actual system conditions, a set of energy offers and bids, and any binding transmission constraints, including binding transmission interface constraints associated with meeting Operating Reserve requirements, and binding Operating Reserve constraints that may exist. In performing this calculation, the ISO shall calculate, on a jointly optimized basis with serving an increment of load at each Node and External Node, the cost of serving an increment of Operating Reserve requirement for the system and each Reserve Zone from all available generating Resources and

Dispatchable Asset Related Demand Resources with an eligible energy offer or bid. Real-Time Reserve Clearing Prices will be equal to zero unless system re-dispatch is required in order to create additional TMSR to meet the system TMSR requirement; or system re-dispatch is required in order to make additional TMOR available to meet a local TMOR requirement; or system re-dispatch is required to make additional TMNSR or TMOR available to meet system TMSNR or TMOR requirements; or there is a deficiency in available Operating Reserve, in which case, Real-Time Reserve Clearing Prices shall be set based upon the Reserve Constraint Penalty Factors specified in Section III.2.7A(c).

(b) If system re-dispatch is required to maintain sufficient levels of Operating Reserve or local TMOR, the applicable Real-Time Reserve Clearing Price is equal to the highest unit-specific Real-Time Reserve Opportunity Cost associated with all generating Resources that were re-dispatched to meet the applicable Operating Reserve requirement. The unit-specific Operating Reserve or local TMOR Real-Time Reserve Opportunity Cost of a generating Resource shall be determined for each generating Resource that the ISO requires to reduce output in order to provide additional Operating Reserve or local TMOR and shall be equal to the difference between (i) the Real-Time Energy LMP at the generation Node for the generating Resource and (ii) the offer price associated with the reduction of the generating Resource's output necessary to create the additional Operating Reserve or local TMOR from the generating Resource's expected output level if it had been dispatched in economic merit order.

(c) If there is insufficient Operating Reserve available to meet the Operating Reserve requirements for the system and/or any Reserve Zone or sufficient Operating Reserve is not available at a redispatch cost equal to or less than that specified by the Reserve Constraint Penalty Factors, the applicable Real-Time Reserve Clearing Prices shall be set based upon Reserve Constraint Penalty Factors. The Reserve Constraint Penalty Factors are inputs into the linear programming algorithm that will be utilized by the linear programming algorithm when Operating Reserve constraints are violated, requiring that the constraints be relaxed to allow the LP algorithm to solve. The Real-Time Reserve Clearing Prices shall be set based upon the following Reserve Constraint Penalty Factor values:

(i) local TMOR RCPF = $50/MWh;

(ii) system TMOR RCPF = $100/MWh;

(iii) system TMNSR RCPF = $850/MWh;

(iv) system TMSR RCPF = $50/MWh.

The RCPFs shall be applied in a manner that is consistent with the price cascading described in Section III.2.7A(d).

(d) Real-Time Reserve designations and Real-Time Reserve Clearing Prices shall be calculated in such a manner to ensure that excess Real-Time Operating Reserve capability will cascade down for use in meeting any remaining Real-Time Operating Reserve Requirements from TMSR to TMNSR to TMOR and that the pricing of Real-Time Operating Reserve shall cascade up from TMOR to TMNSR to TMSR.

(e) During the Operating Day, the calculation set forth in this Section III.2.7A shall be performed every five minutes, using the ISO's Unit Dispatch System and Locational Marginal Price program, producing a set of nodal Real-Time Reserve Clearing Prices based on system conditions during the preceding interval. The prices produced at five-minute intervals during an hour will be integrated to determine the Real-Time Reserve Clearing Prices for the system and/or each Reserve Zone for that hour to be used in Settlements.

III.2.8 Hubs and Hub Prices.

(a) On behalf of the Market Participants, the ISO shall maintain and facilitate the use of a Hub or Hubs for the Day-Ahead and Real-Time Energy Market, comprised of a set of Nodes within the New England Control Area, which Nodes shall be identified by the ISO on its internet website. The ISO has used the following criteria to establish an initial Hub and shall use the same criteria to establish any additional Hubs:

(i) Each Hub shall contain a sufficient number of Nodes to try to ensure that a Hub Price can be calculated for that Hub at all times;

(ii) Each Hub shall contain a sufficient number of Nodes to ensure that the unavailability of, or an adjacent line outage to, any one Node or set of Nodes would have only a minor impact on the Hub Price;

(iii) Each Hub shall consist of Nodes with a relatively high rate of service availability;

(iv) Each Hub shall consist of Nodes among which transmission service is relatively unconstrained; and

(v) No Hub shall consist of a set of Nodes for which directly connected load and/or generation at that set of Nodes is dominated by any one entity or its affiliates.

(b) The ISO shall calculate and publish hourly Hub Prices for both the Day-Ahead and Real-Time Energy Markets based upon the arithmetic average of the Locational Marginal Prices of the nodes that comprise the Hub.

III.2.9 Final Prices.

(a) The ISO shall post the final Real-Time Prices and final Real-Time Reserve Clearing Prices as soon as practicable following the Operating Day, in accordance with the timeframes specified in the ISO New England Manuals, except that the posting of such final Real-Time Prices and final Real-Time Reserve Clearing Prices by the ISO shall not exceed five (5) business days from the applicable Operating Day. Posting of final Real-Time Prices or final Real-Time Reserve Clearing Prices exceeding five (5) business days from the applicable Operating Day shall be approved by the ISO Board. If the ISO is not able to calculate Real-Time Prices and final Real-Time Reserve Clearing Prices normally due to hardware, software, or telecommunication problems that cannot be remedied in a timely manner, the ISO will calculate Real-Time Prices and Real-Time Reserve Clearing Prices as soon as practicable using the best data available. In all cases, the ISO shall calculate prices consistent with this Market Rule.

(b) Day-Ahead Energy Market results are final when published except as provided in this subsection. If the ISO determines based on reasonable belief that there may be one or more errors in the Day-Ahead Energy Market results for an Operating Day due to database, software or similar errors of the ISO or its systems, the ISO shall post on the ISO website prior to 12:01 a.m. of the applicable Operating Day, a notice that the results are provisional and subject to correction. Any Day-Ahead Energy Market results for which no notice is posted shall be final and not subject to correction or other adjustment, and shall be used for purposes of settlement. The ISO shall confirm within three business days of the close of the applicable Operating Day whether there was an error in any provisional Day-Ahead Energy Market results and shall post a notice stating its findings.

(c) The ISO will publish corrected Day-Ahead Energy Market results within three business days of the close of the applicable Operating Day or the results of the Day-Ahead Energy Market for the Operating Day will stand. The ISO shall also publish a statement describing the nature of the error and the method used to correct the results.

(d) If the ISO determines in accordance with subsection (b) that there are one or more errors in the Day-Ahead Market results for an Operating Day, the ISO shall calculate corrected Day-Ahead Energy Market results by determining and substituting for the initial results, final results that reasonably reflect how the results would have been calculated but for the errors. To the extent that it is necessary, reasonable and practicable to do so, the ISO may specify an allocation of any costs that are not otherwise allocable under applicable provisions of Market Rule 1. The ISO shall use the corrected results for purposes of settlement.

(e) For every change in the Day-Ahead Energy Market results made pursuant to Section III.2.9, the ISO will prepare and submit, as soon as practicable, an informational report to the Commission describing the nature of any errors, the precise remedy administered, the method of determining corrected prices and allocating any costs, and any remedial actions that will be taken to avoid similar errors in the future.

III.2.10 Performance Evaluation. The ISO shall undertake an evaluation of the foregoing procedures for the determination of Locational Marginal Prices and Real-Time Reserve Clearing Prices, as well as the procedures for determining and awarding Financial Transmission Rights and associated Congestion Costs and Transmission Congestion Credits, not less often than every two years. The ISO, in conjunction with the Independent Market Monitoring Unit, will conduct a review of the market after 6 months of operation, or after the first summer of operations, whichever occurs first. To the extent practical, the ISO shall retain all data needed to perform comparisons and other analyses of locational marginal pricing. The ISO shall report the results of its evaluation to the Market Participants, along with its recommendations, if any, for changes in the procedures.

III.3 Accounting And Billing

III.3.1 Introduction. This Section III.3 sets forth the accounting and billing principles and procedures for the purchase and sale of services in the New England Markets and for the operation of the New England Control Area.

III.3.2 Market Participants.

III.3.2.1 ISO Energy Market.

(a) For each Market Participant for each hour, the ISO will determine a Day-Ahead Energy Market position representing that Market Participant's net purchases from or sales to the ISO Day-Ahead Energy Market. To accomplish this, the ISO will perform calculations to determine the following.

(i) **Day-Ahead Load Obligation** – Each Market Participant shall have for each hour a Day-Ahead Load Obligation for energy at each Location equal to the MWhs of its Demand Bids, Decrement Bids and External Transaction sales accepted by the ISO in the Day-Ahead Energy Market at that Location and such Day-Ahead Load Obligation shall have a negative value.

(ii) **Day-Ahead Generation Obligation** – Each Market Participant shall have for each hour a Day-Ahead Generation Obligation for energy at each Location equal to the MWhs of its generation Supply Offers, Increment Offers and External Transaction purchases accepted by the ISO in the Day-Ahead Energy Market at that Location and such Day-Ahead Generation Obligation shall have a positive value.

(iii) **Day-Ahead Adjusted Load Obligation** – Each Market Participant shall have for each hour a Day-Ahead Adjusted Load Obligation at each Location equal to the Day-Ahead Load Obligation adjusted by any applicable Day-Ahead internal bilateral transactions at that Location.

(iv) **Day-Ahead Locational Adjusted Net Interchange** – Each Market Participant shall have for each hour a Day-Ahead Locational Adjusted Net Interchange at each Location equal to the Day-Ahead Adjusted Load Obligation plus the Day-Ahead Generation Obligation at that Location.

(b) For each Market Participant for each hour, the ISO will determine a Real-Time Energy Market position. To accomplish this, the ISO will perform calculations to determine the following:

(i) **Real-Time Load Obligation** – Each Market Participant shall have for each hour a Real-Time Load Obligation for energy at each Location equal to the MWhs of load, where such MWhs of load shall include External Transaction sales and shall have a negative value, at that Location, adjusted for any applicable internal bilateral transactions which transfer Real-Time load obligations.

(ii) **Real-Time Generation Obligation** – Each Market Participant shall have for each hour a Real-Time Generation Obligation for energy at each Location. The Real-Time Generation Obligation shall equal the MWhs of energy, where such MWhs of energy shall have positive value, provided by generating Resources, External Resources, and External Transaction purchases at that Location.

(iii) **Real-Time Adjusted Load Obligation** – Each Market Participant shall have for each hour a

Real-Time Adjusted Load Obligation at each Location equal to the Real-Time Load Obligation adjusted by any applicable energy related internal Real-Time bilateral transactions at that Location.

(iv) **Real-Time Locational Adjusted Net Interchange** – Each Market Participant shall have for each hour a Real-Time Locational Adjusted Net Interchange at each Location equal to the Real-Time Adjusted Load Obligation plus the Real-Time Generation Obligation at that Location.

(c) For each Market Participant for each hour, the ISO will determine the difference between the Day-Ahead Energy Market position (Section III.3.2.1(a)) and the Real-Time Energy Market position (Section III.3.2.1(b)) representing that Market Participant's net purchases from or sales to the Real-Time Energy Market. To accomplish this, the ISO will perform calculations to determine the following:

(i) **Real-Time Load Obligation Deviation** – Each Market Participant shall have for each hour a Real-Time Load Obligation Deviation at each Location equal to the difference in MWhs between the Real-Time Load Obligation and the Day-Ahead Load Obligation.

(ii) **Real-Time Generation Obligation Deviation** – Each Market Participant shall have for each hour a Real-Time Generation Obligation Deviation at each Location equal to the difference in MWhs between the Real-Time Generation Obligation and the Day-Ahead Generation Obligation.

(iii) **Real-Time Adjusted Load Obligation Deviation** – Each Market Participant shall have for each hour a Real-Time Adjusted Load Obligation Deviation at each Location equal to the difference in MWhs between the Real-Time Adjusted Load Obligation and the Day-Ahead Adjusted Load Obligation.

(iv) **Real-Time Locational Adjusted Net Interchange Deviation –** Each Market Participant shall have for each hour a Real-Time Locational Adjusted Net Interchange Deviation at each Location equal to the difference in MWhs between the Real-Time Locational Adjusted Net Interchange and the Day-Ahead Locational Adjusted Net Interchange.

(d) For each Market Participant for each hour, the ISO will determine Day-Ahead Energy Market monetary positions representing a charge or credit for its net purchases from or sales to the ISO Day-Ahead Energy Market. The Day-Ahead Energy Market Energy Charge/Credit shall be equal to the sum of its Location specific Day-Ahead Locational Adjusted Net Interchanges multiplied by the Energy

Component of the associated Day-Ahead Locational Marginal Prices. The Day-Ahead Energy Market Congestion Charge/Credit shall be equal to the sum of its Location specific Day-Ahead Locational Adjusted Net Interchanges multiplied by the Congestion Component of the associated Day-Ahead Locational Marginal Prices. The Day-Ahead Energy Market Loss Charge/Credit shall be equal to the sum of its Location specific Day-Ahead Locational Adjusted Net Interchanges multiplied by the Loss Component of the associated Day-Ahead Locational Marginal Prices.

(e) For each Market Participant for each hour, the ISO will determine Real-Time Energy Market monetary positions representing a charge or credit to the Market Participant for its net purchases from or sales to the Real-Time Energy

Market. The Real-Time Energy Market Deviation Energy Charge/Credit shall be equal to the sum of its Location specific Real-Time Locational Adjusted Net Interchange Deviations multiplied by the Congestion Component of the associated Real-Time Locational Marginal Prices. The Real-Time Energy Market Deviation Loss Charge/Credit shall be equal to the sum of its Location specific Real-Time Locational Adjusted Net Interchange Deviations multiplied by the Loss Component of the associated Real-Time Locational Marginal Prices.

(f) For each hour, the ISO will determine the total revenues associated with transmission congestion on the New England Transmission System. To accomplish this, the ISO will perform calculations to determine the following. The Day-Ahead Congestion Revenue shall equal the sum of all Market Participants' Day-Ahead Energy Market Congestion Charge/Credits. The Real-Time Congestion Revenue shall equal the sum of all Market Participants' Real-Time Energy Market Congestion Charge/Credits.

(g) For each hour, the ISO will determine the excess or deficiency in Loss Revenue associated with the Day-Ahead Energy Market. The Day-Ahead Loss Revenue shall be equal to the sum of all Market Participants' Day-Ahead Energy Market Energy Charge/Credits and Day-Ahead Energy Market Loss Charge/Credits.

(h) For each hour for each Market Participant, the ISO shall calculate a Day-Ahead payment or charge associated with the excess or deficiency in Loss Revenue (Section III.3.2.1(g)). The Day-Ahead Loss Charges or Credits shall be equal to the Day-Ahead Loss Revenue multiplied by the

Market Participant's pro rata share of the sum of all Market Participants' Real-Time Adjusted Load Obligations.

(i) For each hour, the ISO will determine the excess or deficiency in Loss Revenue associated with the Real-Time Energy Market. The Real-Time Loss Revenue shall be equal to the sum of all Market Participants' Real-Time Energy Market Deviation Energy Charge/Credit and Real-Time Energy Market Deviation Loss Charge/Credit plus Non-Market Participant Transmission Customer loss costs. The ISO will then adjust Real-Time Loss Revenue to account for Inadvertent Energy Revenue, as calculated under Section III.3.2.1(k) and Emergency transactions as described under Section III.4.3(a).

(j) Non-Market Participant Transmission Customer loss costs shall be assessed for transmission use scheduled in the

Real-Time Energy Market, calculated as the amount to be delivered in each hour multiplied by the difference between the Loss Component of the hourly Real-Time Price at the delivery point or New England Control Area boundary delivery interface and the Loss Component of the hourly Real-Time Price at the source point or New England Control Area boundary source interface.

(k) For each hour, the ISO will calculate an excess or deficiency in Inadvertent Energy Revenue by multiplying the Inadvertent Interchange at each External Node by the associated Real-Time Locational Marginal Price and then summing these values for all External Nodes.

(l) For each hour for each Market Participant, the ISO shall calculate a Real-Time payment or charge associated with the excess or deficiency in Inadvertent Energy Revenue (Section III.3.2.1(k)). The Inadvertent Energy Revenue Charges or Credits shall be equal to the Inadvertent Energy Revenue multiplied by the Market Participant's pro rata share of the sum of all Market Participants' Real-Time Load Obligations and Real-Time Generation Obligations over all Locations, measured as absolute values.

(m) For each hour for each Market Participant, the ISO shall calculate a Real-Time payment or charge associated with the excess or deficiency in Real-Time Loss Revenue (Section III.3.2.1(i)). The Real-Time Loss Revenue Charges or Credits shall be equal to the Real-Time Loss Revenue multiplied by the Market Participant's pro rata share of the sum of all Market Participants' Real-Time Adjusted Load Obligations.

III.3.2.2 Regulation.

(a) Each Market Participant shall have an hourly Regulation obligation equal to its pro rata share of the New England Control Area Regulation requirements for the hour, based on the Market Participant's total Real-Time Load Obligation in the New England Control Area for the hour. A Market Participant that does not meet its hourly

Regulation obligation through its own Resources or through an appropriate bilateral transaction, shall be charged for Regulation dispatched by the ISO to meet such obligation at the Regulation Clearing Price determined in accordance with paragraph (e) of this Section, plus the amounts, if any, described in paragraph (d) and (j) of this Section.

(b) A Market Participant supplying Regulation at the direction of the ISO in excess of its hourly Regulation obligation shall be credited for Time-On-Regulation Megawatts at the higher of (i) the Regulation Clearing Price or (ii) the Regulation Supply Offer price of the generating Resource supplying Time-On-Regulation Megawatts, plus the unit-specific Regulation Opportunity Cost of the generating Resource supplying the Time-On-Regulation Megawatts, as determined by the ISO in accordance with procedures specified in the ISO New

England Manuals and ISO New England Administrative Procedures.

(c) A Market Participant supplying Regulation at the direction of the ISO shall receive a credit for Regulation Service Megawatts at the higher of (i) the Regulation Clearing Price or (ii) the Regulation Supply Offer price of the generating Resource supplying Regulation Service Megawatts, multiplied by the Capacity-to-Service Ratio. The Capacity-to-Service Ratio is described under Subsection (h).

(d) Each Market Participant shall be charged its pro rata share of the total Regulation Service Credits for the hour, based upon the Market Participant's total Real-Time Load Obligation in the New England Control Area for the hour.

(e) The Regulation Clearing Price shall be determined by the ISO. The Regulation Clearing Price for each hour shall be equal to the time-weighted average of all interval based Regulation Clearing Prices calculated within the hour. The Regulation Clearing Price for each interval within the hour shall be equal to the highest Regulation Supply Offer price of any generating Resources selected to provide Regulation in that interval.

(f) A Market Participant's Regulation Service Megawatts shall be determined by the ISO. A Market Participant's hourly Regulation Service Megawatts for each generating Resource providing Regulation shall be equal to the sum of the absolute value of the generation movement, in megawatts, towards the Regulation set point, such movement calculated in four second intervals based upon the generating Resource's Automatic Response Rate.

(g) A Market Participant's Time-on-Regulation Megawatts shall be determined by the ISO. A Market Participant's hourly Time-on-Regulation Megawatts for each generating Resource providing Regulation shall be equal to the Regulation capability provided multiplied by the minutes of Regulation provision in the hour, divided by sixty.

(h) The Capacity-to-Service Ratio shall be determined by the ISO. The Capacity-to-Service Ratio is the relationship between Regulation capability provided and Regulation Service Megawatts provided in an hour. Based on historical analysis, on average, one megawatt of Regulation capability will produce ten megawatts of Regulation Service Megawatts. Based on this relationship, the Capacity-to-Service Ratio shall initially be set equal to 0.1 such that the revenue associated with Time-on-Regulation Megawatts and Regulation Service Megawatts associated with a Resource providing Regulation shall be equally split. The revenue split assumption and the Capacity-to-Service ratio may be changed from time to time and such changes shall be filed with the Commission for approval.

(i) In determining the credit under subsection (b) to a Market Participant that is selected to provide Regulation and that actively follows the ISO's Regulation signals and instructions, the unit-specific Regulation Opportunity Cost of a generating Resource shall be determined for each hour that the ISO requires a generating Resource to provide Regulation and shall be equal to the product of (i) the deviation of the generating Resource's output necessary to follow the ISO's Regulation signals from the generating Resource's expected output level if it had been dispatched in economic merit order multiplied by (ii) the absolute value of the difference between the Real-Time Price at the generation Node for the generating Resource and the megawatt weighted average Supply Offer price for the energy associated with the deviation of the generating Resource's expected output level if it had been dispatched in economic merit order.

(j) Amounts credited for Regulation Opportunity Cost in an hour shall be allocated and charged to each Market Participant that does not meet its hourly Regulation obligation in proportion to its purchases of Regulation in MWhs during that hour.

III.3.2.3 NCPC Credits. The following paragraphs describe the calculation of NCPC Credits and NCPC Charges. Additional information on these calculations may be found in Appendix F of this Market Rule.

(a) Except as otherwise provided for under Section III.3.2.3(f), Market Participants' Pool-Scheduled Resources capable of providing Operating Reserve or Replacement Reserve shall be credited as specified below (an "NCPC Credit") based on the prices offered for the operation of such Resources, provided that the Resources were available for the entire time specified in the Offer Data for such Resource.

(b) The following determination shall be made for the Day Ahead Energy Market:

(i) For each Pool-Scheduled generating Resource that is scheduled in the Day-Ahead Energy Market: the total offered price for Start- Up and No-Load Fees and energy, determined on the basis of the Resource's scheduled output, shall be compared to the total value of that Resource's scheduled energy output as determined by the Day-Ahead Energy Market and the Day-Ahead Prices applicable to the relevant generation Node or External Node in the Day-Ahead Energy Market. If the total offered price summed over all hours for the Operating Day exceeds the total value summed over all hours for the Operating Day, the difference shall be credited to the Market Participant.

(ii) For each Pool-Scheduled External Transaction sale:, the total bid price for energy consumption, determined on the basis of the Resource's scheduled consumption, shall be compared to the total cost of that Resource's scheduled energy consumption as determined by the Day-Ahead Energy Market and the Day-Ahead Prices applicable to the relevant External Node in the Day-Ahead Energy Market. If the total cost summed over all hours for the Operating Day exceeds the total bid price summed over all hours for the Operating Day, the difference shall be credited to the Market Participant as an NCPC Credit.

(c) Except as otherwise provided for under Section III.6.4.4, the sum of the foregoing credits calculated in accordance with Section III.3.2.3(b) shall be the "NCPC

Charge" in the Day-Ahead Energy Market in each Operating Day.

(d) The NCPC Charge in the Day-Ahead Energy Market shall be allocated and charged to each Market Participant in proportion to the sum of its hourly Day- Ahead Load Obligation in for that Operating Day except that, any NCPC Charge associated with Pool-Scheduled Resources scheduled in the Day-Ahead Energy Market for the provision of voltage or VAR support are charged in accordance with the provisions of Schedule 2 of Section II of the Transmission, Markets and Services Tariff.

(e) At the end of each Operating Day, the following determinations shall be made:

(i) for each eligible hour for each synchronized Pool-Scheduled Resource of each Market Participant that operates as requested by the ISO and that is not committed for synchronized condensing: The total offered price, as calculated in accordance with Section III.F.2.1.9, shall be compared to the total value of that Resource's energy in the Real-Time Energy Market, as calculated in accordance with Section III.F.2.1.13. If the total offered price exceeds the total value, the difference shall be credited to the Market Participant as a Real-Time NCPC Credit.

(ii) For each synchronized Pool-Scheduled or Self-Scheduled Dispatchable Asset Related Demand Resource of each Market Participant that is associated with pumping load and that operates as requested by the ISO in accordance with Section III.3.2.3(f): the total Real-Time costs of energy consumption, as calculated in accordance with Section III.F.2.4.9, shall be compared to the total bid amount of that Resource's energy consumption in the Real-Time Energy Market, as calculated in accordance with Section III.F.2.4.6. If the total Real-Time costs exceed the total bid amount, the difference shall be credited to the Market Participant as a Real-Time NCPC Credit.

(iii) For each Pool-Scheduled External Transaction sale of each Market Participant that operates as requested by the ISO: the total bid price shall be compared to the total cost of that Resource's energy in the Day-Ahead Energy Market plus any credit or charge for quantity deviations, at the ISO dispatch direction, from the Day-Ahead Energy Market during the Operating Day. The difference between a Market Participant's Real-Time bid price and the sum of its Day-Ahead and Real-Time costs less any credit as determined pursuant to Section III.3.2.3(b) shall be credited to the Market Participant as a Real-Time NCPC Credit.

For purposes of this Section, a Market Participant is deemed to operate as requested by the ISO if it follows dispatch instructions. A generator is considered to be following a dispatch instruction if the actual output of the generator is not greater than 10% above its desired dispatch point and is not less than 10% below its desired dispatch point for each interval in the hour. Generators with an Economic Max less than or equal to 50 MWs are considered to be following a dispatch instruction if the actual output of the generator is not greater than 5 MWs above its desired dispatch point and is not less than 5 MWs below its desired dispatch point for each interval in the hour. If the generator violates this criterion in any interval during the hour, the generator is considered to be not following dispatch instructions for the entire hour.

(f) A Market Participant's Pool-Scheduled Resource or Self-Scheduled generating Resource, the output of which is reduced or suspended at the request of the ISO for the purpose of maintaining appropriate levels of

Operating Reserve or for the provision of voltage support,

shall be credited in an amount equal to the following:

For generating Resources, the credit for each hour of reduced or suspended operation is:

Posturing Credit = (PAG - AG) x (ULMP - UB) – RC where:

PAG equals the estimated hourly generation had the generator not responded to dispatch orders to reduce or suspend operation taking any limited energy restrictions into account, such estimated hourly generation to be determined in accordance with procedures defined in the ISO New England Manuals;

AG equals the actual output of the generating Resource;

ULMP equals the Real-Time Price associated with the generating Resource that is reduced or suspended for each hour;

UB equals the Supply Offer price associated with PAG for that generating Resource whose output is reduced or suspended;

RC equals any Regulation credits from Section III.3.2.2(i); and where ULMP - UB shall not be negative and Posturing Credit shall not be negative.

The amount, in MW, of a Market Participant's Pool-Scheduled Dispatchable Asset Related Demand Resource or Self-Scheduled Dispatchable Asset Related Demand Resource that is associated with pumping load which is maintained out of economic merit at the request of the ISO for the purpose of maintaining appropriate levels of Operating Reserve, shall be credited in accordance with Section III.3.2.3(b) and III.3.2.3(e).

(g) Except as otherwise provided for under Section III.6.4.4, the sum of the foregoing NCPC Credits, plus any Cancellation Fees paid in accordance with Section III.1.10.2(d), such Cancellation Fees to be applied to the Operating Day for which the unit was scheduled, shall be the non-synchronized condensing NCPC Charge for the Real-Time Energy Market in each Operating Day.

(h) The non-synchronized condensing and synchronized condensing NCPC Charge for the Real-Time Energy Market for each Operating Day shall be allocated and charged to each Market Participant in proportion to the sum of the absolute values of its (i) Real-Time Load Obligation Deviations in MWhs during that Operating Day;

(ii) generation deviations for Pool-Scheduled Resources not following ISO dispatch instructions, Self-Scheduled Resources with dispatchable increments above their Self-Scheduled amounts not following ISO dispatch instructions and Self-Scheduled Resources not following their Day-Ahead Self-Scheduled amounts other than those Self-Scheduled Resources that are following ISO dispatch instructions, including External Resources, in MWhs during the Operating Day; and (iii) deviations from the Day-Ahead Energy Market for External Transaction purchases in MWhs during the Operating Day except that, any NCPC Charge associated with Pool-Scheduled Resources scheduled in the Real-Time Energy Market for the provision of voltage or VAR support are charged in accordance with the provisions of Schedule 2 of Section II of the Transmission, Markets and Services

Tariff. For the purposes of calculating generation deviations, if a generation resource has been scheduled in the Day-Ahead Energy Market and the ISO determines that the unit should not be run in order to avoid a Minimum Generation Emergency, the generation owner will be responsible for all Real-Time Energy Market Deviation Energy Charges but will not incur generation related deviations for the purpose of allocating Real-Time NCPC Charges. For the purposes of calculating Real-Time NCPC Charges, any difference between the actual consumption (Real-Time Load Obligation) of Dispatchable Asset Related Demand Resources and Dispatchable Asset Related Demand Bids that clear in the Day-Ahead Energy Market that result from operation in accordance with the ISO's instructions shall be excluded from the Market Participant Real-Time Load Obligation Deviation.

(i) At the end of each Operating Day, Market Participants shall be credited on the basis of their offered prices for synchronized condensing for any hydropower or combustion turbine units operated as synchronous condensers but producing no energy.

(j) The sum of the foregoing NCPC Credits as specified in Section III.3.2.3(i) shall be the NCPC Charge for synchronized condensing in the Real-Time Energy Market for the Operating Day in the New England Control Area.

(k) **[Reserved]**

(l) For any Operating Day in either, as applicable, the Real-Time Energy Market or the Day-Ahead Energy Market for which, for all or any part of such Operating Day, the ISO

(i) declares an Emergency Condition; (ii) issues an alert that an Emergency Condition may be declared ("Emergency Condition Alert"); or (iii) schedules units based on the anticipation of an Emergency Condition or an Emergency Condition Alert, the NCPC Credit otherwise provided by Section III.3.2.3(b) or Section III.3.2.3(e) shall be limited as provided in paragraphs (m) or (n), respectively. The ISO shall provide timely notice on its internet site of the commencement and termination of any of the actions described in clause (i), (ii), or (iii) of this paragraph (l).

(m) For the Real-Time Energy Market, if the Effective Offer Price (as defined below) is greater than $1,000/MWh, then such amounts above $1,000/MWh shall be used to reduce any NCPC Credits received for generating

Resources under Section III.3.2.3(e). For purposes of this paragraph (m), the Effective Offer Price shall be the amount calculated for total offered price for such Operating Day pursuant to Section III.3.2.3(e) divided by the lesser of (i) hourly metered output or (ii) requested output as determined by the ISO dispatch, during the pool-scheduled hours determined under Section III.3.2.3(e).

(n) For the Day-Ahead Energy Market, if the Effective Offer Price (as defined below) is greater than $1,000/MWh, then such amounts above $1,000/MWh shall be used to reduce any NCPC Credits received for generating Resources under Section III.3.2.3(b). For purposes of this paragraph (n), the Effective Offer Price shall be the amount calculated for total offered price for such Operating Day pursuant to Section III.3.2.3(b) divided by the scheduled

MWhs during the pool-schedule hours determined under Section III.3.2.3(b).

Reserved for future use.

III.3.2.4 Transmission Congestion. Market Participants shall be charged or credited for Congestion Costs as specified in Section III.3.2.1(f) of this Market Rule.

III.3.2.5 [Reserved.]

III.3.2.6 Emergency Energy.

(a) Hourly net costs in excess of Real-Time Prices attributable to the purchase of Emergency energy by the ISO from other Control Areas shall be allocated to Market Participants based on the following hourly deviations where such deviations are negative: (i) Real-Time Adjusted Load Obligation Deviations during that Operating Day; (ii) generation deviations for Pool-Scheduled Resources not following ISO dispatch instructions, Self-Scheduled Resources with dispatchable increments above their Self-

Scheduled amounts not following ISO dispatch instructions and Self-Scheduled Resources not following their Day-Ahead Self-Scheduled amounts other than those Self-Scheduled Resources that are following ISO dispatch instructions, including External Resources, in MWhs during the Operating Day; and (iii) deviations from the Day-Ahead Energy Market for External Transaction purchases in MWhs during the Operating Day. As provided for in the ISO New England Manuals, generation Resources shall have a 5% or 5 MWh threshold when determining such deviations.

(b) Hourly net revenues in excess of Real-Time Prices attributable to the sale of Emergency energy to other Control Areas shall be credited to Market Participants based on the following deviations where such deviations are negative: (i) Real-Time Adjusted Load Obligation Deviations in MWhs during that Operating Day; (ii) generation deviations for Pool-Scheduled Resources following ISO dispatch instructions and Self-Scheduled generating Resources with dispatchable increments above their Self-Scheduled amounts following ISO dispatch instructions, including External Resources, in MWhs during the Operating Day; and (iii) deviations from the Day-Ahead Energy Market for External Transaction purchases in MWhs during the Operating Day. As provided for in the ISO New England Manuals, generation Resources shall have a 5% or 5 MWh threshold when determining such deviations.

III.3.2.6A New Brunswick Security Energy. New Brunswick Security Energy is energy that is purchased from the New Brunswick System Operator by New England to preserve minimum flows on the Orrington-Keswick (396) tie line in accordance with the applicable ISO / New Brunswick System Operator transmission operating guide with respect to the determination of minimum transfer limits. New Brunswick Security Energy costs are hourly costs in excess of the LMP at the applicable External Node attributable to purchases of New Brunswick Security Energy by New England. New Brunswick Security Energy costs shall be allocated among Market Participants on the basis of their pro-rata shares of New England Network Load or in such other manner as may be described in ISO New England Manual M-28 (Market Rule 1 Accounting). Where the LMP at the applicable External Node exceeds the New Brunswick Security Energy costs, such amounts shall be accounted for in accordance with Section III.3.2.1(m).

III.3.2.7 **Billing.** The ISO shall prepare a billing statement each billing cycle, in accordance with the ISO New England Billing Policy, for each Market Participant in accordance with the charges and credits specified in Sections III.3.2.1 through III.3.2.6 of this Market Rule, and showing the net amount to be paid or received by the Market Participant. Billing statements shall provide sufficient detail, as specified in the ISO New England Manuals, ISO New England Administrative Procedures and the ISO New England Billing Policy, to allow verification of the billing amounts and completion of the Market Participant's internal accounting. Billing disputes shall be settled in accordance with procedures specified in the ISO New England Billing Policy.

III.3.3 [Reserved.]

III.3.4 Non-Market Participant Transmission Customers.

III.3.4.1 Transmission Congestion. Non-Market Participant Transmission Customers shall be charged or credited for Congestion Costs as specified in Section III.1 of this Market Rule.

III.3.4.2 Transmission Losses. Non-Market Participant Transmission Customers shall be charged or credited for transmission losses in an amount equal to the product of (i) the Transmission Customer's MWhs of deliveries in the Real-Time Energy Market, multiplied by (ii) the difference between the Loss Components of the Real-Time Locational Marginal Prices at the point-of-receipt and the point-of-delivery Locations.

III.3.4.3 Billing. The ISO shall prepare a billing statement each billing cycle, in accordance with the ISO New England Billing Policy, for each Non-Market Participant Transmission Customer in accordance with the charges and credits specified in Sections III.3.4.1 through III.3.4.2 of this Market Rule, and showing the net amount to be paid or received by the Non-Market Participant Transmission Customer. Billing statements shall provide sufficient detail, as specified in the ISO New England Manuals, the ISO New England Administrative Procedures and the ISO New England Billing Policy, to allow verification of the billing amounts and completion of the Non-Market Participant Transmission Customer's internal accounting. Billing disputes shall be settled in accordance with procedures specified in the ISO New England Billing Policy.

III.3.5 [Reserved.]

III.3.6 Data Reconciliation.

III.3.6.1 Data Correction Billing. The ISO will reconcile Market Participant data errors and corrections after the correction limit for such data has passed. The correction limit for Market Participant supplied meter data and for ISO errors in the processing of meter and other Market Participant data is ninety (90) days from the date of initial billing of the last Operating Day of the month to which the data applied.

III.3.6.2 Eligible Data. The ISO will accept revised hourly asset meter readings from assigned meter readers and new or revised internal bilateral transactions from Market Participants. No other revised data will be accepted for use in settlement recalculations. The ISO will correct data handling errors associated with other Market Participant supplied data to the extent that such data did not impact unit commitment or the Real-Time dispatch. Data handling errors that impacted unit commitment, the Real-Time dispatch or ICAP auctions will not be corrected.

III.3.6.3 **Data Revisions.** The ISO will accept revisions to asset specific meter data and internal bilateral transactions at any time prior to the correction limit. No revisions to other Market Participant data will be accepted after the deadlines for submittal of that data have passed. If the ISO discovers a data error or if a Market Participant discovers and notifies the ISO of a data error prior to the correction limit, revised hourly data will be used to recalculate energy, NCPC and Regulation. No settlement recalculations or other adjustments may be made if the correction limit for the Operating Day to which the error applied has passed.

III.3.6.4 Meter Corrections Between Control Areas. For revisions to meter data associated with assets that connect the New England Control Area to other Control Areas, the ISO will, in addition to performing settlement recalculations, adjust the actual interchange between the New England Control Area and the other Control Area to maintain a proper record of inadvertent energy flow.

III.3.6.5 Meter Correction Data.

(a) Unless otherwise specified in the ISO New England Manuals and ISO New England Administrative Procedures, revised meter data shall be submitted to the ISO as soon as it is available and not later than the correction limit.

(b) Unless otherwise specified in the ISO New England Manuals or the ISO New England Administrative Procedures, errors on the part of the ISO in the administration of Market Participant supplied data shall be brought to the attention of the ISO as soon as possible and not later than the correction limit.

III.3.7 Eligibility for Billing Adjustments.

III.3.7.1 Errors in Market Participant's statements resulting from errors in settlement software, errors in data entry by ISO personnel, and Settlement production problems, that do not affect the day-ahead schedule or real-time system dispatch, will be corrected as promptly as practicable. If errors are identified prior to the issuance of final statements, the market will be resettled based on the corrected information.

III.3.7.2 Calculations made by scheduling or dispatch software, operational decisions involving ISO discretion which affect scheduling or real-time operation, and the ISO's execution of mandatory dispatch directions, such as self-schedules or external contract conditions, are not subject to retroactive correction and resettlement. The ISO will settle and bill day-ahead market as actually scheduled and the real-time market as actually dispatched. Any post-settlement issues raised concerning operating decisions related to these markets will be corrected through revision of operations procedures and guidelines on a prospective basis.

III.3.7.3 While errors in reporting hourly metered data may be corrected (see Section III.3.6), Market Participants have the responsibility to ensure the correctness of all other data they submit to the market system and no adjustment will be made.

III.3.7.4 Disputes between Market Participants regarding Settlement of internal bilateral transactions shall not be subject to adjustment by the ISO, but shall be resolved directly by the Market Participants unless they involve an error by the ISO that is subject to resolution under Section III.3.7.1) above.

III.3.7.5 Billing disputes between Market Participants and the ISO or Non-Market Participants and the ISO shall be settled in accordance with procedures specified in the ISO New England Billing Policy.

III.4 Rate Table

III.4.1 Offered Price Rates. Day-Ahead energy, Real-Time energy, Regulation, Real-Time Operating Reserve, Forward Reserve, NCPC, Congestion Cost and transmission loss costs are based on offers and bids submitted to the ISO as specified in this Market Rule.

III.4.2 [Reserved.]

III.4.3 Emergency Energy Transaction. The pricing for Emergency energy and New Brunswick Security Energy purchases and sales will be determined in accordance with:

(a) an applicable agreement with an adjacent Control Area for Emergency and/or New Brunswick Security Energy purchases and sales, or

(b) arrangements made by the ISO with Market Participants, in accordance with procedures defined in the ISO New England Manuals, to purchase Emergency energy offered by such Market Participant from Resources that are not ICAP Resources. The ISO shall select offers to sell

Emergency energy made by Market Participants to the ISO on a least cost basis and the selected Market Participants shall receive payment for energy delivered at the higher of their offer price or the Real-Time Price at the applicable External Node. Such Emergency energy purchases from Market Participants shall not be eligible to set Real-Time Prices.

III.5 Calculation Of Transmission Congestion Revenue And Credits

III.5.1 Non-Market Participant Transmission Congestion Cost Calculation.

III.5.1.1 Calculation by ISO. When the transmission system is operating under constrained conditions, the ISO shall calculate Congestion Costs.

III.5.1.2 General. The basis for the Congestion Costs shall be the differences in the Congestion Component of the Locational Marginal Prices between points of delivery and points of receipt, as determined in accordance with Section III.2 of this Market Rule.

III.5.1.3 [Reserved.]

III.5.1.4 Non-Market Participant Transmission Customer Calculation. Congestion Costs shall be assessed for transmission use scheduled in the Real-Time Energy Market, calculated as the amount to be delivered in each hour multiplied by the difference between the

Congestion Component of the hourly Real-Time Price at the delivery point or New England Control Area boundary delivery interface and the Congestion Component of the hourly Real-Time Price at the source point or New England Control Area boundary source interface. Non-Market Participants using Point-to-Point Transmission Service for deliveries through the New England Control Area shall be included in the determination of the Congestion Costs.

III.5.2 Transmission Congestion Credit Calculation.

III.5.2.1 Eligibility. Except as provided in Section III.A.6.5 of Appendix A, each holder of a Financial Transmission Right shall receive as a Transmission Congestion Credit a proportional share of the total monthly Transmission Congestion Revenues collected.

III.5.2.2 Financial Transmission Rights.

(a) Transmission Congestion Credits will be calculated based upon the FTRs held at the time of the constrained hour.

(b) FTRs shall be awarded to winning bidders in the FTR Auctions pursuant to Section III.7 and may be acquired in the subsequent bilateral market from FTR Holders.

(i) An entity that acquires an FTR through the FTR Auction shall automatically be recognized by the ISO as the registered FTR Holder of that FTR, subject to having already met the eligibility criteria for bidding in the FTR Auction. The registered FTR Holder shall be entitled to receive or be obligated to make FTR payments arising from such FTR in accordance with Section III.5.2.

(ii) An entity that acquires an FTR through the FTR Auction or through a subsequent bilateral transaction may elect to hold it, sell it in the FTR Auction or sell it bilaterally. The registered FTR Holder of an FTR sold in a bilateral transaction will continue to be the FTR Holder for that FTR unless it submits a confirmation of the sale to the ISO in accordance with the ISO New England Manuals and ISO New England Administrative Procedures. The ISO upon receipt of such a confirmation will transfer record ownership. The purchaser of an FTR in a bilateral transaction that is not recorded by the ISO receives only a contractual right against the seller of the FTR and has no rights or obligations in settlement or in the Energy market. An entity who subsequently acquires an FTR from an FTR Holder through a bilateral transaction must meet applicable financial assurance criteria to be the FTR Holder of that FTR and secure the associated rights and obligations. The ISO shall settle FTRs only with the registered FTR Holders. At any given time, each FTR shall have only one registered FTR Holder.

III.5.2.3 [Reserved.]

III.5.2.4 Target Allocation to FTR Holders. A target allocation of Transmission Congestion Credits for each FTR Holder shall be determined for all applicable FTRs. Each FTR shall be multiplied by the Day-Ahead Price Congestion Component differences for the associated receipt and delivery points. This calculation will result in a positive or negative FTR target allocation. All negative target allocations are obligations to pay. All positive target allocations will be summed for an FTR Holder for the month and compensated as Transmission Congestion Credits under Section III.5.2.5.

III.5.2.5 Calculation of Transmission Congestion Credits.

(a) The total Transmission Congestion Revenue available for the month shall be equal to the sum of: (i) the hourly Day-Ahead Congestion Revenue amounts for the month, (ii) the hourly Real-Time Congestion Revenue amounts for the month plus Congestion Costs collected under Section III.5.1.4, and (iii) the negative FTR target allocations calculated under Section III.5.2.4.

(b) The sum of all monthly positive target allocations, as determined in Section III.5.2.4, shall be compared to the

Transmission Congestion Revenue for the current month. If the sum of all monthly positive target allocations is less than the Transmission Congestion Revenue for the current month, the Transmission Congestion Credit for each FTR Holder shall be equal to its total monthly positive target allocation. All remaining Transmission Congestion Revenues from the current month shall be carried over to the end of the calendar year.

(c) If the sum of all the monthly positive target allocations is greater than the Transmission Congestion Revenue for the current month, each FTR Holder shall be assigned a share of the total Transmission Congestion Revenue for the current month in proportion to its total monthly positive target allocations.

III.5.2.6 Distribution of Excess Congestion Revenue. If there is any Transmission Congestion Revenue at the end of the calendar year, this amount shall be proportionally allocated to any remaining unpaid monthly positive target allocations plus interest on the unpaid monthly positive target allocations in the months of that year, but shall not exceed an amount equal to the unpaid monthly positive target allocation plus interest on the unpaid monthly positive target allocations in the months of the calendar year. Any remaining surplus Transmission Congestion Revenue shall be allocated to the entities who paid Congestion Costs in that calendar year in proportion to the amount of total Congestion Costs paid during the year.

III.6 Local Second Contingency Protection Resources

III.6.1 Definition. "Local Second Contingency Protection Resources" are those Resources identified by the ISO on a daily basis as necessary for the provision of Operating Reserve requirements and adherence to NERC, NPCC and ISO reliability criteria over and above those Resources required to meet first contingency reliability criteria within a Reliability Region.

III.6.2 Day-Ahead and Real-Time Energy Market. When establishing operating schedules, the ISO will select and identify Local Second Contingency Protection Resources on a not unduly discriminatory basis in accordance with the procedures defined in the ISO New England Manuals. ***Appendix A*** will determine which, if any, Supply Offers will be adjusted. The ISO will also record, in an auditable log, the reason the Resource was selected.

III.6.2.1 Special Constraint Resources. When establishing operating schedules, at the request of a Transmission Owner or distribution company in order to maintain area reliability, the ISO will commit and dispatch generating Resources to provide relief for constraints not reflected in the ISO's systems for operating the New England Transmission System or the ISO's operating procedures in accordance with the procedures defined in the ISO New England Manuals. The ISO will also record, in an auditable log, the designation of such generating Resource as a Special Constraint Resource and the name of the requesting Transmission Owner or distribution company. Any NCPC Charge associated with the Real-Time operation of the Special Constraint Resource is charged in accordance with the provisions of Schedule 19 of Section II of the Transmission, Markets and Services Tariff.

III.6.3 [Reserved.]

III.6.4 Local Second Contingency Protection Resource NCPC Charges.

III.6.4.1 [Reserved.]

III.6.4.2 [Reserved.]

III.6.4.3 Calculation of Local Second Contingency Protection Resource NCPC Payments. Day-Ahead and Real-Time NCPC Credits for Local Second Contingency Protection Resources are determined in accordance with the provisions of paragraphs (a), (b), (c) and (e) in Section III.3.2.3, as applied to Pool-Scheduled Resources, but such credits shall not be included in NCPC Charges pursuant to Section III.3.2.3 and shall instead be allocated and charged in accordance with Section III.6.4.4. The Day-Ahead and Real-Time NCPC Credits for Local Second Contingency Protection Resources are subject to market power review and mitigation.

III.6.4.4 Calculation of Local Second Contingency Protection Resource NCPC Charges and Allocation of Fixed Cost Charges Associated with Reliability Agreements.

(a) The Day-Ahead NCPC Credits calculated in accordance with Section III.6.4.3 for Local Second Contingency Protection Resources are aggregated into an NCPC Charge and charged pro rata to each Market Participant in proportion to the sum of its Day-Ahead Load Obligations in MWhs for that Operating Day for Locations within the affected Reliability Region.

(b) The Real-Time NCPC Credits calculated in accordance with Section III.6.4.3 for Local Second Contingency Protection Resources are aggregated into an NCPC Charge and charged to each Market Participant in proportion to the sum of its Real-Time Load Obligations in MWhs during the Operating Day within the affected Reliability Region. For hours for which a Local Second Contingency Protection Resource NCPC Charge is calculated and an Emergency energy sale is being made by the ISO, the amount (MWh) of Emergency energy sales will be included in the above calculation, with a proportional share attributable to the Emergency energy sale being added to the purchasing Control Area's cost for Emergency energy.

(c) Any monthly fixed-cost charges paid to Resources pursuant to Reliability Agreements negotiated under ***Appendix A***, Section III.A.6 and Exhibit 2 shall be allocated and charged pro rata to Market Participants and Non-Market Participants with Network Load in proportion to the sum of their Network Load during that month within the affected Reliability Region.

III.7 Financial Transmission Rights Auctions

III.7.1 Auctions of Financial Transmission Rights. Periodic auctions ("FTR Auctions") to allow Eligible FTR Bidders to acquire or FTR Holders to sell FTRs shall be conducted by the ISO in accordance with the provisions of this Section. Non-Market Participants that want to participate in the FTR Auction or to become an FTR Holder via the secondary market and have satisfied the applicable financial assurance criteria will be charged a one time FTR Registration Fee of $5,000 This fee may be superceded by a future provision in the Transmission, Markets and Services Tariff.

III.7.1.1 Auction Period and Scope of Auctions.

(a) Initially, FTR Auctions shall be held on a monthly basis followed by the introduction of long-term FTR Auctions. Long-term auctions shall be introduced no later than October 1, 2003. The ISO shall provide notice of the initial long-term auction at least thirty (30) days prior to the opening of the auction-quoting period for such long-term auction as described in Section III.7.1.2(a). At the time of such notice, the ISO shall post a schedule for future long-term auctions and the percent of the feasible FTRs that will be available in such long-term auctions. Such schedule shall coordinate the start and end dates of the long-term FTRs to be auctioned with those of the long-term FTRs of neighboring Control Areas. During the period prior to the long-term auctions, the entire transfer capability of the New England Transmission System will be made available to support the sale of FTRs with a term of one month in the monthly FTR Auctions.

(b) Following the initial auctions described above, FTR auctions shall be held on both an annual and monthly basis.

Fifty percent of the feasible FTRs that can be made available with a term of one year shall be made available in the annual FTR Auction. After the annual FTR Auction has been conducted, the remaining feasible FTRs, each having a term of one month, shall be made available in the monthly FTR Auctions. Within two years from the March 1, 2003, the ISO will evaluate making available FTRs with a term of more than one year (in one-year increments).

III.7.1.2 Frequency and Time of FTR Auctions.

(a) Annual (initial long-term) auctions: The bid and offer period shall open five business days before the first business day of the month preceding the period in which the FTRs are to be effective for a five business day auction-quoting period that closes at noon on the fifth business day.

(b) Monthly auctions: The bid and offer period shall open beginning fifteen business days before the first business day of the month preceding the period in which the FTRs are to be effective for a five business day auction-quoting period that closes at noon on the fifth business day.

III.7.2 Financial Transmission Rights Characteristics.

III.7.2.1 Reconfiguration of Financial Transmission Rights. Using an appropriate linear programming model, the ISO shall reconfigure the FTRs offered or otherwise available for sale in any auction to maximize the value to the bidders of the FTRs sold, provided that any FTRs acquired at auction shall be simultaneously feasible in combination with those FTRs outstanding at the time of the auction and not sold in the auction. The linear programming model shall, while respecting transmission constraints and the maximum megawatt quantities of the bids and offers, select the set of simultaneously feasible FTRs with the highest total auction value as determined by the bids of buyers and taking into account the reservation prices of the sellers.

III.7.2.2 Specified Locations. Auction bids for FTRs may specify any combination of receipt and delivery locations represented in the State Estimator model for which the ISO calculates and posts Locational Marginal Prices. Auction bids may specify receipt and delivery points from locations outside of the New England Control Area to locations inside the New England Control Area, from locations within the New England Control Area to locations outside of the New England Control Area, or to and from locations within the New England Control Area. Congestion over interfaces associated with non-PTF external tie lines is not subject to LMP-based congestion management and, therefore, no FTRs across such interfaces will be included in the FTR Auctions.

III.7.2.3 Transmission Congestion Revenues. FTRs shall entitle holders thereof to credits only for Transmission Congestion Revenue, and shall not confer a right to credits for payments arising from or relating to transmission congestion made to any entity other than the ISO.

III.7.2.4 [Reserved.]

III.7.3 Auction Procedures.

III.7.3.1 Role of the ISO. FTRs auctions shall be conducted by the ISO in accordance with standards and procedures set forth in the ISO New England Manuals and ISO New England Administrative Procedures, such standards and procedures to be consistent with the requirements of this Market Rule.

III.7.3.2 [Reserved.]

III.7.3.3 [Reserved.]

III.7.3.4 On-Peak and Off-Peak Periods. The ISO will conduct separate auctions simultaneously for on-peak and off-peak periods. On-peak FTRs shall cover the periods from 7:00 a.m. up to the hour ending at 11:00 p.m. on Mondays through Fridays, except holidays as defined in the ISO New England Manuals and ISO New England Administrative Procedures. Off-peak FTRs shall cover the periods from 11:00 p.m. up to the hour ending 7:00 a.m. on Mondays through Fridays and all hours on Saturdays, Sundays, and NERC holidays as defined in the ISO New England Manuals and ISO New England Administrative Procedures. Each bid shall specify whether it is for an on-peak or off-peak period.

III.7.3.5 Offers and Bids.

(a) Offers to sell and bids to purchase FTRs shall be submitted during the applicable period set forth in Section III.7.1.2, and shall be in the form specified by the ISO in accordance with the requirements set forth below.

(b) Offers to sell shall identify the specific FTRs, by megawatt quantity and receipt and delivery points, offered for sale. An offer to sell a specified megawatt quantity of FTRs shall constitute an offer to sell a quantity of FTRs equal to or less than the specified quantity. An offer to sell may not specify a minimum quantity being offered. Each offer may specify a reservation price, below which the offeror does not wish to sell the FTR. Offers shall be subject to such applicable standards for the financial assurance of the offeror or for the posting of security for performance as the ISO shall establish.

(c) Bids to purchase shall specify the megawatt quantity, price per megawatt, and receipt and delivery points of the FTR that the bidder wishes to purchase. A bid to purchase a specified megawatt quantity of FTRs shall constitute a bid to purchase a quantity of FTRs equal to or less than the specified quantity. A bid to purchase may not specify a minimum quantity that the bidder wishes to purchase. A bid may specify as receipt or delivery points any Location for which the ISO calculates and posts Locational Marginal Prices in accordance with Section III.2 of this Market Rule and may include FTRs for which the associated Transmission Congestion Credits may have negative values. Bids shall be subject to such applicable standards for the financial assurance of the bidder or for the posting of security for performance as the ISO shall establish.

(d) Bids and offers shall be specified to the nearest 0.1 megawatt and the quantity shall be greater than zero.

III.7.3.6 Determination of Winning Bids and Clearing Price.

(a) At the close of each bidding period, the ISO will create a base FTR power flow model that includes all outstanding FTRs that have previously been awarded for the period for which the auction was conducted and that were not offered for sale in the auction. The base FTRs model also will include estimated uncompensated parallel flows into each interface point of the New England Control Area and estimated scheduled transmission outages.

(b) In accordance with the requirements of this Section and subject to all applicable transmission constraints and reliability requirements, the ISO shall determine the simultaneous feasibility of all outstanding FTRs not offered for sale in the auction and of all FTRs that could be awarded in the auction for which bids were submitted. The winning bids shall be determined from an appropriate linear programming model that, while respecting transmission constraints and the maximum megawatt quantities of the bids and offers, selects the set of simultaneously feasible FTRs with the highest net total auction value as determined by the bids of buyers and taking into account the reservation prices of the sellers. In the event that there are two or more identical bids for the selected FTRs and there are insufficient FTRs to accommodate all of the identical bids, then each such bidder will receive a pro rata share of the FTRs that can be awarded.

(c) FTRs shall be sold at the market-clearing price for FTRs between specified pairs of receipt and delivery points, as determined by the bid value of the marginal FTR that could not be awarded because it would not be simultaneously feasible. The linear programming model shall determine the clearing prices of all FTR paths based on the bid value of the marginal FTRs, which are those FTRs with the highest bid values that could not be awarded fully because they were not simultaneously feasible, and based on the flow sensitivities of each FTR's path relative to the marginal FTRs' paths flow sensitivities on the binding transmission constraints.

III.7.3.7 Announcement of Winners and Prices. Within four (4) business days after the close of a monthly auction and six (6) business days after the close of an annual or initial long-term auction or such later time as may be approved by the ISO Board, the ISO shall post the winning bidders, the megawatt quantity, and the receipt and delivery points for each FTR awarded in the auction and the price at which each FTRs was awarded. Results of the on-peak auction and off-peak auction will be posted separately. The ISO shall not disclose the price specified in any bid to purchase or the reservation price specified in any offer to sell.

III.7.3.8 Auction Settlements. All buyers and sellers of FTRs between the same points of receipt and delivery shall pay or be paid the market-clearing price, as determined in the auction, for such FTRs.

III.7.3.9 Allocation of Auction Revenues. All auction revenues, net of payments to entities selling FTRs into the auction, shall be allocated as specified under Appendix C of this Market Rule.

III.7.3.10 Simultaneous Feasibility. The ISO shall make the simultaneous feasibility determinations specified herein using appropriate power flow models of contingency-constrained dispatch. Such determinations shall take into account outages and expected configuration of transmission facilities and outages of individual generating units to the extent that such outages impact voltage or stability limits and shall be based on reasonable assumptions about the configuration and availability of transmission capability during the period covered by the auction. The goal of the simultaneous feasibility determination shall be to ensure that there are sufficient Transmission Congestion Revenues to satisfy all FTR obligations for the auction period under expected conditions.

III.7.3.11 [Reserved.]

III.7.3.12 Financial Transmission Rights in the Form of Options. When the ISO has the necessary software and hardware, the FTR Auctions shall allow for the acquisition of FTRs that do not create potential obligations to pay.

III.7.3.13 FTR Secondary Trading Market. FTR Holders may trade FTRs on the secondary market and have these settled using the ISO systems. The ISO systems shall only allow FTRs to be sub-divided into multiple FTRs with; i) the same points of injection and withdrawal; ii) different megawatt amounts the sum of which does not exceed the original FTR MW amount; and iii) different start and end dates where the start and end dates are the same as or within the start and end dates of the original FTR. FTRs may be reconfigured only through FTR Auctions.

III.7.3.14 Temporary FTR Surcharge. Beginning with the first monthly statement for Non-Hourly Charges, as described and defined in Section 2.2 of the ISO New England Billing Policy, issued by the ISO after the Commission approves the settlement agreement filed in Docket No. ER04-798, the ISO shall collect through its normal settlement process, from all entities awarded FTRs in the auctions conducted by the ISO following Commission approval of the settlement agreement, a surcharge of one and one-tenth percent (1.1%) on the absolute value of all awarded dollars in FTR auctions (the "FTR Surcharge"), including positive and negative awarded dollars. Sellers of FTRs and FTR sales outside the auction shall not be subject to the FTR Surcharge. The ISO shall collect the FTR Surcharge until it has received $2,599,781 plus all interest costs associated with borrowing such amount payable by the ISO to its lenders under its revolving line of credit. The ISO will post monthly on its website information regarding the pay-down of such borrowing and interest from proceeds of the FTR Surcharge. Amounts collected pursuant to the FTR Surcharge in the final monthly statement for Non-Hourly Charges in excess of the foregoing cumulative total will be credited to those entities paying the FTR Surcharge in that final billing period.

III.8 Installed Capacity

III.8.1 Annual Installed Capacity Requirement. The ISO shall calculate the Installed Capacity Requirements for each Power Year. Following consultation with stakeholders as required by Section 11.4 of the Participants Agreement, the ISO shall file the Installed Capacity Requirements for each Power Year with the Commission pursuant to Section 205 of the Federal Power Act. The ISO shall translate the Summer Capability Period and Winter Capability Period Installed Capacity Requirements into a Summer Capability Period and Winter Capability Period Unforced Capacity Requirement for the New England Markets. The Unforced Capacity Requirement for the Summer Capability period or Winter Capability Period shall equal the Installed Capacity Requirement in the Summer Capability Period or Winter Capability Period times the quantity one minus the system-wide weighted average equivalent forced outage rate of the generating assets located within the New England Control Area. The system-wide forced outage rate shall be calculated in accordance with the ISO New England Manuals. The ISO shall determine the amount of Unforced Capacity that must be sited within the New England Control Area and the amount of Unforced Capacity that may be procured from areas External to the New England Control Area in a manner consistent with the ISO New England System Rules.

III.8.2 Requirements Applicable to Participants.

III.8.2.1 Allocation of the New England Control Area Unforced Capacity Requirement to Participants. The ISO shall assign each Market Participant an Unforced Capacity obligation prior to the beginning of each Capability Year, and shall update this allocation monthly throughout the Capability Year. Each Market Participant's Unforced Capacity obligation for each month of the Capability Year will equal the product of: (i) the Summer Capability Period or Winter Capability Period Unforced Capacity

Requirement, as applicable, for the Obligation Month; and (ii) the Market Participant's pro-rata share of the sum of all Market Participant annual coincident contributions to the New England annual peak load from the calendar year immediately prior to the Capability Year, as calculated in accordance with Section III.8.2.3 of this Market Rule (adjusted to reflect the Market Participant's Dispatchable Asset Related Demand Nominated Consumption Limit values). Each month, as customers are gained and lost by Market Participants through Load-shifting, the ISO will adjust the requirement for each Market Participant such that (i) the total Unforced Capacity Requirement for the Summer Capability Period and Winter Capability Period remains constant and (ii) an individual Market Participant's Unforced Capacity obligation reflects the gains and losses. In addition, adjustments will be made to Market Participant Unforced Capacity obligations to account for customers entering and permanently leaving the New England Control Area. The net impact of customer entry and exit shall be proportionately allocated to Market Participants in accordance with the procedures in the ISO New England Manuals, such that the total Unforced Capacity Requirement for the Summer Capability Period and Winter Capability Period remains constant. Given the fixed Summer Capability Period and Winter Capability Period Unforced Capacity Requirement, net increases in customer peak contribution shall reduce the Unforced Capacity obligation of individual Market Participants, while net decreases in customer peak contribution shall increase individual Market Participant Unforced Capacity obligations.

III.8.2.2 **Participant Obligations.** Each Market Participant must obtain Capacity Credits, determined in accordance with the ISO New England Manuals, or self-supply, or procure Unforced Capacity in an amount equal to its Summer Capability Period or Winter Capability Period Unforced Capacity obligation, as applicable, from any ICAP Resource through bilateral transactions and/or purchases in ISO-administered installed capacity auctions. Each

Market Participant must demonstrate that it owns or has obtained a sufficient amount of Unforced Capacity prior to the beginning of each Obligation Month. To satisfy this obligation, each Participant must submit information on all bilateral purchases and sales of Unforced Capacity to the ISO by the date specified in the ISO New England Manuals. This information shall be submitted by the Market Participants in the format and include all the information prescribed by the ISO New England Manuals. Market Participants that fail to timely satisfy their Unforced Capacity obligations, or that fail to make timely submissions of bilateral transactions for Unforced Capacity in accordance with the schedule set forth in the ISO New England Manuals shall be required to participate in a Deficiency Auction pursuant to Section III.8.5 of this Market Rule.

III.8.2.3 Participant Peak Load and Load-Shifting Adjustments. The ISO New England Manuals and ISO New England Administrative

Procedures set forth the procedures for settlement data to be submitted to the ISO, including data for identifying each Market Participant's Unforced Capacity responsibility for customers at each Load Asset. For the purposes of determining a Market Participant's pro-rata share of the Unforced Capacity Requirement in Section III.8.2.1, a Market Participant's monthly peak contribution shall be calculated in accordance with the following two steps, which are further detailed in the ISO New England Manuals:

(a) Calculate the sum of the annual coincident peak contributions from the prior calendar year of the customers served by the Market Participant at each Load Asset that is not a Dispatchable Asset Related Demand coincident with the annual New England peak of the prior calendar year. For Dispatchable Asset Related Demands, determine the Nominated Consumption Limit.

(b) Sum the values in (a) for each Market Participant across all Load Zones.

(c) The following loads are exempt from the Unforced Capacity requirements and are assigned a peak contribution of zero for the purposes of assigning obligations and tracking load shifts:

(i) Load associated with pumping of pumped hydro generators, if the resource was pumping;

(ii) Station service load that is modeled as a discrete Load Asset and the Resource is complying with the maintenance scheduling procedures of the ISO for ICAP Resources and non-ICAP Resources as applicable; and

(iii) Transmission losses associated with delivery of energy over the Control Area tie lines.

The ISO shall account for Load-shifting among Market Participants each month using the best available information provided to it and the affected Market Participants by the entities responsible for submitting settlement data in accordance with the ISO New England Manuals. By the time specified in the ISO New England Manuals, load-gaining Market Participants must procure sufficient Unforced Capacity to meet their increased Unforced Capacity obligation for the nearest following month, and load-losing Market Participants may sell Unforced Capacity that is no longer needed to satisfy their Unforced Capacity obligation. The ISO shall provide each Market Participant with a revised Unforced Capacity obligation for the following month.

III.8.3 Requirements Applicable to ICAP Resources.

III.8.3.1 ICAP Resource Qualification Requirements.

(a) In order to qualify as an ICAP Resource, generating Resources, Dispatchable Asset Related Demand Resources and External Resources, which have agreed to certain curtailment conditions as set forth in the last paragraph of Section III.8.3.2 below, and other than Special Case Resources shall:

(i) provide information reasonably requested by the ISO including the name and location of generators, and Dispatchable Asset Related Demand Resources providing the Installed Capacity;

(ii) in accordance with the ISO New England Manuals, perform Installed Capacity audit tests and submit the results to the ISO, or provide to the ISO appropriate historical production data;

(iii) for ICAP Resources internal to the New England Control Area abide by the ISO maintenance coordination procedures. External ICAP Resources shall comply with the maintenance coordination procedures applicable to ICAP resources in the External Control Area, and ISO will attempt to coordinate maintenance schedules of

External ICAP Resources with the External Control Area;

(iv) provide the expected return date from any outages (including partial outages) to the ISO;

(v) if the Resource is a Generator or External Resource the Market Participant must commit that it will submit a Supply Offer into the Day-Ahead Energy Market as described in Section III.1.10.1A of this Market Rule, unless and to the extent that the generator or External Resource is unable to do so due to an outage as defined in the ISO New England Manuals or due to temperature related de-ratings. Market Participants must also submit Offer Data, which specifies an Economic Maximum Limit;

(vi) if the Resource is a Dispatchable Asset Related Demand, the Market Participant must commit that it will submit a Demand Bid into the Day-Ahead Energy Market as described in Section III.1.10.1A of this Market Rule that specifies the prices at which the Resource is willing to consume energy, unless and to the extent that the Dispatchable Asset Related Demand Resource is unable to do so due to an outage as defined in the ISO New England Manuals. Market Participants must also submit Offer Data, which specifies a Maximum Consumption Limit and Minimum Consumption Limit;

(vii) for generating Resources and External Resources, provide Operating Data in accordance with Section III.8.3.5 of this Market Rule; and

(viii) comply with the ISO New England Manuals.

(b) The ISO shall inform each potential ICAP Resource that is required to submit Installed Capacity audit data of its approved ratings in accordance with the ISO New England Manuals.

III.8.3.2 Additional Provisions Applicable to External ICAP Resources. Requirements to qualify as an ICAP Resource, for External Resources and External Transactions associated with Control Area to Control Area ICAP transactions that have agreed not to curtail the energy associated with such Installed Capacity, shall be established here and in the ISO New England Manuals.

(a) External Resources may offer UCAP into the New England Control Area in five ways:

(i) External dispatchable energy backed by a Unit;

(ii) External non-dispatchable energy backed by a Unit. Energy must be scheduled a minimum of 16 on-peak hours during week days that are not holidays or as specified in the ISO New England Manuals.

(iii) External non-dispatchable energy backed by a Control Area. Energy must be scheduled a minimum of 16 on-peak hours during week days that are not holidays or as specified in the ISO New England Manuals.

(iv) External dispatchable energy backed by a Control Area. The Installed Capacity Equivalent of the contract shall be offered into the Day-Ahead market consistent with the requirements for a unit-backed contract.

(v) Hydro Quebec Interconnection Capability Credits backed by either an emergency interchange agreement or other emergency supply arrangement between the New England Control Area and the Hydro Quebec Control Area over the Phase I/II HVDC-TF.

(b) The Market Participant entering the external ICAP transaction shall be responsible for supplying either the GADS data, data equivalent to GADS data, or other Operating Data to the ISO each month in accordance with the ISO New England Manuals necessary to calculate an EFORd for unit-backed transactions, or for directly supplying the EFORd for the unit backing the transaction calculated in accordance with the formulas in the ISO New England Manuals, and subject to verification with the External Control Area where the unit is located. In the case of transactions backed by an External Control Area, CARL Data shall be submitted in support of the transaction. The CARL data shall be used to assess the ability of the External Control Area to deliver energy in support of the UCAP transaction and to calculate the EFORd of the transaction. For an energy contract backed by a Control Area to qualify as an ICAP Resource, the Control Area shall afford the contract the same curtailment priority as its native load. The EFORd data shall be used to reduce the energy face value of the contract from an ICAP value to a

UCAP value for purposes of meeting the UCAP obligations of the Market Participant, consistent with the treatment of internal resources. The UCAP value of the contract is determined by multiplying the ICAP value of the contract by the quantity one minus the EFORd of the transaction, where the EFORd of the transaction is the rolling twelve month average EFORd of the External Control Area. External ICAP Resources are required to bid the Installed Capacity Equivalent of the UCAP value given to such resources, as described in the ISO New England Manuals.

(c) Certain external ICAP Resources are afforded Grandfathered status with special treatment that is described in the ISO New England Manuals. Those Resources and their associated MW values are identified in the following table:

Contract Description	**Grandfathered (MW)**	**Contract End Date**
NYPA: NY – NE: CMEEC NYPA: NY – NE: MMWEC NYPA: NY – NE: Pascoag NYPA: NY – NE: VELCO	20.9 81.8 2.4 15.0 120.1	10/31/2003 10/31/2003 10/31/2003 10/31/2003
VJO: Highgate – NE VJO: Phase I/II – NE VJO: CCC Block Load	Up to 225* Up to 110* Up to 60*	2020
VPPSA NYSEG: NY-NE*	6 (April-Oct) 7 (Nov-March)	10/31/2003
BED NYSEG: NY – NE*	10	12/31/2009
Select: New Brunswick	224	2020

* The total grandfathered MW for the VJO contract are limited to 335MW

III.8.3.3 ICAP Resource Outage Scheduling Requirements. All Market Participants with ICAP Resources, except for Dispatchable Asset Related Demand Resources, and Special Case Resources, that intend to supply Unforced Capacity to the New England Control Area shall submit a confidential notification to the ISO of their proposed generator outage schedules in accordance with the ISO New England

Manuals. Based upon a reliability assessment, if Operating Reserve deficiencies are projected to occur in certain weeks for the upcoming calendar year, the ISO will request voluntary re-scheduling of outages. In the case of Market Participants with Generators fully or partially listed as ICAP Resources in accordance with the provisions of Sections III.8.3.4 and III.8.3.4A of this Market Rule and the ISO New England Manuals, if voluntary re-scheduling is ineffective, the ISO will invoke forced re-scheduling of their outages to ensure that projected Operating Reserve over the upcoming year is adequate. A Market Participant that refuses a forced rescheduling of its outages for any Generator fully or partially listed as an ICAP Resource shall be prevented from supplying Unforced Capacity in the New England Control Area with that Generator during any month where it undertakes such outages. The re-scheduling process is described in the ISO New England Manuals. A Market Participant that intends to supply Unforced Capacity in a given month from a

Resource that was not listed as an ICAP Resource prior to the beginning of the Capability Period must notify the ISO in accordance with the ISO New England Manuals so that it may be subject to forced re-scheduling of its proposed outages in order to qualify as an ICAP Resource. A Market Participant that refuses the ISO's forced rescheduling of its proposed outages shall not qualify as an ICAP Resource for that unit for any month during which it schedules or conducts an outage. Market Participants with Dispatchable Asset Related Demand Resources shall notify the ISO in accordance with the ISO New England Manuals of outages that would reduce their ability to interrupt. Dispatchable Asset Related Demand Resources must also submit to the ISO a written commitment that any outages that would reduce their ability to interrupt without reducing their Load by a corresponding amount will only be conducted in accordance with the ISO New England Manuals. The external Control Area and the ISO, in accordance with the ISO New England Manuals, shall coordinate outage schedules for External Resources.

III.8.3.3.1 De-Listed Resource Outage Provisions.

(a) Market Participants must submit proposed outage schedules for De-Listed Resources in accordance with the ISO New England Manuals. Outage requests for De-Listed Resources shall not be subject to forced rescheduling by the ISO.

(b) In the event that ISO determines that a proposed outage of a De-Listed Resource would result in a violation of reliability criteria in accordance with ISO Operating Procedures, and that no other action, including forced rescheduling of ICAP Resource outages will resolve the reliability issue, the ISO may request additional capacity from the De-Listed

Resource (to be provided on a voluntary basis) and any other Resource capable of reducing or eliminating the reliability criteria violation. Any De-Listed Resource that responds to an ISO request and elects to reschedule its outage and become an ICAP Resource, which was not sold as capacity to New York shall be re-listed as a ICAP Resource, and all obligations associated with this status shall apply to the Resource for the remainder of the UCAP Obligation Month. In exchange for assuming this reliability obligation, the Resource is eligible to receive the UCAP clearing price used for load shifting in the Obligation Month for which the Resource has been re-listed, plus any additional reasonably incurred maintenance and opportunity type costs associated with re-scheduling the outage and becoming an ICAP Resource. Any De-Listed Resource which was sold as capacity to

New York and that responds to an ISO request and elects to reschedule its outage shall be paid for reasonably incurred maintenance and opportunity type costs associated with re-scheduling the outage, but these Resources shall not receive the New England UCAP clearing price, since they have already received ICAP compensation from New York. Market Participants shall submit compensation applications to the ISO and shall provide supporting data and documents for any additional reasonably incurred maintenance and opportunity type costs. Except as provided in Section III.8.3.3.1(c), payment of the UCAP clearing price shall be guaranteed upon application to the ISO, subject to verification that the Resource was de-listed and that an outage was rescheduled, and subject to the normal ISO settlement business processes and payment schedules. Payment of any additional reasonably incurred maintenance and opportunity type costs shall be subject to verification of the supporting data provided to substantiate the payment request.

(c) The ISO will monitor Market Participant behavior with respect to de-listing and outage requests. The ISO shall notify the Commission of any suspected attempts by a Market Participant to influence UCAP prices through de-listing and outage requests. In the event that the Commission finds that a Market Participant attempted to influence prices through submission of de-listing or maintenance outage requests, the payments under this Section shall be revoked.

(d) The cost of these payments shall be charged to Market Participants in proportion to their average daily UCAP Obligation for the applicable Obligation Month, as calculated in accordance with the ISO New England Manuals.

III.8.3.4 Required Notification That an ICAP Resource Has Been De-listed.

Generating Resources are eligible to de-list by providing notification as described below. Asset Related Demand is not eligible to de-list.

The Lead Market Participant for a Resource must notify the ISO in accordance with the dates specified below of any Unforced Capacity it wishes to fully or partially de-list as a qualified ICAP Resource. If not fully de-listed, a Resource may only be split into a single listed and a single de-listed segment. Resources shall only be de-listed in whole MW increments.

For a given UCAP Obligation Month, a unit, or part thereof, may be de-listed at any time prior to 1800 hours of a day that is at least two full business days prior to the start of the first Obligation Month for which it wishes to de-list. The Deficiency Auction results shall be published by 1800 hours of the day that is at least one business day prior to the deadline for de-listing described above. Once a unit, or part thereof, de-lists, it remains de-listed until a formal request to list is made in accordance with Section 3.9.3 of ISO New England Manual 20. All listing and de-listing actions shall be effective as of the first of the Obligation Month in question.

In the event that the listing or de-listing notification is received at least two days prior to the Deficiency Auction for an Obligation Month, the listing or de-listing action shall be binding with respect to satisfying the Market Participant's UCAP obligation for that Obligation Month. Any listing notification received prior to the Deficiency Auction but after the date established by the minimum notification requirements as specified in the ISO New England Manuals shall not count toward satisfaction of UCAP obligations for that Obligation Month. Any request to de-list a Resource after the Deficiency Auction but prior to the start of the Obligation Month shall be subject to a confirmation of the UCAP position of the Market Participants with Ownership Shares in the Resource for which de-listing has been requested. If such a de-listing request would place any of the Participants with an Ownership Share in the Resource in a deficient position with respect to their UCAP obligations, the request shall be denied. Only requests to de-list Resources that are in excess of the total Resources required to meet the Participant's UCAP obligations shall be honored after the Deficiency Auction.

8.3.4A Additional Rights and Obligations of Fully and Partially De-listed Resources. To the extent that it is de-listed, fully or partially de-listed Unforced Capacity may be sold as a capacity-based product for use in a Control Area external to the New England Control Area and/or the Resource may operate as an energy-only Resource. In the event that a Resource is fully or partially de-listed from the UCAP market, the owner of the Resource is not excused from the requirement to offer energy from the Resource to the Real-Time Energy Market if the Resource is available. Energy from fully de-listed Resources may be offered to the New England Control Area in the Day-Ahead Energy Market and/or the Real-Time Energy Market, although the Energy may be offered to an external Control Area. Any partially de-listed Resource shall offer its full Capability to both the New England Day-Ahead Energy Market and the Real-Time Energy Market, although the Energy may be offered to an external Control Area. Any outage while fully or partially de-listed shall be accurately accounted for in accordance with NERC GADS procedures and the ISO New England Manuals in the event that the unit is re-listed as an ICAP

Resource. Partially de-listed Resources are required to notify the ISO of outage schedules, and are subject to the outage re-scheduling provisions outlined in Manual 20, Section 3.3.

A fully or partially de-listed resource may sell non-recallable energy, up to the quantity of capacity that is de-listed, for use in another Control Area. These non-recallable energy transactions are subject to additional requirements, listed below, regarding the availability of the resource backing the transaction that will be reviewed when the New England Control Area is under ISO New England Operating Procedure 4 (Action During a Capacity Deficiency, OP4) conditions. These requirements are: (a) the partially or fully de-listed resource must be self-scheduled to a MW level equal to or greater than the amount of the non-recallable transaction, and (b) a de-rate of a partially de-listed Resource backing the sale to less than its Seasonal Claimed Capability shall be allocated pro rata between the listed and de-listed parts of the Resource. Upon meeting these requirements, a non-recallable energy transaction cannot be curtailed due to system wide capacity deficient conditions in the New England Control Area.

III.8.3.5 Operating Data Reporting Requirements for Generating Resources. To qualify as ICAP Resources in the New England Control Area, Market Participants shall submit GADS Data, data equivalent to GADS Data, or other Operating Data to the ISO each month in accordance with the ISO New England Manuals for generating Resources and Special Case Resources providing Unforced Capacity. Market Participants that do not submit Operating Data in accordance with this subsection and the ISO New England Manuals shall be subject to the sanctions provided in Appendix B of this Market Rule. ICAP Resources that were not in operation at the beginning of a Capability Year shall submit Operating Data to the ISO no later than one month after such Resources commence commercial operation, and in accordance with the ISO New England Manuals.

III.8.3.6 Operating Data Default Value and Collection.

(a) **Monthly Calculations.** The ISO shall calculate each month for each ICAP Resource the amount of Unforced Capacity that it is qualified to supply in the New England Control Area based on a rolling twelve-month calculation in accordance with formulae provided in the ISO New England Manuals. The ISO shall provide this information to each Market Participant prior to the monthly auctions in accordance with the dates set forth in the ISO New England Manuals. The amount of Unforced Capacity that each generating Resource and External Resource is authorized to supply in the New England Control Area shall be based on the ISO's calculations of individual Equivalent Demand Forced Outage Rates. The amount of Unforced Capacity that each Intermittent Power

Resource is authorized to supply in the New England Control Area shall be based on the individual historical capacity factor adjusted by the ISO to remove the effects of outages in accordance with the rating process defined in the ISO New England Manuals. The ISO shall calculate the Equivalent Demand Forced Outage Rates and capacity factors monthly using a twelve-month rolling average of Operating Data in accordance with formulae provided in the ISO New England Manuals.

In the case of Dispatchable Asset Related Demand Resources, the ISO will calculate availability based adjustments to the UCAP Peak Contribution values in accordance with formulae provided in the ISO New England Manuals.

(b) **Default Unforced Capacity.** In its calculation of Unforced Capacity, the ISO shall deem an ICAP Resource to be completely forced out for each month for which the Market Participant has not submitted its Operating Data in accordance with Section III.8.3.5 of this Market Rule and the ISO New England Manuals. For an ICAP Resource that has been deemed completely forced out for a particular month, the Market Participant may submit new Operating Data, for that month, to the ISO at any time. The ISO will use such new Operating Data when calculating, in a timely manner in accordance with the ISO New England Manuals, a new rolling average for the ICAP Resource. Upon a showing of extraordinary circumstances, the ISO retains the discretion to accept at any time Operating Data which have not been submitted in a timely manner, or which do not fully conform with the ISO New England Manuals.

(c) **Exception for Certain Equipment Failures.** When a Generator, Special Case Resource, or External Resource is forced into an outage by an equipment failure that involves equipment located on the high voltage side of the electric network beyond the step-up transformer, and including such step-up transformer, the outage will not be counted for purposes of calculating that Resource's Equivalent Demand Forced Outage Rate.

III.8.3.7 Availability Requirements.

(a) Subsequent to qualifying, each ICAP Resource shall, except as noted in Section III.8.3.11 of this Market Rule, on a daily basis: (i) Self-Schedule the Resource; (ii) Offer energy in each hour of the Day-Ahead Energy Market in accordance with the applicable provisions of Section III.8.3.1 of this Market Rule; or (iii) notify the ISO of any outages. The total amount of energy that an ICAP Resource Self-Schedules, offers to the pool, or declares to be unavailable on a given day must equal or exceed the seasonal Installed Capacity Equivalent of the Unforced Capacity it supplies.

(b) Market Participants utilizing Hydro Quebec Interconnection Capability Credits to meet all or part of their UCAP obligations are not required to submit an offer or Self-Schedule for the energy equivalent of the Capacity Credit.

III.8.3.8 Unforced Capacity Sales. Each ICAP Resource will be authorized to supply an amount of Unforced Capacity during each Obligation Month based on calculations in Section III.8.3.6 and on the rating process described in the ISO New England Manuals. During the Summer Capability Period the ISO will use the summer rating of the Resource to calculate the amount of Unforced Capacity the Resource may supply, and during the Winter Capability Period the winter rating will be used to calculate the amount of Unforced Capacity the Resource may supply. If an ICAP Resource's Installed Capacity rating is determined to have increased during an Obligation Month, pursuant to testing procedures described in the ISO New England Manuals, the amount of Unforced Capacity that it shall be authorized to supply in that or future Obligation Months shall also be increased on a prospective basis in accordance with the schedule set forth in the ISO New England Manuals. New Generators and Generators that have increased their capacity due to changes in their generating equipment may qualify to supply Unforced Capacity on a foregoing basis based upon an Installed Capacity audit test that is performed and reported to the ISO in accordance with the rating process described in the ISO New England Manuals. Any ICAP Resource, except as noted in Section III.8.3.11 of this Market Rule, which fails on a daily basis to schedule, offer or bid, or declare to be unavailable in the Day-Ahead Energy Market an amount of energy equal to its Installed Capacity during the Summer Capability Period or its Installed Capacity during the Winter

Capability Period, as applicable, as established through testing in accordance with the ISO New England Manuals, rounded down to the nearest whole MW, is subject to sanctions pursuant to Appendix B of this Market Rule. If an entity other than the owner of the ICAP Resource that is providing Unforced Capacity is responsible for fulfilling submission of Supply Offer or Demand Bid data, scheduling, and notification requirements, the owner and that entity must designate to the ISO which of them will be responsible for complying with the scheduling, Supply Offer or Demand bid data submission, and notification requirements. The designated entity shall be subject to sanctions pursuant to Appendix B of this Market Rule.

III.8.3.9 Curtailment of External Transactions. Any Unforced Capacity that is not out of service or scheduled in the Day-Ahead Energy Market may be scheduled to supply energy for use in External Transactions provided, however, that such External Transactions shall be subject to curtailment within the hour, consistent with ISO New England Manuals. Such curtailment shall not exceed the Installed Capacity Equivalent committed to the New England Control Area. If an ICAP Resource's External Transaction is Curtailed in-hour to resolve a reserve shortage within the New England Control Area, the Market Participant scheduling such transaction shall be paid, for the remainder of the hour, the Real-Time generator nodal price. New England will only recall External Transactions associated with a non-ICAP Resources due to unavailability of the resource backing that transaction, or in accordance with system emergency procedures as defined in Section II of the Transmission, Markets and Services Tariff.

III.8.3.10 [Reserved.]

III.8.3.11 Special Case Resources.

(a) **Limited Energy Resources.** A Limited Energy Resource may qualify as an ICAP Resource if it offers or Self-Schedules its Installed Capacity Equivalent into the Day-Ahead Energy Market each day and if it is able to provide the energy equivalent of the Unforced Capacity in accordance with the rating process set forth in the ISO New England Manuals. Limited Energy Resources shall also offer an Economic Maximum Limit, designating desired operating limits. Limited Energy Resources that are not scheduled in the Day-Ahead Energy Market to operate at a level above their bid-in Economic Maximum Limit may be called in Real-Time pursuant to a manual intervention by

ISO dispatchers, who will account for the fact that Limited Energy Resource may not be capable of responding.

(b) **Intermittent Power Resources.** Intermittent Power Resources may qualify as ICAP Resources without having to comply with the daily bidding and scheduling requirements set forth in Section III.8.3.7 of this Market Rule and may claim up to their Installed Capacity as Unforced Capacity in accordance with the rating procedures set forth in the ISO New England Manuals. To qualify as ICAP Resources, Intermittent Power Resources shall comply with the notification requirements of Section III.8.3.7(a)(iii) of this Market Rule. In calculating

Unforced Capacity for an Intermittent Power Resource, the historical capacity factor will be adjusted to remove the effects of outages in accordance with the ISO New England Manuals.

III.8.4 Unforced Capacity Auctions.

III.8.4.1 General Auction Requirements. The ISO will administer Unforced Capacity auctions to accommodate Market Participant's efforts to enter into Unforced Capacity transactions and to give Market Participants an opportunity to satisfy their Unforced Capacity obligations. The ISO shall conduct regular auctions at the times specified in this Section and the ISO New England Manuals. Unforced Capacity purchased in Unforced Capacity auctions may not be sold for the purposes of meeting Installed Capacity requirements imposed by operators of external Control Areas. Offers to sell and bids to purchase Unforced Capacity shall be made in $/kw-month for the time period appropriate to the auction. The ISO shall impose no limits on bids or offers in any auction, except to the extent required by any applicable market mitigation measures. All Market Participants may offer to sell into the ISO-administered Unforced Capacity auctions at their discretion. The ISO New England Manuals shall specify the dates by which the ISO will post the results of Unforced Capacity auctions. The ISO New England Manuals shall ensure that there are at least four business days between the times that auction results are posted and the dates that Market Participants are required to demonstrate that they have procured sufficient Unforced Capacity to cover their Unforced Capacity obligations pursuant to Section III.8.2.2 of this Market Rule.

III.8.4.2 UCAP Monthly Auctions. Monthly Auctions will be held each Obligation Month during which Unforced Capacity may be purchased and sold for the forthcoming month, and any other month as specified in the ISO New England Manuals. The exact dates of each Monthly Auction shall be established in the ISO New England Manuals. Offers to sell and bids to purchase Unforced Capacity in the Monthly Auction shall be made in $/kW-month for the time period appropriate to the auction. The ISO shall impose no limits on bids or offers in the auction, except to the extent required by any applicable market mitigation measures. All Market Participants may offer to sell into Monthly Auctions at their discretion and such offers need not be associated with a specific ICAP Resource. Each Monthly Auction shall establish the Market-Clearing Price for Unforced Capacity for the month in question. In each Monthly Auction, Market Participants that are awarded Unforced Capacity shall pay the Market-Clearing Price for Unforced Capacity. Market Participants selected to supply

Unforced Capacity shall receive the Market-Clearing Price for Unforced Capacity.

III.8.5 Capacity Deficiencies and Deficiency Auctions.

III.8.5.1 Market Participant Deficiencies.

(a) **UCAP Deficiency Auction.** If a Market Participant violates Sections III.8.2.2 or III.8.2.3 of this Market Rule by failing to procure sufficient Unforced Capacity to cover its Unforced Capacity obligation for an Obligation Month, the ISO shall attempt to procure sufficient Unforced Capacity to cover the remainder of the Market Participant's Unforced Capacity obligation for that Obligation Month through a Deficiency Auction. The ISO shall conduct a Deficiency Auction preceding the start of an Obligation Month. The exact date of the Deficiency Auction shall be established in the ISO New England Manuals. The offers used in the Deficiency Auction shall be as follows:

(i) The ISO shall use the sum of all calculated Market Participant deficiencies for the month in question as the total demand in the auction;

(ii) Market Participants shall submit offers for all Unforced Capacity that has not been sold either bilaterally or in the Monthly Auction for the month in question and may submit offers not linked to a specific ICAP Resource;

(iii) In the event that a Market Participant has Unforced Capacity that is not bid into the Deficiency Auction in accordance with Section III.8.5.1(a)(iii) above, the ISO shall enter an offer of $0.00/kW-month for the excess UCAP held by the Market Participant;

(iv) The mandatory offer provisions described in section III.8.5.1(a)(ii) shall not apply to resources that are de-listed from the ICAP market in accordance with the applicable procedures.

(b) **Deficiency Auction Clearing Price.** The clearing price for the Deficiency Auction shall be calculated based on this set of offers and total demand but shall not be permitted to exceed the Deficiency Rate. To the extent all Market Participant deficiencies cannot be met in this auction, the

Unforced Capacity procured in the auction shall be allocated to deficient Market Participants on a proportional basis, and the remaining deficiencies shall be charged in accordance with Section III.8.5.1(c). The ISO shall pay Market Participants with ICAP Resources selected to provide Unforced Capacity the clearing price associated with the Deficiency Auction for such Unforced Capacity. Deficient Market Participants that are awarded Unforced Capacity shall pay to the ISO the clearing price associated with the Deficiency Auction for such Unforced Capacity.

(c) **Additional Deficiency Charges Imposed.** In the event that insufficient resources are available to meet the total demand in the Deficiency Auction, any Market Participants that are still deficient after the completion of a Deficiency Auction shall pay a monthly deficiency charge to the ISO equal to the Deficiency Rate specified in Section III.8.5.1(d) multiplied by the number of MWs by which they are deficient. The ISO shall not reveal the number of MWs that Market Participants are deficient prior to a Deficiency Auction.

(d) **Deficiency Rate.** The Deficiency Rate applied in Section III.8.5.1(c) shall be based on the calculated carrying cost of a peaking capacity unit, adjusted to an Unforced Capacity value. As of the Operations Date, the calculated carrying cost of a simple cycle peaking capacity unit shall be $6.15/kW-month measured on an ICAP basis. The unit-specific equivalent forced outage rate used to convert this charge to a UCAP basis shall be 7.67%, which is the NERC GADS five year EFORd for a Gas Turbine, 50 MW or greater. The Deficiency Rate shall be converted to a UCAP basis by dividing the ICAP rate by the quantity one minus the EFORd. The resulting Deficiency Rate, expressed on a UCAP basis and applied in Section III.8.5.1(c), shall be \$6.66/kW-month.

ISO will allocate any Deficiency Charge revenues to: (a) all Market Participants with a Settlement Obligation for Unforced Capability that are not deficient prior to the Deficiency Auction and (b) all Market Participants with a surplus prior to the Deficiency Auction as follows:

$$\text{Market Participant's Allocation} = \text{Aggregate Deficiency Payments} \times \frac{\text{Market Participant's UCAP Obligation}^{(1)} + \text{Market Participant's UCAP Surplus}}{\text{Aggregate UCAP Obligations}^{(1)} + \text{Aggregate UCAP Surplus}}$$

(1) Only Market Participants who have met their obligation are included.

III.9 Forward Reserve Market

The Forward Reserve Market is a market to procure TMNSR and TMOR on a forward basis to satisfy forward TMNSR and TMOR requirements.

III.9.1 Forward Reserve Market Timing.

A Forward Reserve Auction will be held approximately two months in advance of each Forward Reserve Procurement Period. The Forward Reserve Auction input parameters and assumptions will be evaluated, published and reviewed with Market Participants prior to the Forward Reserve Auction.

III.9.1.1 The Forward Reserve Procurement Periods shall be the Winter Capability Period (October 1 through May 31) or the Summer Capability Period (June 1 through September 30), as applicable.

III.9.1.2 The Forward Reserve Delivery Period shall be hour ending 0800 through hour ending 2300 for each weekday of the Procurement Period excluding those weekdays that are defined as NERC holidays.

III.9.2 Forward Reserve Market Reserve Requirements.

The ISO shall conduct an advance purchase of capability to satisfy the expected Forward Reserve requirements for the system and each Reserve Zone as calculated by the ISO in accordance with the following procedures and as specified more fully in the ISO New England Manuals and ISO New England Administrative Procedures. The Forward Reserve Market Reserve requirements will be specified as part of the Forward Reserve Auction parameters and will be published and reviewed with Market Participants prior to each Forward Reserve Auction.

III.9.2.1 Forward Reserve Market Minimum Reserve Requirements

The Forward Reserve Market minimum requirements for the New England Control Area will be based on the forecast of the first and second contingency supply losses for the next Forward Reserve Procurement Period and will consist of the following:

(i) One half of the forecasted first contingency supply loss will be specified as the minimum TMNSR to be purchased,

(ii) One half of the second contingency supply loss will be specified as the minimum TMOR to be purchased,

(iii) An amount of Replacement Reserve in the form of incremental TMOR will be specified in accordance with the Real-Time Replacement Reserve requirement as described in ISO New England Operating Procedure No. 8, Operating Reserve and Regulation and will be added to the minimum TMOR to be purchased.

The minimum requirements specified above, further adjusted to respect the additional provisions described in Sections III.9.2.2 and III.9.2.3 below, represents the set of requirements that will be input into the Forward Reserve Auction.

III.9.2.2 Minimum Reserve Purchase for "Rest of System"

The Rest of System is the part of the New England Control Area that does not have a locational Reserve requirement. In order to ensure sufficient distribution of Operating Reserves to meet most operational practices, the ISO shall evaluate the historical assignment of reserve Resources and shall determine a minimum "Rest of System" reserve requirement to be procured in the Forward Reserve Market. The "Rest of System" reserve requirement will be 600 MW.

III.9.2.3 Locational Reserve Requirements for Reserve Zones

Locational Reserve requirements will be established for each Reserve Zone. The locational reserve requirements will reflect the need for 30-minute contingency response to provide 2nd contingency protection for each import constrained Reserve Zone. The locational reserve requirements can be satisfied only by Resources that are located within a Reserve Zone and that are capable of providing 30-minute or higher quality reserve products.

The ISO shall establish the locational reserve requirements based on a rolling, two-year historical analysis of the daily peak hour operational requirements for each Reserve Zone for like Forward Reserve Procurement Periods.

These requirements will be aggregated into daily peak hour frequency distribution curves and the MW value at the 95th percentile of the frequency distribution curve for each Reserve Zone will establish the locational requirement.

In the event of a change in the configuration of the transmission system or the addition or retirement of a major generating Resource, the rolling two-year historical analysis will be recalculated on a going forward basis (for use in future auctions).

The modified historical data set will be composed of actual data used in the operation of the reconfigured system and historical (pre-reconfiguration) data adjusted for the impact of the system reconfiguration. Pre-reconfiguration data will be revised by substituting values from the historical data set that are no longer valid with corresponding values used in the operation of the reconfigured system.

The locational reserve requirements will be recalculated using the modified historical data set until the rolling two-year historical data set reflects a common system configuration.

III.9.3 **Forward Reserve Auction Offers** Forward Reserve Auction Offers for TMNSR and TMOR shall be (a) made on a $/MW-month basis, (b) made on a Reserve Zone specific basis, (c) made on a non-Resource specific basis and (d) shall be less than or equal to the Forward Reserve Offer Cap. Forward Reserve Auction Offers shall be submitted to the ISO by Market Participants. The Market Participants are responsible for complying with the requirements of this Section III.9 if the Forward Reserve Auction Offer is accepted.

III.9.4 Forward Reserve Auction Clearing and Forward Reserve Clearing Prices.

The Forward Reserve Auction shall simultaneously clear Forward Reserve Auction Offers to meet the Forward Reserve requirements for the system and each Reserve Zone using a mathematical programming algorithm. The objective of the mathematical programming based Forward Reserve Auction clearing is to minimize the total cost of Forward Reserve procured to meet the Forward Reserve requirements. The Forward Reserve Clearing Price for each Reserve Zone will reflect the cost to serve the next increment of reserve in that Reserve Zone based on the submitted Offers. The Forward Reserve Auction algorithm substitutes higher quality TMNSR for lower quality TMOR to meet system or Reserve Zone TMOR requirements when it is economical to do so provided that no constraints are violated.

The Forward Reserve Auction algorithm shall also utilize excess Forward Reserve in one Reserve Zone to meet the Forward Reserve requirements of another Reserve Zone or the system provided that the Forward Reserve can be delivered such that no constraints are violated. In addition, the Forward Reserve Auction shall apply price cascading such that the Forward Reserve Clearing Price for TMOR in a Reserve Zone is always less than or equal to the Forward Reserve Clearing Price for TMNSR in that Reserve Zone. If there is insufficient supply to meet the Forward Reserve requirements for a Reserve Zone, the Forward Reserve Clearing Price for that Reserve Zone will be set to the Forward Reserve Offer Cap.

Market Participants with cleared Forward Reserve Auction Offers will receive a Forward Reserve Obligation for each Reserve Zone, as applicable, that is equal to the amount of Forward Reserve megawatts cleared for that Market Participant adjusted for internal bilateral transactions that transfer Forward Reserve Obligations. For each Operating Day of the Forward Reserve Procurement Period, prior to the start of the Operating Day, Market Participants must convert their Forward Reserve Obligations into Resource-specific obligations by assigning Forward Reserve MWs to specific eligible Forward Reserve Resources in accordance with procedures set forth in the ISO New England Manuals.

III.9.5 Forward Reserve Resource Eligibility Requirements.

(a) Forward Reserve Resources are off-line or on-line Resources that have been assigned Forward Reserve by Market Participants to meet their Forward Reserve Obligations. To be eligible as a Forward Reserve Resource, a Resource must satisfy the following criteria:

(i) If the Resource is off-line, it must be a Fast Start Generator and have submitted a CLAIM10 or CLAIM30 value as part of its Supply Offer data. The CLAIM10 or CLAIM30 values must have been demonstrated during the previous Forward Reserve Procurement Period through either a response to a Real-Time Dispatch Instruction or a response to a Market Participant requested test (as per Section III.1.11.3(c)(i);

(ii) If the Resource is expected to be on-line during a Forward Reserve Delivery Period, it must be able to produce the energy equivalent to its assigned Forward Reserve Obligation within the timeframe of the assigned Forward Reserve Obligation when operating within its dispatch range;

(iii) If the Resource is an Asset Related Demand, it must have submitted a CLAIM10 or CLAIM30 value as part of its Offer Data and be able to reduce consumption equivalent to its assigned Forward Reserve Obligation within the timeframe of the assigned Forward Reserve Obligation. The CLAIM10 or CLAIM30 values must have been demonstrated during the previous Forward Reserve Procurement Period through either a response to a Real-Time Dispatch Instruction or a response to a Market Participant requested test (as per Section III.1.11.3(c)(i);

(iv) A Resource that has not demonstrated its CLAIM10 or CLAIM30 value during the previous Forward Reserve Procurement Period must demonstrate its CLAIM10 or CLAIM30 value prior to being assigned against a Forward Reserve Obligation.

For the first Forward Reserve Procurement Period, CLAIM10 and CLAIM30 values submitted by the Market Participants will be used subject to verification of reasonableness based on historical performance data;

(v) The Resource must be fully listed as an Installed Capacity Resource during the delivery hour for which it has been assigned;

(vi) The Resource must be able to follow ISO Dispatch Instructions;

(vii) The Resource must have Electronic Dispatch Capability; and

(viii) The Resource must meet the technical requirements associated with the provision of Forward Reserve as specified in ISO New England Operating Procedure No. 14, Technical Requirements For Generation, Dispatchable and Interruptible Loads.

(b) External Resources will be permitted to participate in the Forward Reserve Market when the respective Control Areas implement the technology and processes necessary to support recognition of Operating Reserves from external Resources.

III.9.6 Delivery of Reserve.

III.9.6.1 Dispatch and Energy Bidding of Reserve. Forward Reserve shall be delivered by Forward Reserve Resources by offering the capability into the Real-Time Energy Market by submitting Supply Offers and Demand Bids at or above the Forward Reserve Threshold Price (as calculated pursuant to Section III.9.6.2 of this Market Rule).

The Forward Reserve Threshold Prices shall be set in accordance with the ISO New England Manuals so that Forward Reserve Resource capability has (a) a low probability of being dispatched for energy and (b) a high probability of being held for reserve purposes.

Forward Reserve Resources are scheduled and operated in accordance with Section III.1 of this Market Rule; no distinction is made due to their status as Forward Reserve Resources. Forward

Reserve Resources are eligible to set the Locational Marginal Price in accordance with Section III.2 of this Market Rule.

III.9.6.2 Forward Reserve Threshold Prices. The formula for determining the monthly Forward Reserve Threshold Prices shall be fixed for the duration of the Forward Reserve Procurement Period. The ISO will reevaluate the Forward Reserve Threshold Price level for successive Forward Reserve Auctions on the basis of experience, expected operating conditions and other relevant information.

Forward Reserve Threshold Price: is calculated as the Forward Reserve Heat Rate multiplied by the monthly Forward Reserve Fuel Index.

Forward Reserve Heat Rate: shall be fixed for the duration of the Forward Reserve Procurement Period and announced in the announcement for the Forward Reserve Auction. New Forward Reserve Heat Rates shall be specified for successive auctions.

Forward Reserve Fuel Index: is the monthly fuel index, or combination of monthly indices, applicable to the New England Control Area and specified in the announcement of the Forward Reserve Auction. The monthly Forward Reserve Fuel Index for a Forward Reserve Procurement Period shall be specified prior to the start of each month of the Forward Reserve Procurement Period.

III.9.6.3 Monitoring of Forward Reserve Resources. The Internal Market Monitoring Unit 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 Monitoring Unit shall consult with the Participant in accordance with Market Rule 1, ***Appendix A,*** Section III.A.3. The Internal Market Monitoring Unit 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.

III.9.6.4 Forward Reserve Qualifying Megawatts. Qualifying megawatts are calculated separately on an hourly basis for Forward Reserve Resources supplying Forward Reserve from an off-line state and Forward Reserve Resources supplying Forward Reserve from an on-line state as follows:

Off-line qualifying megawatts. Off-line qualifying megawatts are the amount of capability equal to or below the Economic Maximum Limit for an off-line Forward Reserve Resource offered at or above the Forward Reserve Threshold Price. The generating Resource must satisfy this requirement in the Real-Time Energy Market. In the case of off-line Forward Reserve Resource, the calculation for Forward Reserve Qualifying Megawatts shall include both the energy Supply Offer and a pro-rated amount of Start-Up Fees and No-Load Fees as defined below.

An off-line Forward Reserve Resource must offer its capability so that the following holds:

$$\frac{StartUp}{EcoMax \times 1\ \text{hour}} + \frac{NoLoad}{EcoMax} + Energy\ Offer_i \geq ForwardReserveThresholdPrice$$

where:

StartUp = the generating Resource's cold Start-Up Fee.

NoLoad = the generating Resource's No-Load Fee.

$EnergyOffer_i$ = the generating Resource's Energy Offer for Energy Offer block i.

EcoMax = the Economic Maximum Limit.

On-line qualifying megawatts: is the capability that is less than or equal to the Economic Maximum Limit and above the Economic Minimum Limit that is offered at or above the applicable Forward Reserve Threshold Price by an on-line generating Resource or, is the capability that is less than or equal to the Maximum Consumption Limit and greater than the Minimum Consumption Limit offered at or above the applicable Forward Reserve Threshold Price by a Dispatchable Asset Related Demand Resource. The Forward Reserve Resource must satisfy this requirement in the Real-Time Energy Market. For an on-line generating Resource that has been assigned to meet a Forward Reserve Obligation and has not cleared in the Day-Ahead Energy Market and is operating in a delivery hour as the result of an ISO commitment for VAR or Local Second Contingency Protection, the on-line qualifying megawatts shall be zero.

III.9.6.5 Delivery Accounting. Forward Reserve Delivered Megawatts is the quantity of Forward Reserve delivered in each hour of the Real-Time Energy Market to each Reserve Zone and is calculated as follows.

(a) Forward Reserve Delivered Megawatts for an off-line Forward Reserve Resource are calculated in megawatts for each hour of the Real-Time Energy Market for each Reserve Zone as the minimum of:

(i) the amount, in MW, of Forward Reserve that the off-line generating Resource can provide, based upon operating information provided in the generating Resource's Real-Time Supply Offer,

(ii) Forward Reserve Assigned Megawatts, or

(iii) Forward Reserve Qualifying Megawatts for that Resource (energy at or above the applicable Forward Reserve Threshold Price per Section III.9.6.2), less any previously accounted for Forward Reserve Delivered Megawatts for that Resource.

(b) Forward Reserve Delivered Megawatts for an on-line generating Resource are calculated in megawatts for each hour for each Reserve Zone as the minimum of:

(i) 10 or 30 times the MW/minute ramping rate of the on-line generating Resource, as applicable,

(ii) Forward Reserve Assigned Megawatts, or

(iii) Forward Reserve Qualifying Megawatts for that Resource (MW offered at or above the applicable Forward Reserve Threshold Price per Section III.9.6.2)

less any previously accounted for Forward Reserve Delivered Megawatts for that Resource.

.(c) Forward Reserve Delivered Megawatts for a Dispatchable Asset Related Demand are calculated in megawatts for each hour of the Real-Time Energy Market for each Reserve Zone as the minimum of:

(i) 10 or 30 times the MW/minute ramp rate of the Resource, as applicable,

(ii) the amount of Forward Reserve capability specified in the Resources Demand Bid,

(iii) Forward Reserve Assigned Megawatts, or

(iv) Forward Reserve Qualifying Megawatts for that Resource (MW offered at or above the applicable Forward Reserve Threshold Price per Section III.9.6.2),

less any previously accounted for Forward Reserve Delivered Megawatts for that Resource.

(d) A Forward Reserve Resource’s hourly Forward Reserve Delivered Megawatts for each Reserve Zone is calculated as the sum of the Market Participant’s Resource specific hourly Forward Reserve Delivered Megawatts for each Reserve Zone.

(e) Resource specific Forward Reserve Delivered Megawatts for TMNSR within a Reserve Zone will be applied first to a Market Participant's higher value Forward Reserve Obligation for TMNSR in that Reserve Zone. Any surplus Forward Reserve Delivered Megawatts for TMNSR in that Reserve Zone will be applied to meet the Market Participant's Forward Reserve Obligation for TMOR in that Reserve Zone. Forward Reserve Delivered Megawatts remaining within that Reserve Zone after the Market Participant's Forward Reserve Obligation for that Reserve Zone have been met is available to be applied to the Market Participant's Forward Reserve Obligations in other Reserve Zones provided that the Forward Reserve Delivered Megawatts can be delivered to the other Reserve Zones.

III.9.7 Consequences of Delivery Failure.

III.9.7.1 Real-Time Failure-to-Reserve. A Real-Time Failure-to-Reserve occurs when a Market Participant's Forward Reserve Delivered Megawatts for a Reserve Zone in an hour is less than that Market Participant's Forward Reserve Obligation for that Reserve Zone in that hour. Under these circumstances the Market Participant pays a penalty based upon the Forward Reserve Failure-to-Reserve Penalty Rate and that Market Participant's Forward Reserve Failure-to-Reserve Megawatts.

(a) **<u>Forward Reserve Failure-to-Reserve Megawatts</u>:** A Market Participant's Forward Reserve Failure-to-Reserve Megawatts for TMNSR for a Reserve Zone is defined as, for each hour, the amount

Maximum of [(Market Participant Forward Reserve Obligation for TMNSR for that Reserve Zone – sum of that

Market Participant's Forward Reserve Delivered Megawatts for TMSNR for that Reserve Zone),0].

A Market Participant's Forward Reserve Failure-to-Reserve Megawatts for TMOR for a Reserve Zone is defined as, for each hour, the amount

Maximum of [(Market Participant Forward Reserve Obligation for TMOR for that Reserve Zone – sum of that Market Participant's Forward Reserve Delivered Megawatts for TMOR for that Reserve Zone),0].

(b) **<u>Forward Reserve Failure-to-Reserve Penalties:</u>** A Market Participant's Forward Reserve Failure-to-Reserve Penalty for a Reserve Zone in an hour is defined as:

(i) Forward Reserve Failure-to-Reserve Penalty for TMNSR = Forward Reserve Failure-to-Reserve Penalty Rate x Forward Reserve Failure-to-Reserve Megawatts for TMSNR x [-1],; and

(ii) Forward Reserve Failure-to-Reserve Penalty for TMOR = Forward Reserve Failure-to-Reserve Penalty Rate x Forward Reserve Failure-to-Reserve Megawatts for TMOR x [-1];

Where:

Forward Reserve Failure-to-Reserve Penalty Rate = [1.5 x Forward Reserve Payment Rate]

(c) To extent that a Market Participant has assigned Forward Reserve to a Resource within a Reserve Zone, as defined under Section III.2.7(c), that is on an ISO-approved annual scheduled maintenance outage or that is on a scheduled maintenance outage that has been moved at the ISO's request in accordance with the ISO New England Administrative Procedures, that Market Participant's Forward Reserve Failure-to-Reserve Penalty shall be adjusted by adding the following amount to the previously calculated Forward Reserve Failure-to-Reserve Penalty for that Participant for each applicable hour:

The minimum of (sum of Forward Reserve Assigned MWs associated with Forward Reserve Resources on an approved outage (constrained by the seasonal capability of a Fast Start Generator or the Resource's response rate multiplied by 30 if the Resource is not a Fast Start Generator), Forward Reserve Failure to Reserve Megawatts) x (1.5 x Forward Reserve Payment Rate).

III.9.7.2 Failure-to-Activate Penalties.

Market Participants are required to pay a Failure-to-Activate penalty for each Forward Reserve Resource that fails to activate its Forward Reserve capability when requested to do so by the ISO as part of the real-time contingency dispatch algorithm.

When a Market Participant's Forward Reserve Resource has been determined by the ISO to have failed to activate Forward Reserve, such determination as specified in the ISO New England Manuals and ISO New England Administrative Procedures, that Market Participant shall be required to pay a penalty associated with that Resource as follows:

Forward Reserve Failure-to-Activate Penalty for TMNSR = [Maximum of (Forward Reserve Delivered Megawatts for TMNSR – actual amount of TMNSR energy delivered when activated, 0) x (Forward Reserve Payment Rate for TMNSR + Forward Reserve Failure-to-Activate Penalty Rate)] x [-1]; and

Forward Reserve Failure-to-Activate Penalty for TMOR = [Maximum of (Forward Reserve Delivered Megawatts for TMOR – actual amount of TMOR energy delivered when activated, 0) x (Forward Reserve Payment Rate for TMOR + Forward Reserve Failure-to-Activate Penalty Rate] x [-1].

Where:

Forward Reserve Failure-to-Activate Penalty Rate = Maximum of [2.25 x Forward Reserve Payment Rate, applicable Nodal LMP].

A Forward Reserve Resource that is a Fast Start Generator that fails to activate Forward Reserve through a Failure to Start shall have its Forward Reserve Delivered Megawatts set equal to zero in each subsequent hour in the applicable Forward Reserve Service Period until such time that the Market Participant notifies the ISO that the subject Forward Reserve Resource is capable of providing the Forward Reserve Delivered Megawatts.

III.9.7.3 Known Performance Limitations. The ISO may have reason to believe that a particular Forward Reserve Resource is frequently receiving, or may frequently receive, Forward Reserve payments for a portion or all of its capability that is not capable of activating the Forward TMNSR Assigned Megawatts or the Forward TMOR Assigned Megawatts. When the ISO believes there is such a limited Forward Reserve Resource, the ISO shall contact and confer with the affected Market Participant before taking any action.

(a) The ISO will, whenever practicable, contact the affected Market Participant of the Forward Reserve Resource to request an explanation of the relevant resource Offer Data;

(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 Forward Reserve payments are consistent with Forward Reserve Resource capabilities, no further action will be taken; and

(c) If no agreement is reached, or an acceptable explanation is not provided, the Market Participant may request a Resource performance audit as specified in ISO New England Manuals. If the Forward Reserve Resource fails the performance audit or the Market Participant refuses to request a Resource performance audit, the ISO may take remedial action. Remedial actions may include, but are not limited to: (i) redeclaration, by the ISO, of any relevant operational Offer Data parameter, or (ii) removing the asset or the relevant portion of the asset's capability to provide Forward Reserve on a going-forward basis.

III.9.8 Forward Reserve Credits. Payment for Forward Reserve is based upon a Market Participant's Final Forward Reserve Obligation and the applicable Forward Reserve Clearing Prices. The ISO shall calculate these credits on an hourly basis for each Reserve Zone as follows:

(a) Final Forward Reserve Obligations for TMNSR and TMOR for each Market Participant are calculated for each Reserve Zone for each hour as follows:

(i) Final Forward Reserve Obligation = minimum [Forward Reserve Obligation, Forward Reserve Delivered Megawatts]

(b) Market Participant Forward Reserve Credit for TMNSR = Final Forward Reserve Obligation for TMNSR x applicable hourly Forward Reserve Payment Rate for TMNSR;

where,

the hourly Forward Reserve Payment Rate for TMNSR is equal to maximum of [(applicable monthly Forward Reserve Clearing Price for TMNSR – that month's Market-Clearing Price for Unforced Capacity, as calculated in accordance with Section III.8.4.2), 0] divided by the hours in the month associated with the on-peak period.

(c) Market Participant Forward Reserve Credit for TMOR =

Final Forward Reserve Obligation for TMOR x applicable

hourly Forward Reserve Payment Rate for TMOR;

where,

the hourly Forward Reserve Payment Rate for TMOR is equal to maximum of [(applicable monthly Forward Reserve Clearing Price for TMOR – that month's Market-Clearing Price for Unforced Capacity, as calculated in accordance with Section III.8.4.2), 0] divided by the hours in the month associated with the on-peak period.

III.9.9 Forward Reserve Charges For each hour, the ISO will allocate the total of the Forward Reserve Credits, Forward Reserve Failure-to-Reserve Penalties, Forward Reserve Failure-to-Activate Penalties and Forward Reserve Obligation Charges for each Load Zone that are calculated separately for TMNSR and TMOR, to each Market Participant for each hour, as follows:

Forward Reserve $\text{Charge}_{k,i}$ = [Reserve Charge Allocation $\text{MWs}_{k,i}$] x [FR_CHRG_RT_i] x [-1]

Where:

Forward Reserve $\text{Charge}_{k,i,}$ is Market Participant *k's* Forward Reserve Charge for Load Zone *i* for TMNSR or TMOR, as applicable;

Reserve Charge Allocation MWs = Market Participant *k*'s Real Time Load Obligation in Load Zone *i* adjusted for Market Participant *k*'s Dispatchable Asset Related Demand MWs in Load Zone *i* that are designated for real-time reserves,

FR_CHRG_RT_i = [[FR_SUP_PMNT] / [FR_P_WTD_LD_OB]] x [P_RATIO_i] for TMNSR or TMOR, as applicable;

FR_P_WTD_LD_OB = $\sum_i$ [Reserve Charge Allocation MWs_i] x [P_RATIO_i] for TMNSR or TMOR, as applicable;

[FR_SUP_PMNT] = The total over all Load Zones of Forward Reserve Credits for TMNSR or TMOR plus the total over all Load Zones of Forward Reserve Failure-to Reserve Penalties for TMNSR or TMOR plus the total over all Load Zones of Forward Reserve Failure-to-Activate Penalties for TMNSR or TMOR, plus the total over all Load Zones of Forward Reserve Failure-to-Activate Penalties for TMNSR or TMOR, plus the total over all Load Zones of the Forward Reserve Obligation Charges for TMNSR or TMOR, as applicable;

$FR\_P\_RATIO_i$ is the ratio of the Forward Reserve Clearing Prices in Load Zone *i* for TMNSR, or TMOR, as applicable, to the Forward Reserve Clearing Prices in the Reference Load Zone for TMNSR, or TMOR, as applicable. To the extent that a Load Zone contains more than one Reserve Zone, that Load Zone's Forward Reserve Clearing Price shall be the Forward Reserve Auction Reserve Zone cleared MW weighted average of the Reserve Zone Forward Reserve Clearing Prices in that Load Zone;

The Reference Load Zone is the Load Zone with the minimum, non-zero Forward Reserve Clearing Price for TMNSR or TMOR, as applicable.

III.10 Real-Time Reserve

The ISO shall use a joint optimization dispatch algorithm to serve Real-Time Energy Market requirements and meet Real-Time Operating Reserve requirements based on a least-cost security constrained economic dispatch. The Real-Time dispatch algorithm will designate Resources to meet the Energy requirements and will designate Resources to meet the Operating Reserve requirements of the New England Control Area.

III.10.1 Provision of Operating Reserve in Real-Time

For each Market Participant for each hour, the ISO will determine each Market Participant's provision of Operating Reserve in Real-Time. To accomplish this, the ISO will perform calculations to determine the following.

III.10.1.1 Real-Time Reserve Designation

Each Market Participant shall have for each hour and for each eligible generating Resource capable of providing Operating Reserve a Real-Time Reserve Designation, in megawatts, equal to the amounts of Operating Reserve designated by the ISO to that Resource in Real-Time adjusted downward after-the-fact, if necessary, to account for differences in actual Resource output based upon revenue quality meter readings and the estimated Resource output utilized to determine the amount of Real-Time Reserve Designation. Each Market Participant shall have for each hour and for each eligible Asset Related Demand Resource capable of providing Operating Reserve a Real-Time Reserve Designation, in megawatts, equal to the amounts of Operating Reserve designated by the ISO to that Resource in Real-Time adjusted downward after-the-fact, if necessary, to account for differences in actual Resource consumption based upon revenue quality meter readings and the estimated Resource consumption utilized to determine the amount of Real-Time Reserve Designation. Resource eligibility to provide Operating Reserve shall be specified in the ISO New England Manuals.

III.10.2 Real-Time Reserve Credits

For each Market Participant for each hour, the ISO will determine a credit for provision of Operating Reserve in Real-Time.

(a) A Market Participant's Resource specific Real-Time Reserve Credit for TMSR shall be equal to that Market Participant's Resource specific Real-Time Reserve Designation for TMSR multiplied by the Real-Time Reserve Clearing Price for TMSR. The Real-Time Reserve Credit for TMSR associated with a Load Zone shall be equal to the sum of all Market Participants' Resource specific Real-Time Reserve Credits for TMSR in that Load Zone.

(b) A Market Participant's Resource specific Real-Time Reserve Credit for TMNSR shall be equal to that Market Participant's Resource specific Real-Time Reserve Designation for

TMNSR multiplied by the Real-Time Reserve Clearing Price for TMNSR. The Real-Time Reserve Credit for TMNSR associated with a Load Zone shall be equal to the sum of all Market Participants' Resource specific Real-Time Reserve Credits for TMNSR in that Load Zone.

(c) A Market Participant's Resource specific Real-Time Reserve Credit for TMOR shall be equal to that Market Participant's Resource specific Real-Time Reserve Designation for TMOR multiplied by the Real-Time Reserve Clearing Price for TMOR. The Real-Time Reserve Credit for TMOR associated with a Load Zone shall be equal to the sum of all Market Participants' Resource specific Real-Time Reserve Credits for TMOR in that Load Zone.

III.10.3 Real-Time Reserve Charges

For each hour, the ISO will as allocate the sum of the Real-Time Reserve Credits for each Load Zone, calculated separately for TMSR, TMNSR and TMOR, to each Market Participant as follows:

Real-Time Reserve Charge$_{k,i}$ = [Reserve Charge Allocation MW$_{k,I}$] x [RT_CHRG_RT$_i$] x [-1]

Where:

Real-Time Reserve Charge$_{k,i,}$ is Market Participant *k's* Real-Time Reserve Charge for Load Zone *i* for all Real-Time reserve services;

Reserve Charge Allocation MW = Market Participant *k*'s Real Time Load Obligation in Load Zone *i* adjusted for Market Participant *k*'s Dispatchable Asset Related Demand MWs in Load Zone *i* that are designated for Real-Time reserves.

$RT\_CHRG\_RT_i$ = [IRT_SUP_PMNT]/RT_P_WTD_LD_OB] x [RT_P_RATIO] for TMSR, TMNSR, or TMOR, as applicable.

RT_P_WTD_LD_OB = ∑[Reserve Charge Allocation MWsi] x [P_RATIOi] for TMSR, TMNSR or TMOR, as applicable;

[RT_SUP_PMNT] = The total over all Load Zones of Real-Time Reserve Credits for TMSR, TMNSR or TMOR, as applicable;

RT_P_RATIOi is the ratio of the Real Time Reserve Clearing Price in Load Zone i for TMSR, TMNSR or TMOR, as applicable, to the Real -Time Reserve Clearing Price in the Reference Zone for TMSR, TMNSR or TMOR, as applicable. To the extent that a Load Zone contains more than one Reserve Zone, that Load Zone's Real-Time Reserve Clearing Price for TMSR, TMNSR or TMOR shall be the Real-Time Reserve Designation weighted average of the Reserve Zone Real-Time Reserve Clearing Prices in that Load Zone for TMSR, TMNSR or TMOR, as applicable;

The Reference Load Zone is the Load Zone with the minimum, non-zero Real-Time Reserve Clearing Price for TMSR, TMNSR or TMOR, as applicable.

III.10.4 Forward Reserve Obligation Charges

For each Market Participant with a Forward Reserve Obligation, the ISO will determine a Forward Reserve Obligation Charge for each hour such that a Market Participant will not receive compensation for the provision of both Real-Time Operating Reserve MWs and Forward Reserve MWs for the same reserve service. Forward Reserve Obligation Charges will not be applicable to the Forward Reserve Energy Obligation Credit Megawatts defined below.

III.10.4.1 Forward Reserve Energy Obligation Credit Megawatts

For each hour in which the Day-Ahead nodal Energy LMP and/or the Real-Time nodal Energy LMP are greater than or equal to the Forward Reserve Threshold Price and the Real-Time Clearing Price is greater than zero, the ISO will calculate for each Forward Reserve Resource in each applicable Reserve Zone, the Forward Reserve Energy Obligation Credit Megawatts as the amount, in MW, of that Resource's Forward Reserve Delivered Megawatts that have been scheduled in the Day-Ahead Energy Market and dispatched for energy in Real-Time at a nodal LMP above the Forward Reserve Threshold Price. This MW credit will also include the portion of the Forward Reserve Delivered Megawatts that are dispatched in Real-Time in excess of the Day-Ahead scheduled Megawatts. In the case where the Real-Time nodal LMP includes the effect of the Reserve Constraint Penalty Factor, the Real-Time MWs dispatched above the Day-Ahead MWs will be pro-rated down by the (time-weighted ratio of the non-Reserve Constraint Penalty Factor portion of the hourly Reserve Clearing Price) divided by (the hourly Reserve Clearing Price times the fraction of the hour the Reserve Clearing Price is non-zero). In order to reduce this Credit and reflect only the MWs of the Forward Reserve Delivered Megawatts that are to be credited as Forward Reserve Obligation Charge Megawatts.

III.10.4.2 Forward Reserve Obligation Charge Megawatts

For each Market Participant with a Forward Reserve Obligation, the ISO will determine the Forward Reserve Obligation Charge Megawatts for TMNSR and TMOR in each applicable Reserve Zone as the greater of ((the Final Forward Reserve Obligation minus the sum of the Forward Reserve Energy Obligation Credit Megawatts), 0).

III.10.4.3 Forward Reserve Obligation Charge

The Forward Reserve Obligation Charge will be calculated as follows:

(a) A Market Participant's Forward Reserve Obligation Charge for TMNSR in each Reserve Zone shall be equal to the Market Participant's Forward Reserve Obligation Charge Megawatts for TMNSR in that Reserve Zone multiplied by the Real-Time Reserve Clearing Price for TMNSR in that Reserve Zone multiplied by (-1).

(b) A Market Participant's Forward Reserve Obligation Charge for TMOR in each Reserve Zone shall be equal to the Market Participant's Forward Reserve Obligation Charge Megawatts for TMOR in that Reserve Zone multiplied by the Real-Time Reserve Clearing Price for TMOR in that Reserve Zone multiplied by (-1).

III.11 Gap RFPs For Reliability Purposes

III.11.1 Request For Proposals for Load Response and Supplemental Generation Resources for Reliability Purposes.

(a) Should the ISO determine that a region may have potential critical near-term power supply reliability problems for which no Market Participant has proposed or committed to implement a viable solution (from a timeliness or financial standpoint), the ISO may, after consultation with the Reliability Committee, issue a request for proposals (Gap RFP). The Gap RFP will solicit load response and supplemental generating Resources to maintain near-term reliability in the identified region. For any Gap RFP issued after December 31, 2003, the ISO shall file such Gap RFP with the Commission for approval at least 60 days prior to its issuance. The filing shall include proposed Gap RFP terms and conditions and shall explain why market incentives were unable to solicit a market response in the absence of the Gap RFP.

(b) The ISO may enter into contracts awarded pursuant to a competitive Gap RFP process. Bidders that are awarded contracts through the Gap RFP process shall file those contracts with the Commission for approval of the rates to be charged thereunder to the extent that such contracts are for services that are jurisdictional to the Commission. All other contracts entered into pursuant to a Gap RFP shall be filed with the Commission for informational purposes.

(c) The costs for load response and other generation Resources selected through any Gap RFP issued by the ISO pursuant to this Section III.11.1 shall be allocated and charged in the same manner as fixed-cost charges associated with Local Second Contingency Protection Resources under Section III.6.4.4(c) of this Market Rule.

III.12 Intra-hour Transaction Scheduling Pilot Program

III.12.1 **Intra-hour Transaction Scheduling**. In order to optimize the use of transmission ties between New York and New England, the ISO and New York ISO ("NYISO") are investigating alternatives to facilitate the exchange of energy between the New York Control Area and the New England Control Area. The alternatives being considered are revisions to processes and procedures that would facilitate transactions between Participants and/or facilitate transactions between the ISOs based upon price differentials. The goal of this effort is to improve efficiency between both markets.

III.12.2 **Pilot Program.** The ISO and NYISO have developed an initial pilot program (the "Pilot") to study the operational impacts of the implementation of intra-hour exchanges of energy based upon price differentials.

III.12.3 **Pilot Objectives.** The objectives of the Pilot are as follows:

- To identify operations issues associated with intra-hour short term exchanges of energy between Control Areas;
- To evaluate tools and data needed to support intra-hour short-term exchanges of energy;
- To observe the effects of intra-hour exchanges of energy on proxy bus prices;
- To limit undesirable effects on normal system and market operations; and
- To gather other information that may be useful in the development of a permanent mechanism or an alternative program.

III.12.4 **Notice**. The ISO shall notify Participants fourteen (14) days in advance of the commencement of the Pilot via a "Special Notice" posted on the ISO's website.

III.12.5 **Implementation.** The Pilot shall be implemented by the ISO in accordance with the Intra-hour Transaction Scheduling Pilot Program Description posted on the ISO's website.

III.12.6 **Settlement of Pilot Transactions.** The aggregate net hourly charges or credits attributable to the purchase or sale of energy pursuant to this Section III.12 shall be segregated as an ISO market development expense and amortized broadly by the ISO over a three year period

III.12.7 **Effectiveness.** This Section III.12 will be effective from the Operations Date through April 30, 2005.

Sheet Nos. 7312 through 7399 are reserved for future use.