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2.35 Day-Ahead

Nominally, the twenty-four (24) hour period directly preceding the Dispatch Day,

except when this period may be extended by the ISO to accommodate weekends and holidays.

2.36 Day-Ahead LBMP

The LBMPs calculated based upon the ISO's Day-Ahead Security Constrained Unit

Commitment process.

2.37

2.36a Day-Ahead Margin

That portion of Day-Ahead LBMP for an SCD interval that represents the difference

between the Supplier's accepted Bid Price and the Day-Ahead LBMP for that interval.

2.36b Day-Ahead Margin Assurance Payment

A supplemental payment made to an eligible Supplier that buys out of a Day-Ahead

Energy, Regulation Service, or Operating Reserves schedule in a manner that reduces its Day-

Ahead Margin. Rules for calculating these payments, and for determining Suppliers' eligibility to receive them, are set forth in Attachment J to this ISO Services Tariff.

Day-Ahead Market

The ISO Administered Market in which

The ISO Administered Market in which Capacity, Energy and/or Ancillary Services are scheduled and sold Day-Ahead consisting of the Day-Ahead scheduling process, price calculations and Settlements.

2.37a Day-Ahead Reliability Unit

<u>A Day-Ahead committed Resource which would not have been committed but for the</u> <u>commitment request by a Transmission Owner in order to meet the reliability needs of the</u> <u>Transmission Owner's local system which request was made known to the ISO prior to the close</u> of the Day-Ahead Market.

2.38 Decremental Bid

A monotonically increasing Bid curve provided by an entity engaged in a Bilateral

Import or Internal Transaction to indicate the LBMP below which that entity is willing to reduce

its Generator's

 Issued by:
 William J. MuselerElaine D. Robinson, Dir. Reg. Affairs, President
 Effective: February May 124, 20085

 Issued on:
 January March 248, 20085
 Filed to comply with order of the Federal Energy Regulatory Commission, Docket No. ER04-230-00023, et. al.,

 issued February 11July 20, 20064, 1016 FERC ¶ 61,111043 (20046).

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the NYS Transmission System are operated in a more conservative manner by reducing transmission transfer limits.

2.174 Strandable Costs

Prudent and verifiable expenditures and commitments made pursuant to a Transmission Owner's legal obligations that are currently recovered in the Transmission Owner's retail or wholesale rate that could become unrecoverable as a result of a restructuring of the electric utility industry and/or electricity market, or as a result of retail-turned-wholesale customers, or customers switching generation or Transmission Service suppliers.

2.175 Stranded Investment Recovery Charge

A charge established by a Transmission Owner to recover Strandable Costs.

2.176 Supplemental Resource Evaluation ("SRE")

A determination of the least cost selection of additional Generators, which are to be committed, to meet: (i) changed or local system conditions for the Dispatch Day that may cause the original system Day-Ahead schedules for the dDispatch Day to be inadequate to meet Load and/orthe reliability requirements of the Transmission Owner's local system or to meet load or reliability requirements of the ISO; or (ii) forecast load and reserve requirements over the six-day period that follows the Dispatch Day.

2.177 Supplier

A Party that is supplying the Capacity, Demand Reduction, Energy and/or associated Ancillary Services to be made available under the ISO OATT or the ISO Services Tariff, including Generators and Demand Side Resources that satisfy all applicable ISO requirements.

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substitute higher quality Ancillary Services (<u>i.e.</u>, shorter response time) for lower quality Ancillary Services when doing so would result in an overall least <u>bid</u> cost solution. For example, 10-Minute Non-Synchronized Reserve may be substituted for 30-Minute Reserve if doing so would reduce the total <u>bid</u> cost of providing Energy and Ancillary Services.

4.2.4.1 Reliability Forecast for the Dispatch Day

At the request of a Transmission Owner to meet the reliability of its local system, the NYISO may incorporate into the NYISO's Security Constrained Unit Commitment constraints specified by the Transmission Owner.

A Transmission Owner may request commitment of certain Generators (including specific output level(s)) for a Dispatch Day if it determines that certain generation is needed to meet the reliability of its local system. Such request shall be made before the Day-Ahead Market for that Dispatch Day has closed if the Transmission Owner knows of the need to commit certain Generators before the Day-Ahead Market close.

A Transmission Owner may request commitment of additional Generators (including specific output level(s)) for a Dispatch Day following the close of the Day-Ahead Market to meet changed or local system conditions for the Dispatch Day that may cause the Day-Ahead schedules for the Dispatch Day to be inadequate to ensure the reliability of its local system. The ISO will use SRE to fulfill a Transmission Owner's request for additional units.

All requests by Transmission Owners to commit Generators, pursuant to this Section 4.2.4.1, shall be posted upon receipt on OASIS following the close of the Day-Ahead Market.

After the Day-Ahead schedule is published, the ISO shall evaluate any events, including, but not limited to, the loss of significant Generators or transmission facilities that may cause the Day-Ahead schedules to be inadequate to meet the Load or reliability requirements for the Dispatch Day.

4.2.5 Reliability Forecast <u>for the Six Days Following the Dispatch Day</u>

In the SCUC program, system operation shall be optimized based on Bids over the Dispatch Day. However, to preserve system reliability, the ISO must ensure that there will be

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provide the Transmission Owner with the Load forecast (for seven (7) days) as well as the ISO security evaluation data to enable local area reliability to be assessed. A Transmission Owner may request commitment of additional Generators (including specific output level(s)) if it determines that additional generation is needed to ensure local area reliability in accordance with the Local Reliability Rules. The ISO will use SRE to fulfill a Transmission Owner's request for additional units. Any requests by Transmission Owners to commit Generators not otherwise committed by the ISO in the Day-Ahead Market will be posted upon receipt on OASIS.

4.2.7 Day-Ahead LBMP Market Settlements

The ISO shall calculate the Day-Ahead LBMPs for each Load Zone and at each Generator bus and Demand Reduction Bus as described in Attachment B. Each Supplier that bids a Generator into the ISO Day-Ahead Market and is scheduled in the SCUC to sell Energy in the Day-Ahead Market will be paid the product of: (a) the Day-Ahead hourly LBMP at the applicable Generator bus; and (b) the hourly Energy schedule. For each Demand Reduction Provider that bids a Demand Reduction into the Day-Ahead Market and is scheduled in SCUC to <u>provide Energy from the Demand Reduction</u>reduce demand, the LSE providing Energy service to the Demand Side Resource that accounts for the Demand Reduction shall be paid the product of: (a) the Day-Ahead hourly LBMP at the applicable Demand Reduction Bus; and (b) the hourly demand reduction scheduled Day-Ahead (in MW). In addition, each Demand Reduction Provider that bids a Demand Reduction into the

 Issued by:
 Elaine D. Robinson, Dir. Reg. Affairs
 William J. Museler, President
 Effective: February May 124, 20085

 Issued on:
 January March 248, 20085
 Filed to comply with order of the Federal Energy Regulatory Commission, Docket No. ER04-230-00023, et. al., issued February 11July 20, 20064, 1016 FERC ¶ 61,111043 (20046).

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A zonal floor bid price of \$75/MW hour is applicable to all Day-Ahead Demand

Response Resources that bid into the Day-Ahead Energy market.

The ISO shall publish the Day-Ahead Settlement Load Zone LBMPs for each hour in the scheduling horizon (nominally twenty-four (24) hours). The ISO shall then close the Day-Ahead Settlement.

4.3 In-Day Scheduling Changes

After the Day-Ahead schedule is published, the ISO shall evaluate any events, including,

but not limited to, the loss of significant Generators or transmission facilities that may cause the

 Issued by:
 Elaine D. Robinson, Dir. Reg. Affairs William J. Museler, President
 Effective: February May 124, 20085

 Issued on:
 January March 248, 20085
 Filed to comply with order of the Federal Energy Regulatory Commission, Docket No. ER04-230-00023, et. al.,

 issued February 11July 20, 20064, 1016 FERC ¶ 61,111043 (20046).

New York Independent System Operator, Inc. FERC Electric Tariff Original Volume No. 2 Third Revised Sheet No. 96 Superseding Second Revised Sheet No. 96

system dispatch to be inadequate to meet the requirements established in the Reliability Rules.

After the Day-Ahead schedule is published, the ISO shall normally grant requests by Capacity Limited Resources and Energy Limited Resources for reductions from Day-Ahead schedules to their UOL_Ns for any hour(s) in which they are scheduled above their UOL_Ns . However, the ISO may schedule such Resources to provide Energy in the Real-Time Market in an amount up to its Day-Ahead schedule during the relevant hour(s) at a price no higher than the relevant Day-Ahead offer price when it is needed to prevent or to address an Emergency.

The ISO shall commit additional Resources, via SRE, beyond those committed

Day-Ahead when necessary to meet Load. After providing notice, the ISO may require all Resources to run above their UOL_{MS}, up to the level of their UOL_{MS} (pursuant to ISO Procedures) and may raise the UOL_{MS}, of Capacity Limited Resources and Energy Limited Resources to their UOL_M levels, in order to achieve a reliable next-day schedule while minimizing total Bid Production Cost over the remainder of the day to meet Load scheduled Day Ahead. The ISO may use the following additional Resources in order to prevent or address an Emergency: (i) Bids submitted to the ISO that were not previously accepted but were designated by the bidder as continuing to be available; (ii) new Bids from all Suppliers, including neighboring systems; and (iii) cancellation of/or rescheduling of transmission facility.

Issued by:William J. Museler, PresidentEffective:February 1, 2005Issued on:January 28, 2005January 28, 2005Filed to comply with order of the Federal Energy Regulatory Commission, Docket No. ER04-230-000, et. al., issuedFebruary 11, 2004, 106 FERC ¶ 61,111 (2004).February 10, 2004, 106 FERC ¶ 61,111 (2004).February 10, 2004, 106 FERC ¶ 61,111 (2004).

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maintenance outages when possible. Actions taken by the ISO in performing supplemental commitments will not change any financial commitments that resulted from the Day-Ahead SCUC.

The ISO will not recall Energy produced by a Generator serving External Load to the extent that the Generator is not providing Installed Capacity (and has not indicated that it wishes to qualify as a provider of Installed Capacity) in the NYCA. The ISO shall take action, including manual intervention, to schedule Export Transactions from Generators that have Available Generating Capacity and that have supplied installed Capacity to entities serving Load located in an External Control Area when the External Control Area issues a notification requiring such Generators to supply Energy, provided however, that any Transaction may be Curtailed in response to the invocation of Transmission Loading Relief procedures by the ISO or by operators of other Control Areas. Energy from non-Installed Capacity providers in New York which is being Supplied outside the NYCA could be purchased by the ISO, pursuant to ISO Procedures, should an emergency exist in the NYCA, provided however that Energy from Generators that have supplied installed Capacity to entities serving Load located in an External Control Area that are responding to a notification by the External Control Area that requires such Generators to supply Energy, may not be purchased by the ISO should a capacity resource emergency exist in the NYCA.

Issued by:William J. Museler, PresidentIssued on:May 24, 2002

Effective: July 1, 2002

New York Independent System Operator, Inc.Third Revised Sheet No. 331.01.07FERC Electric TariffSuperseding Second Revised Sheet No. 331.01.07

Original Volume No. 2 Attachment B

The Marginal Losses Component of the LBMP at each location shall be calculated as the product of the LBMP calculated for the Reference Bus (according to Section I.A.1) and a quantity equal to the delivery factor produced by RTD for that location minus one.

The Congestion Component of the LBMP at each such location shall be calculated as the LBMP at that location, minus the LBMP calculated for the Reference Bus (according to Section I.A.1), minus the Marginal Losses Component of the LBMP at that location.

B. Day-Ahead LBMP Calculation Procedures

LBMPs in the Day-Ahead Market are calculated using six passes. The first three passes are commitment and dispatch passes, Passes 4, 5 and 6 are dispatch only passes.

Pass 1 consists of a least cost commitment and ideal dispatch to meet Bid Load <u>and</u> <u>reliable operation of the NYS Power System</u> that assumes that all Fixed Block Units are dispatchable on a "flexible basis" (they can be dispatched anywhere between zero (0) MW and their maximum Capacity) <u>and that includes Day-Ahead Reliability Units</u>.

Issued by:William J. Museler, PresidentEffective:February 1, 2005Issued on:January 28, 2005Filed 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).

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It consists of several steps. Step 1A is a complete Security Constrained Unit Commitment to meet Bid Load. At the end of this step, Fixed Block Units, Import offers, Export Bids, virtual supply and demand Bids and committed non-Fixed Block Units are dispatched to

Issued by:William J. Museler, President Effective:May 1, 2001Issued on:December 2, 2002Filed to comply with order of the Federal Energy Regulatory Commission, Docket Nos. ER00-3591-000, et al., issued October 31, 2002, 101 FERC ¶ 61,109 (2002).

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mitigated offer prices, together with the original unmitigated offer price of units whose offer prices were not subject to mitigation, or did not trigger the conduct or impact thresholds, are used to commit generation and dispatch energy to meet Bid Load. This step is also a complete iteration of the Security Constrained Unit Commitment process. At the end of Step 1C, Fixed Block Units, Import offers, Export Bids, virtual supply and demand Bids, and committed non-Fixed Block Units are again dispatched to meet Bid Load, with Fixed Block Units treated as dispatchable on a flexible basis. LBMPs are calculated from this dispatch.

All non-Fixed Block Units committed in the final step of Pass 1 (which could be either step 1A, 1B, or 1C depending on activation of and the AMP) are blocked on at minimum load in Passes 4 through 6. The cost of meeting local system reliability is determined in Pass 1.

Pass 2 consists of a least cost commitment and dispatch of Fixed Block Units, Import offers, Export Bids, and non-Fixed Block Units to meet forecast Load requirements in excess of Bid Load, considering the Wind Energy Forecast, that minimizes the cost of incremental Minimum Generation and Start Up Bids, given revenues for Minimum Generation Energy based on LBMPs calculated in Pass 1, and assumes all Fixed Block Units are dispatchable on a flexible basis. Incremental Import Capacity needed to meet forecast Load requirements is determined in Pass 2. Intermittent Power Resources that depend on wind as their fuel committed in this pass as a result of the consideration of the Wind Energy Forecast are not blocked in Passes 5 or 6.

Pass 3 consists of a least cost commitment and dispatch of Fixed Block Units, Import offers, Export Bids, and non-Fixed Block Units to meet forecast Load requirements in excess of Bid Load, considering the Wind Energy Forecast, that minimizes the cost of Minimum Generation and Start Up Bids, given revenues for Minimum Generation Energy based on LBMPs calculated in Pass 1 and assumes all Fixed Block Units are dispatchable on a flexible basis. Fixed Block Units dispatched in this Pass are not blocked on in Pass 6. Non-Fixed Block Units committed in this step are blocked on at minimum Load in Passes 4 through 6. <u>Intermittent</u>

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<u>Power Resources that depend on wind as their fuel committed in this pass as a result of the</u> <u>consideration of the Wind Energy Forecast are not blocked in Passes 5 or 6.</u> The difference between Pass 2 and Pass 3 is the inclusion of the In-City reserve and second contingency local reliability criteria. Incremental Import Capacity needed to meet forecast Load requirements is determined in Pass 3. The costs of satisfying forecast Load and Local Reliability Rules are determined in Pass 3.

Pass 3 is reserved for future use.

Pass 4 consists of a least cost dispatch to forecast Load. It is not used -to set schedules or prices. It is used for operational purposes and provides a dispatch of Fixed Block Units, Import offers, Export Bids and the non-

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Fixed Block Units committed in Pass 3 (the "Day-Ahead committed resources") against forecast Loads.

Pass 5 consists of a least cost dispatch of Fixed Block Units, Import offers, Export Bids, virtual supply and demand Bids and Day-Ahead committed resources to meet Bid Load, based where appropriate on offer prices as mitigated in Pass 1. Fixed Block Units are treated as dispatchable on a flexible basis, LBMPs used to settle the Day-Ahead Market are calculated from this dispatch. The Shadow Prices used to compute Day-Ahead Market clearing prices for Regulation Service and for Operating Reserves in Rate Schedules 3 and 4 of this ISO Services Tariff are also calculated from this dispatch.

Pass 6 consists of a least cost dispatch of Day-Ahead committed resources, Import offers, Export Bids, and virtual supply and demand Bids to meet Bid Load, based where appropriate on offer prices as mitigated in Pass 1, with the schedules of all Fixed Block Units dispatched in the final step of Pass 1 or dispatched above zero in Pass 5 blocked on at maximum Capacity. The schedules of dispatchable units and Imports may be backed down, and Export schedules may be increased, to offset the additional Capacity scheduled on these Fixed Block Units. Final schedules for the Day-Ahead Market are calculated from this dispatch.

C. LBMP Calculation Method

System marginal costs will be utilized in an *ex ante* computation to produce Day-Ahead and Real-Time LBMP bus prices using the following equations.

The LBMP at bus i can be written as:

$$\gamma_i = \lambda^R + \gamma^L_{\ i} + \gamma^C_{\ i}$$

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Energy schedules for all Wheels Through and Exports. For the ISO Services Charge calculated pursuant to Sections 2.B.2, 2.B.3, and 2.B.4 of this Rate Schedule, the Transmission Customer's billing units shall be based on the Actual Energy Withdrawals for all Transmission Service to supply Load in the NYCA, and hourly Energy schedules for all Wheels Through and Exports. To the extent Schedule 1 charges are associated with satisfying meeting Local Reliability Rules the reliability needs of a local system, the billing units for such charges will be based on the Actual Energy Withdrawals in the sub-zone(s) where the the Resource needed to meet the reliability need is located Local Reliability Rules applied. To the extent Schedule 1 charges are associated with payments made for supplemental payments and Demand Reduction Incentive payments to Demand Reduction Providers, the billing units of such charges shall be based on Actual Energy Withdrawals to supply Load in the NYCA according to the methodology described in Attachment R. To the extent that the sum of all Bilateral Schedules and all Day-Ahead Market purchases to service Load in the Day-Ahead schedule is less than the ISO's Day-Ahead forecast of Load and the ISO commits Resources in addition to the reserves it normally maintains to enable it to respond to contingencies to meet the ISO's Day-Ahead forecast of Load, charges associated with the costs of Bid Production Cost Guarantees for the additional Resources committed Day-Ahead to meet the ISO's Day-Ahead forecast of Load shall be allocated to Transmission Customers who are not bidding as Suppliers according to the Methodology described in Attachment T.

Issued by:William J. Museler, PresidentIssued on:April 16, 2003

Effective: June 16, 2003

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(iv) payments of the real-time TUC to Transmission Customers that reduced their schedules for that hour after the Day-Ahead commitment; (v) payments of Congestion Rents collected for that hour in the Day-Ahead schedule to Primary Holders of TCCs; (vi) settlements with Transmission Owners for losses revenue variances; and (vii) Excess Congestion Rentspositive Net Congestion Rents collected in that hour.

B. Bid Production Guarantees

The ISO's costs also include the costs associated with differences between the amounts bid by generating facilities that have been committed and scheduled by the ISO to provide Energy and certain Ancillary Services, and the actual revenues received by these generating facilities for providing such Energy and Ancillary Services. Where the costs are incurred to compensate <u>a Resource generating facilities</u> for satisfying meeting Local Reliability Rules the reliability needs of a local system, the associated charge shall apply only to Transmission Customers serving Load in the Load Zone(s) where the <u>Resource is rule is identified located</u>. The ISO's costs also include the costs associated with payments made for supplemental payments and Demand Reduction Incentive payments to Demand Reduction Providers.

Issued by:William J. Museler, President Effective:May 1, 2001 January 1, 2004Issued on:April 4, 2001 October 16, 2003

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a) For hours These mitigation measures will be implemented when the NYISO's Day-Ahead unit commitment or a Transmission Owner requires an In-City Generator to be committed Day-Ahead to meet local reliability requirements, under circumstances in which the In-City Generator would not otherwise have been committed under the NYISO's least cost dispatch, that Generator's Start-Up Bid and Minimum Generation Bid shall be set at the lower of the Bid or the applicable reference level. Mitigation measures will not be implemented under circumstances where local reliability criteria require an In-City Generator to be committed, but such Generator would have been committed under the NYISO's least cost dispatch.

b) When the NYISO's Day Ahead unit commitment identifies an In City Generator that was required to be committed due to second contingency constraints, that Generator's start-up costs Bids and Minimum Generation Bids will be set at the lower of the bid of the applicable reference level. For any day that an In-City Generator's start-up costs Bids and Minimum Generation Bids are replaced, bids at the applicable reference level shall apply in all hours of such day.

5.3 Market Power Mitigation Measures Applicable to Sales of Spinning Reserves

a) Local reliability rules require that specified amounts of Spinning Reserves be provided by In-City Generators. The Spinning Reserve-capable portion of each Generator located in New York City must be made available to the ISO for purposes of meeting the New York City Spinning Reserve requirement.

b) The market power mitigation measures applicable to Spinning Reserves will be implemented when the ISO's least-cost dispatch requires that one or more of the Generators located in New York City be committed to meet the In-City Spinning Reserve requirement. For any day that an In-City Generator is committed to meet the In-City Spinning Reserve requirement under circumstances where the Generator would not otherwise have been committed under the ISO's least-cost dispatch, the market power mitigation measures applicable to unit commitments, as described in Section 5.2, would apply.

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 on February 11, 2004, 106 FERC \P 61,111 (2004).