

## ***ARTICLE 2***

### ***DEFINITIONS***

#### **2.0 Definitions**

The following definitions are applicable to the ISO Services Tariff:

#### **2.1 Actual Energy Injections**

Energy injections which are measured using a revenue-quality real-time meter.

#### **2.1.1 Actual Energy Withdrawals**

Energy withdrawals which are either: (1) measured with a revenue-quality real-time meter; (2) assessed (in the case of Load Serving Entities ("LSEs") serving retail customers where withdrawals are not measured by revenue-quality real-time meters) on the basis provided for in a Transmission Owner's retail access program; or (3) calculated (in the case of wholesale customers where withdrawals are not measured by revenue-quality real-time meters), until such time as revenue - quality real-time metering is available on a basis agreed upon by the unmetered wholesale customers.

#### **2.1.2 Advance Reservation**

(1) A reservation of transmission service over the Cross-Sound Scheduled Line that is obtained in accordance with the applicable terms of Schedule 18 and the Schedule 18 Implementation Rule of the ISO New England Inc. Transmission, Markets and Services Tariff, or in accordance with any successors thereto; or

(2) A right to schedule transmission service over the Neptune Scheduled Line that is

obtained in accordance with the rules and procedures established pursuant to Section ~~44B38~~ of the PJM Interconnection LLC Open Access Transmission Tariff and set forth in a separate service schedule under the PJM Interconnection LLC Open Access Transmission Tariff; ~~or-~~

(3) A right to schedule transmission service over the Linden VFT Scheduled Line that is obtained in accordance with the rules and procedures established pursuant to Section ~~44B38~~ of the PJM Interconnection LLC Open Access Transmission Tariff and set forth in a separate service schedule under the PJM Interconnection LLC Open Access Transmission Tariff.

## 2.2 Adverse Conditions

Those conditions of the natural or man-made environment that threaten the adequate reliability of the NYS Power System, including, but not limited to, thunderstorms, hurricanes, tornadoes, solar magnetic flares and terrorist activities.

## **2.82 ISO Market Power Monitoring Program**

The monitoring program approved by the Commission and administered by the ISO designed to monitor the possible exercise of market power in ISO Administered Markets.

## **2.83 ISO OATT**

The ISO Open Access Transmission Tariff.

## **2.84 ISO Procedures**

The procedures adopted by the ISO in order to fulfill its responsibilities under the ISO OATT, the ISO Services Tariff and the ISO Related Agreements.

## **2.85 ISO Related Agreements**

Collectively, the ISO Agreement, the ISO/TO Agreement, the NYSRC Agreement, and the ISO/NYSRC Agreement.

## **2.86 ISO Services Tariff (the "Tariff")**

The ISO Market Administration and Control Area Services Tariff.

## **2.87 ISO Tariffs**

The ISO OATT and the ISO Services Tariff, collectively.

## **2.88 LBMP Market(s)**

The Real-Time Market or the Day-Ahead Market or both.

### **2.88a Limited Control Run-of-River Hydro Resource**

A Generator above 1 MW in size that has demonstrated to the satisfaction of the ISO that its Energy production depends directly on river flows over which it has limited control and that such dependence precludes accurate prediction of the facility's real-time output.

### **2.88b Limited Customer**

An entity that is not a Customer but which qualifies to participate in the ISO's Emergency Demand Response Program by complying with Limited Customer requirements set forth in the ISO Procedures.

### **2.88c Linden VFT Scheduled Line**

VA variable frequency transformers and other transmission facilities that interconnects the NYCA to and the PJM Interconnection LLC Control Area.

### **2.89 LIPA Tax Exempt Bonds**

Obligations issued by the Long Island Power Authority, the interest on which is not included in gross income under the Internal Revenue Code.



### **2.148a Prior Equivalent Capability Period**

The previous same-season Capability Period.

### **2.149 Proxy Generator Bus**

A proxy bus located outside the NYCA that is selected by the ISO to represent a typical bus in an adjacent Control Area and for which LBMP prices are calculated. The ISO may establish more than one Proxy Generator Bus at a particular Interface with a neighboring Control Area to enable the NYISO to distinguish the bidding, treatment and pricing of products and services at the Interface.

### **2.150 PSC**

The Public Service Commission of the State of New York or any successor agency thereto.

### **2.151 PSL**

The New York Public Service Law, Public Service Law § 1 et seq. (McKinney 1989 & Supp. 1997-98).

### **2.151.01 Qualified Non-Generator Voltage Support Resource**

A resource that is neither a Generator nor a synchronous condenser but that is capable of providing the ISO with Reactive Power on a dynamic basis, that is energized and under the operational control of the ISO, or a Transmission Owner, or an External Control Area operator, that meets the resource-specific technical and testing criteria specified in the ISO Procedures, and that is ineligible to receive Reactive Power compensation other than as a Qualified Non-Generator Voltage Support Resource. The Cross-Sound Scheduled Line shall be a Qualified Non-Generator Voltage Support Resource, provided that it meets the technical and testing criteria in the ISO Procedures.

### **2.151.1 Quick Start Mode**

The setting of a block of generator units capable of remote start-up by a Transmission Owner so that it can synchronize and reach full output within fifteen (15) minutes.

### **2.151.2 Quick Start Reserves**

Capacity of a block of generator units that is set to Quick Start Mode by request of a Transmission Owner.

### **2.151a Ramp Capacity**

The amount of change in the Desired Net Interchange that generation located in the NYCA can support at any given time. Ramp capacity may be calculated for all Interfaces between the NYCA and neighboring Control Areas as a whole or for any individual Interface between the NYCA and an adjoining Control Area.

### **2.151b RCRR TCC:**

A zone-to-zone TCC created when a Transmission Owner with a RCRR exercises its right to convert the RCRR into a TCC pursuant to Section 6.3 of Part IV of Attachment B of this Tariff.

### **2.152 Reactive Power (MVA<sub>r</sub>)**

The product of voltage and the out-of-phase component of alternating current. Reactive Power, usually measured in MVA<sub>r</sub>, is produced by capacitors (synchronous condensers), Qualified Non-Generator Voltage Support Resources, and over-excited Generators and absorbed by reactors or under-excited Generators and other inductive devices including the inductive portion of Loads.

### **2.153 Real Power Losses**

The loss of Energy, resulting from transporting power over the NYS Transmission System, between the Point of Injection and Point of Withdrawal of that Energy.

### **2.153a Real-Time Bid**

A Bid submitted into the Real-Time Commitment at least seventy-five minutes before the start of a dispatch hour, or at least eighty-five minutes before the start of a dispatch hour if the

Bid seeks to schedule an External Transaction at the Proxy Generator Buses associated with the Cross-Sound Scheduled Line, ~~or~~ the Neptune Scheduled Line, or the Linden VFT Scheduled Line.

**2.153b Real-Time Commitment (“RTC”)**

A multi-period security constrained unit commitment and dispatch model that co-optimizes to solve simultaneously for Load, Operating Reserves and Regulation Service on a

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least as-bid production cost basis over a two hour and fifteen minute optimization period. The optimization evaluates the next ten points in time separated by fifteen minute intervals. Each RTC run within an hour shall have a designation indicating the time at which its results are posted;- “RTC<sub>00</sub>,” “RTC<sub>15</sub>,” “RTC<sub>30</sub>,” and “RTC<sub>45</sub>” post on the hour, and at fifteen, thirty, and forty-five minutes after the hour, respectively. Each RTC run will produce binding commitment instructions for the periods beginning fifteen and thirty minutes after its scheduled posting time and will produce advisory commitment guidance for the remainder of the optimization period. RTC<sub>15</sub> will also establish External Transaction schedules. Additional information about RTC’s functions is provided in Section 4.4.2 of this ISO Services Tariff.

### **2.153c Real-Time Dispatch (“RTD”)**

A multi-period security constrained dispatch model that co-optimizes to solve simultaneously for Load, Operating Reserves, and Regulation Service on a least-as-bid production cost basis over a fifty, fifty-five or sixty-minute period (depending on when each RTD run occurs within an hour). The Real-Time Dispatch dispatches, but does not commit, Resources, except that RTD may commit, for pricing purposes, Resources meeting Minimum Generation Levels and capable of starting in ten minutes. Real-Time Dispatch runs will normally occur every five minutes. Additional information about RTD’s functions is provided in Section 4.4.3 of this ISO Services Tariff.

Throughout this ISO Services Tariff the term “RTD” will normally be used to refer to both the Real-Time Dispatch and to the specialized Real-Time Dispatch Corrective Action Mode software.

**2.153d Real-Time Dispatch–Corrective Action Mode (“RTD-CAM”)**

A specialized version of the Real-Time Dispatch software that will be activated when it is needed to address unanticipated system conditions. RTD-CAM is described in Section 4.4.4 of this ISO Services Tariff.

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### **2.160a Residual Transmission Capacity**

The transmission capacity determined by the ISO before, during and after the Centralized TCC Auction which is conceptually equal to the following:

Residual Transmission Capacity = TTC - TRM - CBM - GTR - GTCC - ETCNL

The TCCs associated with Residual Transmission Capacity cannot be accurately determined until the Centralized TCC Auction is conducted.

TTC is the Total Transfer Capability that can only be determined after the Residual Transmission Capacity is known.

GTR is the transmission capacity associated with Grandfathered Rights.

GTCC is the transmission capacity associated with Grandfathered TCCs.

ETCNL is the transmission capacity associated with Existing Transmission Capacity for Native Load.

TRM is the Transmission Reliability Margin.

CBM is the Capacity Benefit Margin.

### **2.160b Resource**

An Energy Limited Resource, Generator, Installed Capacity Marketer, Special Case Resource, Intermittent Power Resource, Limited Control Run of River Hydro Resource, municipally-owned generation, System Resource, Demand Side Resource or Control Area System Resource.

### **2.160c Rest of State**

The set of all non-Locality NYCA LBMP Load Zones. As of the 2002-2003 Capability Year, Rest of State includes all NYCA LBMP Load Zones other than LBMP Load Zones J and K.

### **2.161 Safe Operations**

Actions which avoid placing personnel and equipment in peril with regard to the safety of life and equipment damage.

### **2.161a Scheduled Line**

A transmission facility or set of transmission facilities: (a) that provide a distinct scheduling path interconnecting the ISO with an adjacent control area, (b) over which Customers are permitted to schedule External Transactions, (c) for which the ISO separately posts TTC and ATC, and (d) for which there is the capability to maintain the Scheduled Line actual interchange at the DNI, or within the tolerances dictated by Good Utility Practice. Each Scheduled Line is associated with a distinct Proxy Generator Bus. Transmission facilities shall only become Scheduled Lines after the Commission accepts for filing revisions to the NYISO's tariffs that identify a specific set or group of transmission facilities as a Scheduled Line.

The following transmission facilities are Scheduled Lines: the Cross-Sound Scheduled Line, the Neptune Scheduled Line, the Dennison Scheduled Line, ~~and~~ the Northport Norwalk Scheduled Line, and the Linden VFT Scheduled Line.

### **2.161b Scheduling Differential**

A monetary amount, to be defined by the ISO pursuant to ISO Procedures, that is assigned to, or defines Bid Price limits applicable to, Decremental Bids and Sink Price Cap Bids at Proxy Generator Buses, in order to establish an appropriate scheduling priority for the Transaction or Firm Transmission Service associated with each such Bid. The Scheduling Differential shall be no larger than one dollar (\$1.00).

### **2.162 SCUC**

Security Constrained Unit Commitment, described in Section 4.2.4 of this ISO Services Tariff.

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The transmission capacity determined by the ISO before, during and after the Centralized TCC Auction which is conceptually equal to the following:

Residual Transmission Capacity = TTC - TRM - CBM - GTR - GTCC - ETCNL

The TCCs associated with Residual Transmission Capacity cannot be accurately determined until the Centralized TCC Auction is conducted.

TTC is the Total Transfer Capability that can only be determined after the Residual Transmission Capacity is known.

GTR is the transmission capacity associated with Grandfathered Rights.

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### **2.161 Safe Operations**

Actions which avoid placing personnel and equipment in peril with regard to the safety of life and equipment damage.

### **2.161a Scheduled Line**

A transmission facility or set of transmission facilities: (a) that provide a distinct scheduling path interconnecting the ISO with an adjacent control area, (b) over which Customers are permitted to schedule External Transactions, (c) for which the ISO separately posts TTC and ATC, and (d) for which there is the capability to maintain the Scheduled Line actual interchange at the DNI, or within the tolerances dictated by Good Utility Practice. Each Scheduled Line is associated with a distinct Proxy Generator Bus. Transmission facilities shall only become Scheduled Lines after the Commission accepts for filing revisions to the NYISO's tariffs that identify a specific set or group of transmission facilities as a Scheduled Line.

The following transmission facilities are Scheduled Lines: the Cross-Sound Scheduled Line, the Neptune Scheduled Line, the Dennison Scheduled Line, ~~and~~ the Northport Norwalk Scheduled Line, and the Linden VFT Scheduled Line.

### **2.161b Scheduling Differential**

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and Capacity market clearing prices in addition to Congestion Costs.

#### **4.1.4 Scheduling Prerequisites**

Each Customer shall be subject to a minimum Transaction size of one (1) megawatt (“MW”) between each Point of Injection and Point of Withdrawal in any given hour. Each Transaction must be scheduled in whole megawatts.

#### **4.1.5 Communication Requirements for Market Services**

Customers may utilize a variety of communications facilities to access the ISO’s OASIS and Bid/Post System, including but not limited to, conventional Internet service providers, wide area networks such as NERC net, and dedicated communications circuits. Customers shall arrange for and maintain all communications facilities for the purpose of communication of commercial data to the ISO. Each Customer shall be the customer of record for the telecommunications facilities and services its uses and shall assume all duties and responsibilities associated with the procurement, installation and maintenance of the subject equipment and software.

#### **4.1.6 Customer Responsibilities**

All purchasers in the Day-Ahead or Real-Time Markets who withdraw Energy within the NYCA or at an NYCA Interconnection with another Control Area must obtain Transmission Service under the ISO OATT. All Customers requesting service under the ISO Services Tariff to engage in Virtual Transactions must obtain Transmission Service under the ISO OATT.

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All LSEs serving Load in the NYCA must comply with the Installed Capacity requirements set forth in Article 5 of this ISO Services Tariff.

All Customers taking service under the ISO Services Tariff must pay the Market Administration and Control Area Services Charge, as specified in Rate Schedule 1 of this ISO Services Tariff provided, however, that Demand Side Resources offering Operating Reserves or Regulation Service shall pay the Market Administration and Control Area Services Charge based only on their withdrawal billing units.

A Generator or Demand Side Resource with a real time physical operating problem that makes it impossible for it to operate in the bidding mode in which it was scheduled shall notify the NYISO.

All Customers shall comply with all applicable federal, state and local laws, regulations and orders, including orders from the ISO.

#### **4.1.7 Commitment for Reliability**

Generating units committed by the ISO for service to ensure NYCA or local system reliability will recover startup and minimum generation costs not recovered in the Dispatch Day. Payment for such costs shall be determined pursuant to the provisions of Attachment C. Such payments shall be recovered by the ISO from the local customers for whose benefit the generation was committed in accordance with Rate Schedule 1 of the ISO OATT.

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Re-dispatching costs incurred as a result of reductions in Transfer Capability caused by Storm Watch (“Storm Watch Costs”) shall be aggregated and recovered on a monthly basis by the ISO exclusively from Transmission Customers in Load Zone J. The ISO shall calculate Storm Watch Costs by multiplying the real-time Shadow Price of any binding constraint associated with a Storm Watch, by the higher of (a) zero; or (b) the scheduled Day-Ahead flow across the constraint minus the actual real-time flow across the constraint.

#### **4.1.7a Incremental Cost Recovery for Units Responding to Local Reliability Rule I-R3 or I-R5**

Generating units designated pursuant to the New York State Reliability Council’s Local Reliability Rule I-R3 -- Loss of Generator Gas Supply (New York City) or I-R5 -- Loss of Generator Gas Supply (Long Island), as being required to burn an alternate fuel at designated minimum levels based on forecast Load levels in Load Zones J and K (for purposes of this section 4.1.7a, “eligible units”), shall be eligible to recover the variable operating costs associated with burning the required alternate fuel pursuant to the provisions of this section 4.1.7a. For purposes of this section 4.1.7a, the periods of time for which Consolidated Edison invokes Local Reliability Rule I-R3 or LIPA invokes Local Reliability Rule I-R5 and in which the eligible unit burns its required alternate fuel, including that period of time required to move into and out of Rule I-R3 or I-R5 compliance, shall be referred to as the “Eligibility Period.” For Eligibility Periods, the eligible unit shall recover its variable operating costs associated with burning the required alternate fuel if and to the extent that such variable operating costs are not reflected in the reference level for that unit for the hours included in the Eligibility Period, pursuant to ISO procedures. To be recoverable, variable operating costs associated with burning the required alternate fuel must be incurred during an Eligibility Period and must be incurred only because Local Reliability Rule I-R3 or I-R5 was invoked.

Rules for determining: (i) variable operating costs associated with burning the required alternate fuel that would not have been incurred but for the requirement to burn the required alternate fuel as established by Local Reliability Rules I-R3 and I-R5; and (ii) Eligibility Periods shall be specified in ISO Procedures. Payments made by the ISO to the eligible unit to reimburse the variable operating costs paid pursuant to this section 4.1.7a shall be in addition to any LBMP, Ancillary Service or other revenues received as a result of the eligible unit's Day-Ahead or Real-Time dispatch for that day.

There shall be no recovery of costs pursuant to this section 4.1.7a for any hour for which the indexed variable operating costs of the required alternate fuel that is being burned pursuant to Rule I-R3 or I-R5 is less than the indexed variable operating costs for natural gas, as determined by the ISO.

The ISO shall make available for the Transmission Owner in whose subzone the Generator is located: (i) the identity of Generators determined by the ISO to be eligible to recover the variable operating costs associated with burning the required alternate fuel pursuant to the provisions of this section; (ii) the start and stop hours for each claimed Eligibility Period and (iii) the amount of alternative fuel for which the Generator has sought to recover variable operating costs.

## **4.2 Day-Ahead Markets and Schedules**

### **4.2.1 Pre-Scheduled Transaction Requests**

Pre-Scheduled Transaction Requests shall be submitted, pursuant to ISO Procedures, no earlier than eighteen (18) months prior to the Dispatch Day, and shall include hourly Transaction quantities (in MW) at each affected External Interface for each specified Dispatch Day.

Customers may submit Pre-Scheduled Transaction Requests for scheduling in the Day-Ahead Market. The ISO shall determine, pursuant to ISO Procedures, the amount of Total Transfer Capability at each External Interface to be made available for scheduling. The ISO shall evaluate Pre-Scheduled Transaction Requests in the order in which they are submitted for evaluation until the Pre-Scheduled Transmission Request expires, pursuant to ISO Procedures, prior to the close of the Day-Ahead Market for the specified Dispatch Day. Modification of a Pre-Scheduled Transaction Request shall constitute a withdrawal of the original request and a submission of a new Pre-Scheduled Transaction Request. At the request of a Customer, the ISO shall continue to evaluate a Pre-Scheduled Transaction Request that was not accepted for scheduling in the priority order in which the Request was originally submitted until it is either accepted for scheduling, is withdrawn or expires, pursuant to ISO Procedures, prior to the close of the Day-Ahead Market for the specified Dispatch Day. The ISO shall accept Pre-Scheduled Transaction Requests for scheduling, pursuant to ISO Procedures, provided that there is Ramp Capacity, and Transfer Capability at each affected External Interface, available in the NYCA for each hour requested. If Ramp Capacity or Transfer Capability, on the designated External Interface, is unavailable in the NYCA for any hour of the Pre-Scheduled Transaction Request, the request shall not be scheduled. The ISO shall confirm the Transaction with affected Control Areas, as necessary, pursuant to ISO Procedures and may condition acceptance for scheduling on such confirmation.

The ISO shall provide the requesting Customer with notice, as soon as is practically possible, as to whether the Pre-Scheduled Transaction Request is accepted for scheduling and, if it is not scheduled, the ISO shall provide the reason.

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The ISO shall reserve Ramp Capacity, and Transfer Capability on affected Interfaces, for each Pre-Scheduled Transaction. The ISO shall evaluate requests to withdraw Pre-Scheduled Transactions pursuant to ISO Procedures. The ISO shall submit Pre-Scheduled Transactions to the appropriate LBMP Market for the designated Dispatch Day.

Prescheduled Transactions that are submitted for scheduling in the Day-Ahead Market shall be assigned a Decremental Bid or Sink Price Cap Bid, as appropriate, to provide the highest scheduling priority available.

Prescheduled Transactions may not be scheduled at Proxy Generator Buses that are associated with Scheduled Lines.

#### **4.2.2 Day-Ahead Load Forecasts, Bids and Bilateral Schedules**

##### **A. General Customer Forecasting and Bidding Requirements**

By 5 a.m., on the day prior to the Dispatch Day (or by 4:50 a.m. for Eligible Customers seeking to schedule External Transactions at the Proxy Generator Buses associated with the Cross-Sound Scheduled Line, ~~or~~ the Neptune Scheduled Line, or the Linden VFT Scheduled Line): (i) All LSEs serving Load in the NYCA shall provide the ISO with Day-Ahead and seven (7) day Load forecasts; and (ii)

#### **4.4 Real-Time Markets and Schedules**

##### **4.4.1 In-Day Pre-Scheduled Transactions**

For any hour in which the operator of an External Control Area informs the ISO that it must call on a Supplier located in the NYCA to provide the External Control Area with Energy, and that Supplier has previously committed to provide installed capacity to the External Control Area, then the ISO shall ensure, to the extent possible, that the required quantity of Energy will flow to the External Control Area in the hour. If the Supplier has already submitted an Export to the External Control Area for evaluation by the ISO, the ISO shall treat the Export as an in-day Pre-Scheduled Transaction. Such a Transaction shall be assigned a Sink Price Cap Bid that provides the highest scheduling priority available. If the Supplier has not previously submitted an Export for evaluation by the ISO it shall immediately submit such a bid into RTC. The ISO shall schedule the proposed Export as an in-day Pre-Scheduled Transaction, with the highest scheduling priority available, unless there is no Ramp Capacity or Transfer Capability on the relevant External Interface, in which case the Export will not be scheduled. To the extent that Ramp Capacity or Transfer Capability are available to support only a portion of an in-day Pre-Scheduled Transaction the ISO will schedule that portion of the Transaction.

In-day Pre-Scheduled Transactions will only be subject to Curtailment in the same limited circumstances as other Pre-Scheduled Transactions.

In-day Pre-Scheduled Transactions may not be scheduled at Proxy Generator Buses that are associated with Scheduled Lines.

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#### **4.4.2 Real-Time Commitment (“RTC”)**

##### **A. Overview**

RTC will make binding unit commitment and de-commitment decisions for the periods beginning fifteen minutes (in the case of Resources that can respond in ten minutes) and thirty minutes (in the case of Resources that can respond in thirty minutes) after the scheduled posting time of each RTC run, will provide advisory commitment information for the remainder of the two and a half hour optimization period, and will produce binding schedules for External Transactions to begin at the start of each hour. RTC will co-optimize to solve simultaneously for all Load, Operating Reserves and Regulation Service requirements and to minimize the total as-bid production costs over its optimization timeframe. RTC will consider SCUC’s Resource commitment for the day, load and loss forecasts that RTC itself will produce each quarter hour, binding transmission constraints, and all Real-Time Bids and Bid parameters submitted pursuant to Section 4.4.2.B below.

##### **B. Bids and Other Requests**

After the Day-Ahead schedule is published and no later than seventy-five (75) minutes before each hour; (or no later than eighty-five minutes before each hour for ~~bids~~Bids to schedule External Transactions at the Proxy Generator Buses associated with the Cross-Sound Scheduled Line, ~~or the Neptune Scheduled Line,~~ or the Linden VFT Scheduled Line), Customers may submit Real-Time Bids into RTC for real-time evaluation.

##### **1. Real-Time Bids to Supply Energy and Ancillary Services**

Eligible Customers may submit new or revised Bids to supply Energy, Operating Reserves and/or Regulation Service. Customers that submit such Bids may specify different Bid



parameters in RTC than they did Day-Ahead. ISO-Committed Fixed Generators, ISO-Committed Flexible Generators and Demand Side Resources, and Self-Committed Flexible Generators may not increase their Day-Ahead Incremental Energy Bids that are applicable to any portion of their Capacity that was scheduled Day-Ahead, and may not increase their Minimum Generation Bids, or Start-Up Bids, for any hour in which they received a Day-Ahead Energy schedule. Bids to supply Energy or Ancillary Services shall be subject to the rules set forth in Section 4.2.2 above and in Attachment D to this ISO Services Tariff.

Generators that did not submit a Day-Ahead Bid for a given hour may offer to be ISO-Committed Flexible, Self-Committed Flexible, Self-Committed Fixed or, with ISO approval, as ISO-Committed Fixed in real-time. Demand Side Resources that did not submit a Day-Ahead Bid to provide Operating Reserves or Regulation Service for a given hour or that submitted a Day-Ahead Bid to provide Operating Reserves or Regulation Service but did not receive a Day-Ahead schedule for a given hour may offer to provide Operating Reserves or Regulation Service as ISO-Committed Flexible for that hour in the Real-Time Market provided, however, that the Demand Side Resource shall have an Energy price Bid no lower than \$75 /MW hour.

Generators that submitted a Day-Ahead Bid but did not receive a Day-Ahead schedule for a given hour may change their bidding mode for that hour to be ISO-Committed Flexible, Self-Committed Flexible, Self-Committed Fixed or, with ISO approval, ISO-Committed Fixed in real-time without restriction.

Generators that received a Day-Ahead schedule for a given hour may not change their

bidding mode between Day-Ahead and real-time provided, however, that Generators that were scheduled Day-Ahead in Self-Committed Fixed mode may switch, with ISO approval, to ISO-Committed Fixed bidding mode in real-time. Generators that were scheduled Day-Ahead in ISO-Committed Fixed mode will be scheduled as Self-Committed Fixed in the Real-Time Market unless, with ISO approval, they change their bidding mode to ISO-Committed Fixed.

A Generator with a real time physical operating problem that makes it impossible for it to operate in the bidding mode in which it was scheduled Day-Ahead should notify the NYISO.

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Generators and Demand Side Resources may not submit separate Operating Reserves Availability Bids in real-time and will instead automatically be assigned a real-time Operating Reserves Availability Bid of zero for the amount of Operating Reserves they are capable of providing in light of their response rate (as determined under Rate Schedule 4).

**2. Bids Associated with Internal and External Bilateral Transactions**

Customers may seek to modify Bilateral Transactions that were previously scheduled Day-Ahead or propose new Bilateral Transactions, including External Transactions, for economic evaluation by RTC. Bids associated with Internal Bilateral Transactions shall be subject to the rules set forth above in Section 4.2.2(G).

Except as noted in Attachment N to this ISO Services Tariff, Sink Price Cap Bids or Decremental Bids for External Transactions may be submitted into RTC up to seventy five minutes before the hour in which the External Transaction would flow. External Transaction Bids must have a one hour duration, must start and stop on the hour, and must have constant magnitude for the hour. Intra-hour schedule changes, or Bid modifications, associated with External Transactions will not be accommodated.

### **3. Self-Commitment Requests**

Self-Committed Flexible Resources must provide the ISO with schedules of their expected minimum operating points in quarter hour increments. Self-Committed Fixed Resources must provide their expected actual operating points in quarter hour increments or, with ISO approval, bid as an ISO-Committed Fixed Generator.

### **4. ISO-Committed Fixed**

The ability to use the ISO-Committed Fixed bidding mode in the Real-Time Market shall be subject to ISO approval pursuant to procedures, which shall be published by the ISO. Generators that do not have the communications systems, operational control mechanisms or hardware to be able to respond to five-minute dispatch basepoints are eligible to bid as ISO-Committed in the Real-Time Market. Real-Time Bids by ISO-Committed Fixed Generators shall identify variable Energy price Bids, consisting of up to eleven monotonically increasing, constant cost incremental Energy steps, and other parameters described in Attachment D of this ISO Services Tariff and the ISO Procedures. Real-Time Bids by ISO-Committed Fixed Generators shall also include Minimum Generation Bids and hourly Start-Up Bids. ISO-Committed Fixed Bids shall specify that the Generator is offering to be ISO-Committed Fixed.

RTC shall schedule ISO-Committed Fixed Generators.

**C. External Transaction Scheduling**

RTC<sub>15</sub> will schedule External Transactions on an hour-ahead basis as part of its development of a co-optimized least-bid cost real-time commitment. RTC will alert the ISO when it appears that scheduled External Transactions need to be reduced for reliability reasons but will not automatically Curtail them. Curtailment decisions will be made by the ISO, guided by the information that RTC provides, pursuant to the rules established by Attachment B of this ISO Services Tariff and the ISO Procedures.

**D. Posting Commitment/De-Commitment and External Transaction Scheduling Decisions**

Except as specifically noted in Section 4.4.3 and 4.4.4 of this ISO Services Tariff, RTC will make all Resource commitment and de-commitment decisions. RTC will also produce advisory commitment information and advisory real-time prices. RTC will make decisions and post information in a series of fifteen-minute “runs” which are described below.

RTC<sub>15</sub> will begin at the start of the first hour of the RTC co-optimization period and will post its commitment, de-commitment, and External Transaction scheduling decisions no later than fifteen minutes after the start of that hour. During the RTC<sub>15</sub> run, RTC will:

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- (i) Commit Resources with 10-minute start-up times that should be synchronized by the time that the results of the next RTC run are posted so that they will be synchronized and running at their minimum generation levels by that time;
- (ii) Commit Resources with 30-minute start-up times that should be synchronized by the time that the results of the RTC run following the next RTC run are posted so that they will be synchronized and running at their minimum generation levels by that time;
- (iii) De-commit Resources that should be disconnected from the network by the time that the results of the next RTC run are posted so that they will be disconnected by that time;
- (iv) Issue advisory commitment and de-commitment guidance for periods more than thirty minutes in the future and advisory dispatch information;
- (v) Schedule Pre-Scheduled Transaction and economic External Transactions to run during the entirety of the next hour; and
- (vi) Schedule ISO-Committed Fixed Resources.

All subsequent RTC runs in the hour, i.e., RTC<sub>30</sub>, RTC<sub>45</sub>, and RTC<sub>00</sub> will begin executing at fifteen minutes before their designated posting times (for example, RTC<sub>30</sub> will begin in the fifteenth minute of the hour), and will take the following steps.

- (i) Commit Resources with ten-minute start-up times that should be synchronized by the time that the results of the next RTC run are posted so that they will be synchronized and running at that time;

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- (ii) Commit Resources with thirty-minute start-up times that should be synchronized by the time that the results of the RTC run following the next RTC run are posted so that they will be synchronized and running at that time;
- (iii) De-commit Resources that should be disconnected from the network by the time that the results of the next RTC run are posted so that they will be disconnected at that time;
- (iv) Issue advisory commitment, de-commitment, and dispatching guidance for the period from thirty minutes in the future until the end of the RTC co-optimization period;
- (v) Either reaffirm that the External Transactions scheduled by RTC<sub>15</sub> to flow in the next hour should flow, or inform the ISO that External Transactions may need to be reduced; and
- (vi) Schedule ISO-Committed Fixed Resources.

**E. External Transaction Settlements**

RTC<sub>15</sub> will calculate the Real-Time LBMP for all External Transactions if constraints at the interface associated with that External Transaction are binding. In addition, RTC<sub>15</sub> will calculate Real-Time LBMPs at Proxy Generator Buses for any hour in which: (i) proposed economic Transactions over the Interface between the NYCA and the External Control Area that the Proxy Generator Bus is associated with would exceed the Available Transfer Capability for the Proxy Generator Bus or for that Interface; (ii) proposed interchange schedule changes pertaining to the NYCA as a whole

would exceed any Ramp Capacity limits in place for the NYCA as a whole; or (iii) proposed interchange schedule changes pertaining to the Interface between the NYCA and the External Control Area that the Proxy Generator Bus is associated with would exceed any Ramp Capacity limit imposed by the ISO for the Proxy Generator Bus or for that Interface. Finally, Real-Time LBMPs will be determined at certain times at Non-Competitive Proxy Generator Buses and Proxy Generator Buses associated with designated Scheduled Lines that are subject to the Special Pricing Rules as is described in Attachment B to this ISO Services Tariff.

Real-Time LBMPs will be calculated by RTD for all other purposes, including for pricing External Transactions during intervals when the interface associated with an External Transaction is not binding pursuant to Section 4.4.3(B).



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FERC Electric Tariff  
Original Volume No. 2

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$W_i =$  load weighting factor for bus  $i$ .

The zonal LBMPs will be a weighted average of the Load bus LBMPs in the zone. The weightings will be predetermined by the ISO.

**F. Real Time LBMP Calculation Methods for Proxy Generator Buses, Non-Competitive Proxy Generator Buses and Proxy Generator Buses Associated with Designated Scheduled Lines**

1. General Rules

External Generators and Loads can bid into the LBMP Market or participate in Bilateral Transactions. External Generators may arrange Bilateral Transactions with Internal or External Loads and External Loads may arrange Bilateral Transactions with Internal Generators.

The Generator and Load locations for which LBMPs will be calculated will initially be limited to a pre-defined set of buses External to the NYCA. LBMPs will be calculated for each bus within this limited set. The three components of LBMP will be calculated from the results of RTD, or, except as set forth in Sections I.E.2 and I.E.3 below, in the case of a Proxy Generator Bus, from the results of  $RTC_{15}$  during periods in which (1) proposed economic transactions over the Interface between the NYCA and the Control Area with which that Proxy Generator Bus is associated would exceed the Available Transfer Capability for the Proxy Generator Bus or for that Interface, (2) proposed interchange schedule changes pertaining to the NYCA as a whole would exceed any Ramp Capacity limits in place for the NYCA as a whole, or (3) proposed interchange schedule changes pertaining to the Interface between the NYCA and the Control Area with which that Proxy Generator Bus is associated would exceed any Ramp

Capacity limit imposed by the ISO for the Proxy Generator Bus or for that Interface.

**2. Rules for Non-Competitive Proxy Generator Buses**

Real-Time LBMPs for a Non-Competitive Proxy Generator Bus shall be determined as follows. When (i) proposed Real-Time Market economic net Import transactions into the NYCA from the Control Area in which the Non-Competitive Proxy Generator Bus is located would exceed the Available Transfer Capability for the Interface between the NYCA and the Control Area in which the Non-Competitive Proxy Generator Bus is located or would exceed the Available Transfer Capability of the Non-Competitive Proxy Generator Bus, or (ii) proposed interchange schedule changes pertaining to increases in Real-Time Market net imports into the NYCA from the Control Area in which the Non-Competitive Proxy Generator Bus is located would exceed the Ramp Capacity limit imposed by the ISO for the Interface between the NYCA and the Control Area in which the Non-Competitive Proxy Generator Bus is located or would exceed the Ramp Capacity limit imposed by the ISO for the Non-Competitive Proxy Generator Bus, the Real-Time LBMP at the Non-Competitive Proxy Generator Bus will be the higher of (i) the RTC-determined price at that Non-Competitive Proxy Generator Bus or (ii) the lower of the LBMP determined by RTD for that Non-Competitive Proxy Generator Bus or zero.

When (i) proposed Real-Time Market economic net Export Transactions from the NYCA to the Control Area in which the Non-Competitive Proxy Generator Bus is located would exceed the Available Transfer Capability for the Interface between the NYCA and the Control Area in

which the Non-Competitive Proxy Generator Bus is located or would exceed the Available Transfer Capability of the Non-Competitive Proxy Generator Bus, or (ii) proposed interchange schedule changes pertaining to increases in Real-Time Market net Exports from the NYCA to the Control Area in which the Non-Competitive Proxy Generator Bus is located would exceed the Ramp Capacity limit imposed by the ISO for the Interface between the NYCA and the Control Area in which that Non-Competitive Proxy Generator Bus is located or would exceed the Ramp Capacity limit imposed by the ISO for the Non-Competitive Proxy Generator Bus, the Real-Time LBMP at the Non-Competitive Proxy Generator Bus will be the lower of (i) the RTC-determined price at the Non-Competitive Proxy Generator Bus or (ii) the higher of the LBMP determined by RTD for the Non-Competitive Proxy Generator Bus or the Day-Ahead LBMP determined by SCUC for the Non-Competitive Proxy Generator Bus. At all other times, the Real-Time LBMP shall be calculated as specified in Section E.1 above.

### **3. Special Pricing Rules for Scheduled Lines**

Real-Time LBMPs for the Proxy Generator Buses associated with designated Scheduled Lines shall be determined as follows:

When proposed Real-Time Market economic net Import Transactions into the NYCA associated with a designated Scheduled Line would exceed the Available Transfer Capability of the designated Scheduled Line, the Real-Time LBMP at the Proxy Generator Bus associated with the designated Scheduled Line will be the higher of (i) the RTC-determined price at that Proxy Generator Bus or (ii) the lower of the LBMP determined by RTD for that Proxy Generator Bus or zero.

When proposed Real-Time Market economic net Export Transactions from the NYCA associated with a designated Scheduled Line would exceed the Available Transfer Capability of the designated Scheduled Line, the Real-Time LBMP at the Proxy Generator Bus associated with the designated Scheduled Line will be the lower of (i) the RTC-determined price at the Proxy Generator Bus or (ii) the higher of the LBMP determined by RTD for the Proxy Generator Bus or the Day-Ahead LBMP determined by SCUC for the Proxy Generator Bus. At all other times, the Real-Time LBMP shall be calculated as specified in Section E.1 above.

The Cross-Sound Scheduled Line, ~~and~~ the Neptune Scheduled Line, and the Linden VFT Scheduled Line are designated Scheduled Lines.

**4. Method of Calculating Marginal Loss and Congestion Components of Real-Time LBMP at Non-Competitive Proxy Generator Buses and Proxy Generator Buses that are Subject to the Special Pricing Rule for Scheduled Lines**

Under the conditions specified below, the Marginal Losses Component and the Congestion Component of the Real-Time LBMP, calculated pursuant to the preceding paragraphs in subsections 2 and 3, shall be constructed as follows:

When the Real-Time LBMP is set to zero and that zero price was not the result of using the RTD, RTC or SCUC-determined LBMP;

Marginal Losses Component of the Real-Time LBMP =  $LOSSES_{RTC PROXY GENERATOR BUS}$ ;

and

Congestion Component of the Real-Time LBMP =  $-(Energy_{RTC REF BUS} + LOSSES_{RTC PROXY GENERATOR BUS})$ .

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When the Real-Time LBMP is set to the Day-Ahead LBMP:

Marginal Losses Component of the Real-Time LBMP =  $LOSSES_{RTC\ PROXY\ GENERATOR\ BUS}$ ;

and

Congestion Component of the Real-Time LBMP =  $Day\text{-}Ahead\ LBMP_{PROXY\ GENERATOR\ BUS} - (Energy_{RTC\ REF\ BUS} + LOSSES_{RTC\ PROXY\ GENERATOR\ BUS})$ .

where:

$Energy_{RTC\ REF\ BUS}$  = marginal Bid cost of providing Energy at the reference Bus, as calculated by  $RTC_{15}$  for the hour;

$LOSSES_{RTC\ PROXY\ GENERATOR\ BUS}$  = Marginal Losses Component of the LBMP as calculated by  $RTC_{15}$  at the Non-Competitive Proxy Generator Bus or Proxy Generator Bus associated with a designated Scheduled Line for the hour; and

$Day\text{-}Ahead\ LBMP_{PROXY\ GENERATOR\ BUS}$  = Day-Ahead LBMP as calculated by SCUC for the Non-Competitive Proxy Generator Bus or Proxy Generator Bus associated with a designated Scheduled Line for the hour.

## 5. The Marginal Losses Component of LBMP at Proxy Generator Buses

The components of LBMP will be posted in the Day-Ahead and Real-Time Markets as described above, except that the Marginal Losses Component of LBMP will be calculated differently for Internal locations. The Marginal Losses Component of the LBMP at each bus, as described

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above, includes the difference between the marginal cost of losses at that bus and the Reference Bus. If this formulation were employed for an External bus, then the Marginal Losses Component would include the difference in the cost of Marginal Losses for a section of the transmission system External to the NYCA. Since the ISO will not charge for losses incurred Externally, the

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### 3.6 Scheduling Transmission Service for External Transactions

The amount of Firm Transmission Service scheduled Day-Ahead for Bilateral Transactions which designate External Generators to supply Imports or Internal Generators to supply Exports will be equal to the amount of Energy scheduled to be consumed under those Transactions Day-Ahead. The amount of Firm Transmission Service scheduled in the RTC<sub>15</sub> for Bilateral Transactions which designate External Generators to supply Imports or Internal Generators to supply Exports will be equal to the amount of Energy scheduled to be consumed under those Transactions in RTC<sub>15</sub>. The DNI between the NYCA and adjoining Control Areas will be adjusted as necessary to reflect the effects of any Curtailments of Import or Export Transactions. Additionally, any Curtailment or Reductions of schedules for Export Transactions will cause the scheduled amount of Transmission Service to change.

To the extent possible, Curtailments of External Transactions at the Proxy Generator Buses associated with the Cross-Sound Scheduled Line, ~~or~~ the Neptune Scheduled Line, and the Linden VFT Scheduled Line shall be based on the transmission priority of the associated Advance Reservation for use of the Cross-Sound Scheduled Line, ~~or the Neptune Scheduled Line, or the Linden VFT Scheduled Line~~ (as appropriate).

The ISO shall use Decremental Bids supplied by Transmission Customers using External Generators to supply Wheels-Through to determine the amount of Energy those Generators are scheduled Day-Ahead to produce in each hour. This in turn will determine the Firm Transmission Service scheduled Day-Ahead to support those

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The ISO will not schedule a Bilateral Transaction which crosses an Interface between the NYCA and a neighboring Control Area if doing so would cause the DNI to exceed the Transfer Capability of that Interface.

The ISO shall not permit Market Participants to schedule External Transactions over the following eight scheduling paths:

1. External Transactions that are scheduled to exit the NYCA at the Proxy Generator Bus that represents its Interface with the Control Area operated by the Independent Electricity System Operator of Ontario (“IESO”), and to sink in the Control Area operated by PJM Interconnection, LLC (“PJM”);
2. External Transactions that are scheduled to exit the NYCA at the Proxy Generator Buses that represent the NYCA’s common border with the Control Area operated by PJM, and to sink in the Control Area operated by IESO;
3. External Transactions that are scheduled to enter the NYCA at the Proxy Generator Buses that represent the NYCA’s common border with the Control Area operated by PJM, and to source from the Control Area operated by IESO;
4. External Transactions that are scheduled to enter the NYCA at the Proxy Generator Bus that represents the NYCA’s Interface with the Control Area operated by IESO, and to source from the Control Area operated by PJM;
5. Wheels Through the NYCA that are scheduled to enter the NYCA at the Proxy Generator Buses that represent the NYCA’s common border with the Control Area operated by PJM, and to sink in the Control Area operated by the Midwest Independent Transmission System Operator, Inc. (“MISO”);
6. Wheels Through the NYCA that are scheduled to exit the NYCA at the Proxy Generator Buses that represent the NYCA’s common border with the Control Area operated by PJM, and to source from the Control Area operated by the MISO;
7. Wheels Through the NYCA that are scheduled to enter the NYCA at the Proxy Generator Bus that represents the NYCA’s Interface with the Control Area operated by IESO, and to sink in the Control Area operated by the MISO; and
8. Wheels Through the NYCA that are scheduled to exit the NYCA at the Proxy Generator Bus that represents the NYCA’s Interface with the Control Area operated by IESO, and to source from the Control Area operated by the MISO.

External Transactions at the Proxy Generator Buses that are associated with the Cross-Sound Scheduled Line, ~~and the~~ Neptune Scheduled Line, and the Linden VFT Scheduled Line shall also be governed by Attachment N to the ISO Services Tariff.

#### **IV. SALE AND AWARD OF TRANSMISSION CONGESTION CONTRACTS ("TCCs")**

##### **1.0 Overview of the Sales of TCCs**

TCCs will be made available through both (i) the Centralized TCC Auction ("Auction") and Reconfiguration Auction, which will be conducted by the ISO; (ii) Direct Sales by the Transmission Owners, which will be non-discriminatory, auditable sales conducted solely on the OASIS in compliance with the applicable requirements and restrictions set forth in Order No. 889 et seq.; (iii) the conversion of transmission capacity associated with certain Existing Transmission Agreements ("ETAs") pursuant to Section 2A of Part IV of this Attachment B; and (iv) the award of Incremental TCCs pursuant to Section 2C of Part IV of this Attachment B.

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Before each Auction, the ISO shall ensure that all of the following correspond to a simultaneously feasible security constrained Power Flow: (i) existing TCCs that are valid for any part of the duration of any TCCs to be sold in the ~~Centralized TCC Auction, including TCCs that were created pursuant to Sections 2A and 2C of Part IV of this Attachment B and that have certain characteristics specified in Part IV of Attachment B; or (B) Section 2B of Part IV of this Attachment B prior to the previous Centralized TCC Auction;~~ (ii) Grandfathered Rights; and (iii) Original Residual TCCs; and (iv) ETCNL, not previously sold as TCCs that are valid for any part of the duration of any TCCs to be sold in the Centralized TCC Auction. Should infeasibility occur, the TCC Reservations shown in Table 1 of Attachment M of the ISO OATT will be reduced until feasibility is assured, as described in Section 3.0 of this Part IV of this Attachment B.

Before each Centralized TCC Auction, the ISO shall also: (i) convert ETCNL into ETCNL TCCs pursuant to Section 5.0 of this Part IV of this Attachment B, and shall (including the Capacity Reservation Cap provision of Section 5.3), and (ii) allocate RCRRs to Transmission Owners and convert RCRRs into RCRR TCCs pursuant to Section 6.0 of this Part IV of this Attachment B; and (iii) allocate AARs to LSEs and, at the LSE's option, convert them into TCCs pursuant to Section wB of of Part IV this Attachment B.

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RTD, or, except as set forth in Sections I.E.2 and I.E.3 below, in the case of a Proxy Generator Bus, from the results of  $RTC_{15}$  during periods in which (1) proposed economic transactions over the Interface between the NYCA and the Control Area with which that Proxy Generator Bus is associated would exceed the Available Transfer Capability for the Proxy Generator Bus or for that Interface, (2) proposed interchange schedule changes pertaining to the NYCA as a whole would exceed any Ramp Capacity limits in place for the NYCA as a whole, or (3) proposed interchange schedule changes pertaining to the Interface between the NYCA and the Control Area in which that Proxy Generator Bus is associated would exceed any Ramp Capacity limit imposed by the ISO for the Proxy Generator Bus or for that Interface.

## **2. Rules for Non-Competitive Proxy Generator Buses**

Real-Time LBMPs for a Non-Competitive Proxy Generator Bus shall be determined as follows.

When (i) proposed Real-Time Market economic net Import transactions into the NYCA from the Control Area in which the Non-Competitive Proxy Generator Bus is located would exceed the Available Transfer Capability for the Interface between the NYCA and the Control Area in which the Non-Competitive Proxy Generator Bus is located or would exceed the Available Transfer Capability of the Non-Competitive Proxy Generator Bus, or (ii) proposed interchange schedule changes pertaining to increases in Real-Time Market net imports into the NYCA from the Control Area in which the Non-Competitive Proxy Generator Bus is located would exceed the Ramp Capacity limit imposed by the ISO for the Interface between the NYCA and the Control Area in which the Non-Competitive Proxy Generator Bus is located or would exceed the Ramp Capacity limit imposed by the ISO for the Non-Competitive Proxy Generator Bus, the Real-Time LBMP at the Non-Competitive Proxy Generator Bus will be the higher of

(i) the RTC-determined price at that Non-Competitive Proxy Generator Bus or (ii) the lower of the LBMP determined by RTD for that Non-Competitive Proxy Generator Bus or zero.

When (i) proposed Real-Time Market economic net Export Transactions from the NYCA to the Control Area in which the Non-Competitive Proxy Generator Bus is located would exceed the Available Transfer Capability for the Interface between the NYCA and the Control Area in which the Non-Competitive Proxy Generator Bus is located or would exceed the Available Transfer Capability of the Non-Competitive Proxy Generator Bus, or (ii) proposed interchange schedule changes pertaining to increases in Real-Time Market net Exports from the NYCA to the Control Area in which the Non-Competitive Proxy Generator Bus is located would exceed the Ramp Capacity limit imposed by the ISO for the Interface between the NYCA and the Control Area in which that Non-Competitive Proxy Generator Bus is located or would exceed the Ramp Capacity limit imposed by the ISO for the Non-Competitive Proxy Generator Bus, the Real-Time LBMP at the Non-Competitive Proxy Generator Bus will be the lower of (i) the RTC-determined price at the Non-Competitive Proxy Generator Bus or (ii) the higher of the LBMP determined by RTD for the Non-Competitive Proxy Generator Bus or the Day-Ahead LBMP determined by SCUC for the Non-Competitive Proxy Generator Bus. At all other times, the Real-Time LBMP shall be calculated as specified in Section E.1, above.

### **3. Special Pricing Rules for Scheduled Lines**

Real-Time LBMPs for the Proxy Generator Buses associated with designated Scheduled Lines shall be determined as follows:

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When proposed Real-Time Market economic net Import Transactions into the NYCA associated with a designated Scheduled Line would exceed the Available Transfer Capability of the designated Scheduled Line, the Real-Time LBMP at the Proxy Generator Bus associated with the designated Scheduled Line will be the higher of (i) the RTC-determined price at that Proxy Generator Bus or (ii) the lower of the LBMP determined by RTD for that Proxy Generator Bus or zero.

When proposed Real-Time Market economic net Export Transactions from the NYCA associated with a designated Scheduled Line would exceed the Available Transfer Capability of the designated Scheduled Line, the Real-Time LBMP at the Proxy Generator Bus associated with the designated Scheduled Line will be the lower of (i) the RTC-determined price at the Proxy Generator Bus or (ii) the higher of the LBMP determined by RTD for the Proxy Generator Bus or the Day-Ahead LBMP determined by SCUC for the Proxy Generator Bus. At all other times, the Real-Time LBMP shall be calculated as specified in Section E.1 above.

The Cross-Sound Scheduled Line, ~~and~~ the Neptune Scheduled Line, and the Linden VFT Scheduled Line are designated Scheduled Lines.

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**4. Method of Calculating Marginal Loss and Congestion Components of Real-Time LBMP at Non-Competitive Proxy Generator Buses and Proxy Generator Buses that are Subject to the Special Pricing Rule for Scheduled Lines**

Under the conditions specified below, the Marginal Losses Component and the Congestion Component of the Real-Time LBMP, calculated pursuant to the preceding paragraphs in subsections 2 and 3, shall be constructed as follows:

When the Real-Time LBMP is set to zero and that zero price was not the result of using the RTD, RTC or SCUC-determined LBMP;

Marginal Losses Component of the Real-Time LBMP =  $LOSSES_{RTC \text{ PROXY GENERATOR BUS}}$ ;

and

Congestion Component of the Real-Time LBMP =  $-(Energy_{RTC \text{ REF BUS}} + LOSSES_{RTC \text{ PROXY GENERATOR BUS}})$ .

When the Real-Time LBMP is set to the Day-Ahead LBMP:

Marginal Losses Component of the Real-Time LBMP =  $LOSSES_{RTC \text{ PROXY GENERATOR BUS}}$ ;

and

Congestion Component of the Real-Time LBMP =  $Day\text{-Ahead LBMP}_{\text{PROXY GENERATOR BUS}} - (Energy_{RTC \text{ REF BUS}} + LOSSES_{RTC \text{ PROXY GENERATOR BUS}})$ .

where:

$Energy_{RTC \text{ REF BUS}}$  = marginal Bid cost of providing Energy at the reference Bus, as calculated by  $RTC_{15}$  for the hour;

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$Losses_{RTC \text{ PROXY GENERATOR BUS}}$

= Marginal Losses Component of the LBMP as calculated by  $RTC_{15}$  at the Non-Competitive Proxy Generator Bus or Proxy Generator Bus associated with a designated Scheduled Line for the hour; and

Day-Ahead  $LBMP_{PROXY GENERATOR BUS}$

= Day-Ahead LBMP as calculated by SCUC for the Non-Competitive Proxy Generator Bus or Proxy Generator Bus associated with a designated Scheduled Line for the hour.

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## **5. The Marginal Losses Component of LBMP at Proxy Generator Buses**

The components of LBMP will be posted in the Day-Ahead and Real-Time Markets as described above, except that the Marginal Losses Component of LBMP will be calculated differently for Internal locations. The Marginal Losses Component of the LBMP at each bus, as described above, includes the difference between the marginal cost of losses at that bus and the Reference Bus. If this formulation were employed for an External bus, then the Marginal Losses Component would include the difference in the cost of Marginal Losses for a section of the transmission system External to the NYCA. Since the ISO will not charge for losses incurred Externally, the formulation will exclude these loss effects. To exclude these External loss effects, the Marginal Losses Component will be calculated from points on the boundary of the NYCA to the Reference Bus.

The Marginal Losses Component of the LBMP at the External bus will be a weighted average of the Marginal Losses Components of the LBMPs at the Interconnection Points. To derive the Marginal Losses Component of the LBMP at an External location, a Transaction will be assumed to be scheduled from the External bus to the Reference Bus. The Shift Factors for this Transaction on the tie lines into these Interconnection buses, which measure the per-unit effect of flows over each of those tie lines that results from the hypothetical transaction, will provide the weights for this calculation. Since all the power from this assumed Transaction crosses the NYCA boundary, the sum of these weights is unity.

## ATTACHMENT N

### EXTERNAL TRANSACTIONS AT THE PROXY GENERATOR BUSES ASSOCIATED WITH THE CROSS-SOUND SCHEDULED LINE, ~~AND~~ NEPTUNE SCHEDULED LINE, AND LINDEN VFT SCHEDULED LINE

#### 1.0 Supremacy of Attachment N

External Transactions at the Proxy Generator Buses associated with the Cross-Sound Scheduled Line, ~~and~~ the Neptune Scheduled Line, and the Linden VFT Scheduled Line shall be ~~bid~~ Bid and scheduled pursuant to the provisions of the ISO Services Tariff and the ISO OATT, and in accordance with this Attachment N. In the event of a conflict between the provisions of this Attachment N and any other provision of the ISO OATT, the ISO Services Tariff, or any of their attachments and schedules, with regard to External Transactions at the Proxy Generator Buses associated with the Cross-Sound Scheduled Line, ~~or~~ the Neptune Scheduled Line, or the Linden VFT Scheduled Line, the provisions of this Attachment N shall prevail.

#### 2.0 Transmission Reservations on the Cross-Sound Scheduled Line, ~~and~~ the Neptune Scheduled Line, and the Linden VFT Scheduled Line

Customers scheduling External Transactions at the Proxy Generator Buses associated with the Cross-Sound Scheduled Line, ~~or~~ the Neptune Scheduled Line, or the Linden VFT Scheduled Line must first hold an Advance Reservation on the appropriate Scheduled Line sufficient to support the proposed External Transaction. Advance Reservations must be obtained in accordance with (a) the Cross-Sound Scheduled Line release procedures that are set forth in Schedule 18 and the Schedule 18 Implementation Rule of the ISO New England Inc. Transmission, Markets and Services Tariff, or any successors thereto, or (b) the Neptune release procedures that are established pursuant to



Section ~~44B-38~~ of the PJM Interconnection LLC (“PJM”) Open Access Transmission Tariff and set forth in a separate service schedule under the PJM Open Access Transmission Tariff, or (c) the Linden VFT Scheduled Line release procedures that are established pursuant to Section 38[??] of the PJM Interconnection LLC (“PJM”) Open Access Transmission Tariff and set forth in a separate service schedule under the PJM Open Access Transmission Tariff.

Customers that have obtained Advance Reservations and wish to schedule External Transactions at the Proxy Generator Buses associated with the Cross-Sound Scheduled Line, ~~or~~ the Neptune Scheduled Line, or the Linden VFT Scheduled Line must (a) schedule an External Transaction with the ISO by submitting appropriate bids for economic evaluation, and (b) ~~correspondingly~~ schedule a transaction over the Cross-Sound Scheduled Line, ~~or~~ the Neptune Scheduled Line, or the Linden VFT Scheduled Line (as appropriate) in accordance with all applicable tariffs and market rules of the Control Area in which the Scheduled Line is located.

If a Customer scheduling External Transactions at the Proxy Generator Buses that ~~is~~ are associated with the Cross-Sound Scheduled Line, ~~or~~ the Neptune Scheduled Line, or the Linden VFT Scheduled Line inaccurately claims to hold an Advance Reservation or Advance Reservations that are adequate to support its ~~bid~~ Bid(s), or falsely implies that it has an Advance Reservation or Advance Reservations that are adequate to support its ~~bid~~ Bid(s) by scheduling such an External Transaction, the ISO may inform the Commission and take other appropriate action.

### **3.0 Additional Scheduling Rules for the Cross-Sound Scheduled Line, ~~and~~ the Neptune Scheduled Line, and the Linden VFT Scheduled Line**

#### **3.1 Bid Submission and E-Tags for Day-Ahead Transactions**

Customers seeking to Schedule Day-Ahead transactions at the Proxy Generator Bus

associated with the Cross-Sound Scheduled Line, ~~or~~ the Neptune Scheduled Line, or the Linden

~~(a) shall comply~~

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VFT Scheduled Line (a) shall comply with all applicable ISO Procedures, and (b) shall submit ~~bids~~-Bids that reference valid NERC E-Tags for their transaction(s) no later than 10 minutes prior to the close of the DAM.

### **3.2 Bids and E-Tags for Real Time Transactions**

Customers seeking to schedule Real-Time Market transactions at the Proxy Generator Bus associated with the Cross-Sound Scheduled Line, ~~or~~ the Neptune Scheduled Line, or the Linden VFT Scheduled Line (a) shall comply with all applicable ISO Procedures, and (b) shall submit ~~bids~~-Bids that reference valid NERC E-Tags for their transaction(s) at least 85 minutes before the start of each dispatch hour.

### **3.3 E-Tags Shall Each Reference One Advance Reservation ID**

NERC E-Tags for External Transactions at the Proxy Generator Buses associated with the Cross-Sound Scheduled Line, ~~or~~ the Neptune Scheduled Line, or the Linden VFT Scheduled Line shall each reference no more than one (a) Cross-Sound Scheduled Line Advance Reservation ID or “assignment reference number” from the Cross-Sound Cable, LLC node of the ISO-NE OASIS, or (b) assignment reference number or other designation associated with the grant of scheduling rights over the Neptune Scheduled Line or the Linden VFT Scheduled Line (as appropriate).