

**NOTE THAT THESE CHANGES WILL ALSO BE MADE TO ATTACHMENT J OF THE OATT**

New York Independent System Operator, Inc.  
FERC Electric Tariff  
Original Volume No. 2  
Attachment B

Tenth Revised Sheet No. 331  
Superseding Ninth Revised Sheet No. 331

**ATTACHMENT B**

**I. LBMP CALCULATION METHOD**

The Locational Based Marginal Prices (“LBMPs” or “prices”) for Suppliers and Loads in the Real-Time Market will be based on the system marginal costs produced by either the Real-Time Dispatch program, or during intervals when it is activated, the RTD-CAM program (together “RTD”), and during intervals when certain conditions exist at Proxy Generator Buses, the Real-Time Commitment (RTC”) program. LBMPs for Suppliers and Loads in the Day-Ahead Market will be based on the system marginal costs produced by the Security Constrained Unit Commitment (“SCUC”). LBMPs calculated by SCUC and RTD will incorporate the incremental dispatch costs of Resources that would be scheduled to meet an increment of Load and, to the extent that tradeoffs exist between scheduling providers to produce Energy or reduce demand, and scheduling them to provide Regulation Service or Operating Reserves, LBMPs shall reflect the effect of meeting an increment of Load at each location on the Bid Production Cost associated with those services. As such, those LBMPs may incorporate: (i) Availability Bids for Regulation Service or Operating Reserves; or (ii) shortage costs associated with the inability to meet a Regulation Service or Operating Reserves requirement under the Regulation Service Demand Curve and Operating Reserve Demand Curves set forth in Rate Schedules 3 and 4 respectively of this ISO Services Tariff.

Additionally, for the purpose of calculating Real-Time LBMPs when RTD is committing and dispatching **eligible** Resources capable of starting in 10 minutes pursuant to Section 4.4.3 (C) of this ISO Services Tariff (“**eligible Resources**”), RTD shall include in the incremental dispatch cost of each such Resource a start-up cost based on the Start-Up

Bid of each such Resource and shall assume for each such Resource a zero downward response rate.

**A. Real-Time LBMP Calculation Procedures**

For each RTD interval, the ISO shall use the procedures described below in Sections I.A.1(a)-(e) to calculate Real-Time LBMPs, the Marginal Losses Component, and the Congestion

Issued by: William J. Museler, President  
Issued on: January 28, 2005

Effective: February 1, 2005

Filed to comply with order of the Federal Energy Regulatory Commission, Docket No. ER04-230-000, et. al., issued February 11, 2004, 106 FERC ¶ 61,111 (2004).

Component at each Load Zone and Generator bus. In addition, when certain conditions exist, as defined in the table below, the ISO shall employ the special scarcity pricing rules described in Sections I.A.2.a and 2.b. Procedures governing the calculation of LBMPs at External locations are set forth below in Section E.

Issued by: William J. Museler, President  
Issued on: January 28, 2005

Effective: February 1, 2005

Filed to comply with order of the Federal Energy Regulatory Commission, Docket No. ER04-230-000, et. al., issued February 11, 2004, 106 FERC ¶ 61,111 (2004).

the hour) and ending at the first time point in its optimization period (i.e., ten minutes after the hour.) It will produce advisory prices and schedules for its second time point (which is five minutes after the first time point), and advisory prices and schedules for its third, fourth and fifth time points, each of which would be fifteen minutes apart. The RTD run that posts its results at ten minutes after the beginning of the hour (“RTD<sub>10</sub>”) will initialize at five minutes after the beginning of the hour and produce prices over a sixty minute optimization period. RTD<sub>10</sub> will produce binding prices and schedules for the interval beginning when it posts its results (i.e., at ten minutes after the hour) and ending at the first time point in its optimization period (i.e., fifteen minutes after the hour.) It will produce advisory prices and schedules for its second, third, fourth and fifth time points, each of which would be fifteen minutes after the preceding time point.

**b. Description of the Real-Time Dispatch Process**

**(i) The First Pass**

The first Real-Time Dispatch pass consists of a least bid cost, multi-period co-optimized dispatch for Energy, Regulation Service and Operating Reserves that treats all Fixed Block Units that are committed by RTC, or are otherwise instructed to be on line or remain online by the ISO as if they were blocked on at their UOL<sub>N</sub> or UOL<sub>E</sub>, whichever is applicable. Eligible Resources capable of being started in 10 - minutes that have not been committed by RTC are treated as flexible (i.e. able to be dispatched anywhere between zero (0) MW and their UOL<sub>N</sub> or UOL<sub>E</sub>, whichever is applicable).

The first pass establishes “physical base points” (i.e., real-time Energy schedules) and real-time schedules for

## Regulation

Issued by: William J. Museler, President

Effective: February 1, 2005

Issued on: ~~November~~ January 26, 2003

Filed to comply with order of the Federal Energy Regulatory Commission, Docket No. ER04-230-000, et. al., issued February 11, 2004, 106 FERC ¶ 61,111 (2004).

When setting physical base points for Self-Committed Fixed and ISO-Committed Fixed Generators in any time point, the ISO shall consider the feasibility of the Resource reaching the output levels that it specified in its self-commitment request for each time point in the RTD run given: (A) its metered output at the time that the run was initialized; and (B) its response rate.

The RTD Base Point Signals sent to ISO-Committed Fixed and Self-Committed Fixed Generators shall follow the quarter hour operating schedules that those Generators submitted in their real-time self-commitment requests, regardless of their actual performance. To the extent possible, the ISO shall honor the response rates specified by such Generators when establishing RTD Base Point Signals. If such a Generator's operating schedule is not feasible based on its real-time self-commitment requests then its RTD Base Point Signals shall be determined using a response rate consistent with the operating schedule changes.

**(ii) The Second Pass**

The second Real-Time Dispatch pass consists of a least bid cost, multi-period, co-optimized dispatch for Energy, Regulation Service, and Operating Reserves that treats all Fixed Block Units that are committed by RTC, all eligible Resources capable of starting in ten minutes that have not been committed by RTC and all units ~~or that are~~ otherwise instructed to be online or remain online by the ISO, as flexible (i.e., able to be dispatched anywhere between zero (0) MW and their  $UOL_N$  or  $UOL_E$ , whichever is applicable),

Issued by: William J. Museler, President  
Issued on: ~~November~~ January 26, 20035

Effective: February 1, 2005

Filed to comply with order of the Federal Energy Regulatory Commission, Docket No. ER04-230-000, et. al., issued February 11, 2004, 106 FERC ¶ 61,111 (2004).

regardless of their minimum run-time status. This pass shall establish “hybrid base points” (i.e., real-time Energy schedules) that are used in the third pass to determine whether minimum run-time constrained Fixed Block Units should be blocked on at their  $UOL_N$  or  $UOL_E$ , whichever is applicable, or dispatched flexibly. The ISO will not use schedules for Energy, Regulation Service and Operating Reserves established in the second pass to dispatch Resources.

The upper and lower dispatch limits used for ISO-Committed Fixed and Self-Committed Fixed Resources, as well as for Dispatchable Generators scheduled to provide Regulation Service, shall be the same as the physical base points calculated in the first pass.

The upper dispatch limit for the first time point of the second pass for a Dispatchable Resource not scheduled to provide Regulation Service shall be the higher of: (A) its upper dispatch limit from the first pass; or (B) its “pricing base point” from the first time point of the prior RTD interval adjusted down within its Dispatchable range for any possible ramping since that pricing base point was issued.

The lower dispatch limit for the first time point of the second pass for a Dispatchable Resource not scheduled to provide Regulation Service shall be the lower of: (i) its upper dispatch limit from the first pass; or (ii) its pricing base point for the first time point of the prior RTD interval adjusted down within its Dispatchable range to account for any possible ramping since that pricing base point was issued.

The upper dispatch limit for the later time points of the second pass for a Dispatchable Resource that was not scheduled to provide Regulation Service in the first pass shall be

Issued by: William J. Museler, President

Effective: February 1, 2005

Issued on: January 28, 2005

Filed to comply with order of the Federal Energy Regulatory Commission, Docket No. ER04-230-000, et. al., issued February 11, 2004, 106 FERC ¶ 61,111 (2004).



determined by increasing its upper dispatch limit from the first time point at the Resource's response rate, up to its  $UOL_N$  or  $UOL_E$ , whichever is applicable. The lower dispatch limit for the later time points of the second pass for such a Resource shall be determined by decreasing its lower dispatch limit from the first time point at the Resource's response rate, down to its minimum generation level.

**(iii) The Third Pass**

The third Real-Time Dispatch pass is the same as the second pass with three variations. First, the third pass treats Fixed Block Units that are committed by RTC, or are otherwise instructed to be on line or remain online by the ISO that received a non-zero physical base point in the first pass, and that received a hybrid base point of zero in the second pass, as blocked on at their  $UOL_N$  or  $UOL_E$ , whichever is applicable. Second, the third pass produces "pricing base points" (i.e., real-time Energy schedules) instead of hybrid base points. Third, and finally, the third pass calculates real-time Energy prices and real-time Shadow Prices for Regulation Service and Operating Reserves that the ISO shall use for settlement purposes pursuant to Article 4, Rate Schedule 3, and Rate Schedule 4 of this ISO Services Tariff respectively. The ISO shall not use schedules for Energy, Regulation Service and Operating Reserves that are established in the third pass to dispatch Resources.