

## **2.154 Real-Time LBMP**

The LBMPs established through the ISO Administered Real-Time Market.

## **2.155 Real-Time Market**

The ISO Administered Markets for Energy and Ancillary Services resulting from the operation of the RTC and RTD.

### **2.155a Real-Time Minimum Run Qualified Gas Turbine**

One or more gas turbines, offered in the Real-Time Market, which, because of their physical operating characteristics, may qualify for a minimum run time of two hours in the Real-Time Market. Characteristics that qualify gas turbines for this treatment are established by ISO Procedures and include using waste heat from the gas turbine-generated electricity to make steam for the generation of additional electricity via a steam turbine.

### **2.155ba Real-Time Scheduled Energy ~~Injection~~**

The quantity of Energy that a Supplier is directed to inject or withdraw in real-time by the ISO. Injections are indicated by positive Base Point Signals and withdrawals are indicated by negative Base Point Signals. Unless otherwise directed by the ISO, Dispatchable Supplier's Real-Time Scheduled Energy ~~Injection~~ is equal to its RTD Base Point Signal, or, if it is providing Regulation Service, to its AGC Base Point Signal, and an ISO Committed Fixed or Self-Committed Fixed Supplier's Real-Time Scheduled Energy ~~Injection~~ is equal to its ~~stated~~ bid output level in real-time.

### **2.155cb Reconfiguration Auction**

The monthly auction administered by the ISO in which Market Participants may purchase

#### **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 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**

Intermittent Power Resources that depend on wind as their fuel submitting new or revised offers to supply Energy shall bid as ISO-Committed Flexible and shall not include a Minimum Generation Bid or a Start-Up Bid. 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. Additionally, Real-Time Minimum Run Qualified Gas Turbine Customers shall not increase their previously submitted Real-Time Incremental Energy Bids, Minimum Generation Bids, or Start-Up Bids within 135 minutes of the dispatch hour. 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

Issued by: ~~Elaine D. Robinson, Dir. Reg. Affairs~~Stephen G. Whitley, President Effective: May ~~24~~12, 20089  
Issued on: March ~~25~~25, 20089  
~~Filed to comply with order of the Federal Energy Regulatory Commission, Docket No. ER04-230-023, issued July 20, 2006, 116 FERC ¶ 61,043 (2006).~~

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.

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 make all economic commitment/De-Commitment decisions based upon available offers assuming Suppliers internal to the NYCA have a one-hour minimum run time; provided however, Real-Time Minimum Run Qualified Gas Turbines shall be assumed to have a two-hour minimum run time.

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:

Issued by: Elaine D. Robinson, Dir. Reg. Affairs  
Issued on: March 24, 2008

Effective: May 24, 2008



- (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;

Issued by: Mark S. Lynch, President  
Issued on: June 12, 2006

Effective: October 11, 2005

Filed to comply with order of the Federal Energy Regulatory Commission, Docket No. ER04-230-017, issued October 25, 2005.

- (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).

Issued by: Mark S. Lynch, President  
Issued on: March 28, 2007

Effective: June 6, 2007