**DRAFT September 28, 2003**

New York Independent System Operator, Inc.                                Second Revised Sheet No. 427
FERC Electric Tariff                                         Superseding First Revised Sheet No. 427
Original Volume No. 2
Attachment D

## ATTACHMENT D

## DATA REQUIREMENTS FOR ~~INTERNAL GENERATORS FOR~~ LBMP BIDDERS

**Attachment D**
**Table D-1**
**Data Requirements for Internal Generators ~~for LBMP Bidders~~**

| Data Item | Cat. | Bid Parameters | Variability | Comments |
|---|---|---|---|---|
| Company Name | G | -- | Static Required | Parent Organization |
| Generator Name/No. | G | -- | Static Required | |
| Generator Unit Code/ID | G | -- | Static Required | Unique code which identifies the Generator to the ISO |
| Bus | G | Bus No. | Static Required | Specific location of Generator within the NYCA |
| Submitted By | G | Name | May vary Required | Organization submitting Bid. Multiple organization can be authorized to submit Bids with the ISO accepting the most recent. A single organization must be specified ~~toreceive~~to receive invoices from the ISO. |
| DMNC (Summer & Winter) | P/G | MW | Static Required | Dependable Maximum Net Capability. Confirmed by test for ~~units~~Generator's with ~~installed~~Installed Capacity contracts, or historical production data. |
| Power Factor | P/G | MW/MVA | Static Optional | Generator's tested Power Factor for producing Reactive Power (MVArs) at normal high operating limit MW output level. Provided it is at least 90% of DMNC. This is required for Generators receiving Voltage Support Payments. |
| Installed Capacity Contracts | G | MW | May vary Required | Installed Capacity contracts in effect with LSEs within the NYCA. The ISO may limit maximum and/or minimum amounts of Installed Capacity by location due to reliability Constraints. |
| ~~Normal~~ Upper Operating Limit | C/D | MW | May change Required by hour for Day-Ahead | Maximum output of a ~~unit~~Generator t that could be expected in any hour of the following operating day. The ISO must be informed of a limit change that results in less ~~capability~~Capability. |
| Emergency Upper Operating Limit | C/D | MW | May change Required by hour for Day-Ahead | Maximum output that a Generator's owner expects it can reach during extraordinary conditions. A Generator's Emergency Upper Operating Limit may be no less than its Normal Upper Operating Limit. |
| Normal Response Rate (NRR) | P/C/D | MW/min. | May vary Required | To be provided as an expected response rate for ~~SCD~~RTD. Generators may specify up to three NRRs. The minimum acceptable response rate is 1% of a ~~unit'~~Generator's gross output per minute. |
| Regulation Response Rate (RRR) | P/C/D | MW/Min. | Same as Optional NRR | To be provided as an expected response for ~~regulation~~Regulation Service. If RRR differs from NRR, the total expected response rate is restricted to the maximum of the two rates. |
| Emergency Response Rate (ERR) | P/C/D | MW/Min. ~~or~~ ~~Piecewise linear curve with MW Output as independent variable and MW/Min. as dependent variable~~ | Same as ~~Optional~~ NRR | To be provided as expected response for reserve pickups; ~~ERR must at least equal~~A Generator's ERR must be greater than or equal to the capacity-weighted average of its NRRs.) ~~NRR. If ERR is reduced, then unit will be subject to a performance penalty if called upon.~~ ~~ERR for Class B Reserve bidders must at least equal the static NRR from Pre-Qualification data.~~ Bidders must inform ISO of all changes to ERR. |
| Reactive Power Capability | P/G | Piecewise linear curve with MW as independent variable and +/- MVArs as dependent variable | Static Optional | Update as changed. |
| Physical Minimum Generation Limit | P/G | MW | Static Required | |

**Notes:**
Internal Generators LBMP bidders are located within the NYCA.
Cat. = Data Categories: **G** = General; **P** = Pre-Qualification; **C** = Commitment; **B** = Balancing; **D** = Dispatch; **I** = Installed Capacity.
Static Data remains relatively constant over the lifetime of Bids but can be changed.
General Data may be provided electronically or by mail, but requires a confirmation or Pre-Qualification process by the ISO.
Some data will require substantiation by a test; actual data Bid may be subject to validation checking against Pre-Qualification data.

**Attachment D**

Table D-1a

**Data Requirements for Demand Side ~~Resource for LBMP Bidders~~ Resources**

| Data Item | Cat. | Bid Parameters | Variability | Comments |
|---|---|---|---|---|
| Company Name | G | -- | Static Required | Parent Organization |
| Generator Name/No. | G | -- | Static Required | |
| Generator Unit Code/ID | G | -- | Static Required | Unique code which identifies the Demand Side Resource to the ISO |
| Bus | G | Bus No. | Static Required | Specific location of Demand Side Resource within the NYCA |
| Submitted By | G | Name | May vary Required | Organization submitting Bid. Multiple organization can be authorized to submit Bids with the ISO accepting the most recent. A single organization must be specified to receive invoices from the ISO. |
| DMNC (Summer & Winter) | P/G | MW | Static Required | Specify maximum, megawatt ~~curtailment~~ Curtailment ~~bid~~ Bid |
| Power Factor | P/G | MW/MVA | Static Optional | Values to be initialized pursuant to ISO requirements. |
| Installed Capacity Contracts | G | MW | May vary Required | Installed Capacity contracts in effect ~~with~~ between Special Case Resources that are Demand Side Resources and LSEs within the NYCA. The ISO may limit maximum and/or minimum amounts of Installed Capacity by location due to reliability Constraints. |
| Normal Upper Operating Limit | C/D | MW | May ~~change~~ vary Required by hour for Day-Ahead | Maximum output of a ~~demand side resource~~ Demand Side Resource that could be expected in any hour of the ~~following~~ operating day. The ISO must be informed of a limit change that results in ~~lesscapability~~ less Capability. |
| Emergency Upper Operating Limit | C/D | MW | May vary Required by hour for Day-Ahead | Maximum output that a Demand Side Resource expects to be able to reach during extraordinary conditions. A Demand Side Resource's Emergency Upper Operating Limit may be no lower than its Normal Upper Operating Limit. |
| Normal Response Rate (NRR) | P/C/D | MW/min. | May vary Required | ~~Values to be initialized pursuant to ISO~~ To be provided as an expected response rate for RTD. Demand Side Resources may specify up to three NRRs. ~~requirements.~~ The minimum acceptable response rate is 1% of the quantity of Demand Reductions that the Demand Side Resource produces per minute. |
| ~~Regulation Response Rate (RRR)~~ | ~~P/C/D~~ | ~~MW/Min.~~ | ~~Same as~~ Optional ~~NRR~~ | ~~Values to be initialized pursuant to ISO requirements.~~ |
| Emergency Response Rate (ERR) | P/C/D | MW/Min. ~~or Piecewise linear curve with MW Output as independent variable and MW/Min. as dependent variable~~ | Same as ~~Optional~~ NRR | ~~Values to be initialized pursuant to ISO requirements.~~ To be provided as expected response for reserve pickups; A Demand Side Resource's ERR must be greater than or equal to the capacity-weighted average of its NRRs. Bidders must inform ISO of all changes to ERR. (??) |
| ~~Reactive Power Capability~~ | ~~P/G~~ | ~~Piecewise linear curve with MW as independent variable and +/- MVArs as dependent variable~~ | ~~Static Optional~~ | ~~Values to be initialized pursuant to ISO requirements.~~ |
| Physical Minimum Demand Reduction Limit | P/G | MW | Static Required | |

**Notes:**
Demand Side Resource LBMP bidders are located within the NYCA.
Cat. = Data Categories: **G** = General; **P** = Pre-Qualification; **C** = Commitment; **B** = Balancing; **D** = Dispatch; **I** = Installed Capacity.
Static Data remains relatively constant over the lifetime of Bids but can be changed.
General Data may be provided electronically or by mail, but requires a confirmation or Pre-Qualification process by the ISO.
Some data will require substantiation by a test; actual data Bid may be subject to validation checking against Pre-Qualification data.
Optional = Required only when providing or bidding to provide the associated service.

Issued by:       William J. Museler, President                    Effective:       May 1, 2001

Issued on:        April 4, 2001

**Attachment D**
**Table D-2**
**Data Requirements for External Generators ~~for LBMP Bidders~~**

| Data Item | Cat. | Bid Parameters | Variability | Comments |
|---|---|---|---|---|
| Company Name | G | -- | Static Required | Parent Organization. |
| Generator Name/No. | G | -- | Static Required | |
| Generator Unit Code/ID | G | -- | Static Required | Unique code which identifies the Generator to the ISO. |
| Submitted By | G | Name | May vary Required | Organization submitting Bid. Multiple organizations can be authorized to submit Bids with the ISO accepting the most recent. A single organization must be specified to receive invoices from the ISO. |
| Dependable Maximum Net Capability | P/G | MW | Static Required | Confirmed by test for ~~units~~Generators with ~~installed~~Installed ~~capacity~~Capacity contracts. |
| Installed Capacity Contracts | P/G | MW | Variable (not within a Bid) Optional | Installed Capacity contracts in effect with LSEs within the NYCA. The ISO may limit maximum and/or minimum amounts of Installed Capacity by location due to reliability Constraints. |
| Normal Upper Operating Limit | C/D | MW | May change by hour for Day-Ahead Required | Maximum output of a ~~unit~~Generator that could be expected in any hour of the following operating day. The ISO must be informed of a limit change that results in less ~~capability~~Capability. |
| Emergency Upper Operating Limit | C/D | MW | May change Required by hour for Day-Ahead | Maximum output that a Generator's owner expects it can reach during extraordinary conditions. A Generator's Emergency Upper Operating Limit may be no lower than its Normal Upper Operating Limit. |
| Physical Minimum Generation Limit | P/G | MW | Static Required | |

**Notes:**

External Generators LBMP bidders are located outside the NYCA.

Cat. = Data Categories: **G** = General; **P** = Pre-Qualification; **C** = Commitment; **B** = Balancing; **D** = Dispatch; **I** = Installed Capacity.

Static Data remains relatively constant over the lifetime of Bids but can be changed.

General Data may be provided electronically or by mail, but requires a confirmation or Pre-Qualification process by the ISO.

Some data will require substantiation by a test; actual data Bid may be subject to validation checking against Pre-Qualification data.

Optional = Required only when providing or bidding to provide the associated service.

Filed to comply with order of the Federal Energy Regulatory Commission, Docket No. ER99-4235-000, issued December 18, 2000.

<table>
<tr><td colspan="5" align="center">

**Attachment D**
**Table D-3**
**Data Requirements for Generator Commitment Bids ~~for LBMP Bidders~~**

</td></tr>
</table>

| Data Item | Cat. | Bid Parameters | Variability | Comments |
|---|---|---|---|---|
| Startup Time | C/B | Hours: Minutes **or** Piecewise linear curve with Hours Off-Line as independent variable and Hours to Start as dependent variable | May be changed for any Day-Ahead <u>or Real-Time</u> Commitment<br><br>Required | Length of time needed to startup an off-line Generator, synchronize it to the power grid and stabilize at minimum. |
| Startup Bid Price | C/B | $\$$ to Start <u>specified hourly or a</u> **or** Piecewise linear curve with ~~Hours Off-Line~~<u>hours off-line</u> as <u>an</u> independent variable and $ to Start as <u>a</u> dependent variable | May be changed for any Day-Ahead Commitment<u>. May only be lowered in the Real-Time Commitment in any hour in which the Generator has a Day-Ahead schedule.</u><br>Required | |
| Minimum Run Time | C/B | Hours:Minutes | May be changed for any Day-Ahead Commitment~~,~~ <u>but</u> may not be changed once ~~unit~~<u>a Generator</u> is online. May be changed in Real-Time if the Generator is not currently online. ~~is on-line~~<br><br>Required | Duration of time that <u>a</u> Generator must run once started before it can subsequently be decommitted. Minimum Run Time cannot be honored past the end of the Dispatch Day. <u>The longest Minimum Run Time allowed in the Real-Time Market shall be one hour</u>. |
| Minimum Down Time | C/B | Hours:Minutes | May be changed for any Day-Ahead <u>or Real-Time</u> Commitment<br><br>Required | Duration of time that <u>a</u> Generator must remain off-line following decommission before it can be re-started<u>. SCUC shall honor Minimum Down Time within a twenty four hour Dispatch Day. RTC will honor Minimum Down Times in the Real-Time Market unless the Generator has a Day-Ahead Schedule for any portion of the RTC optimization period</u>. |
| Maximum Number of Startups per Day | C/B | No | Static        Required | <u>RTC will monitor but will not honor this parameter.</u> |

**Notes:**
Cat. = Data Categories: **G** = General; **P** = Pre-Qualification; **B** = Balancing; **D** = Dispatch; **I** = Installed Capacity.
Static Data remains relatively constant over the lifetime of bids but can be changed.

New York Independent System Operator, Inc.
FERC Electric Tariff                                          Original Sheet No. 430A
Original Volume No. 2
Attachment D

<table>
<tr><td colspan="5" align="center"><strong>Attachment D<br>Table-3a</strong><br><br><strong>Data Requirements for Demand Side Resource Commitment Bids</strong> ~~for LBMP Bidders~~</td></tr>
<tr><td align="center"><strong>Data Item</strong></td><td align="center"><strong>Cat.</strong></td><td align="center"><strong>Bid Parameters</strong></td><td align="center"><strong>Variability</strong></td><td align="center"><strong>Comments</strong></td></tr>
<tr>
<td>Startup Time</td>
<td>C/B</td>
<td>Hours: Minutes<br>~~or~~<br>~~Piecewise linear curve with Hours Off-Line as independent variable and Hours to Start as dependent variable~~</td>
<td>May be changed for any Day-Ahead <u>or Real-Time</u> Commitment<br><br>Required</td>
<td>~~ISO will provide assumed value.~~<br><br><u>Length of time needed to respond to the ISO's signal to begin reducing demand.</u></td>
</tr>
<tr>
<td>Startup Bid Price</td>
<td>C/B</td>
<td>$ to Start<br>~~or~~<br>~~Piecewise linear curve with Hours Off-Line as independent variable and $ to Start as dependent variable~~</td>
<td>May be changed for any Day-Ahead Commitment <u>and, for any Real-Time Commitment in an hour in which the Demand Side Resource does not have a Day-Ahead schedule.</u><br><br>Required</td>
<td>~~The Curtailment Initiation Cost should be entered here~~</td>
</tr>
<tr>
<td>Minimum Run Time</td>
<td>C/B</td>
<td>Hours:Minutes</td>
<td>May be changed for any Day-Ahead <u>or Real-Time</u> Commitment; may not be changed once ~~unit~~<u>Resource</u> is on-line<br><br>Required</td>
<td>Duration of time that the Demand Side Resource must reduce its demand once started before it can subsequently be decommitted. Minimum Run Time cannot be for more than 8 hours and cannot be honored past the end of the Dispatch Day.<br><br><u>The longest Minimum Run Time allowed in the Real-Time Market shall be one hour.</u></td>
</tr>
<tr>
<td>Minimum Down Time</td>
<td>C/B</td>
<td>Hours:Minutes</td>
<td>May be changed for any Day-Ahead <u>or Real-Time</u> Commitment<br><br>Required</td>
<td>~~Values to be initialized pursuant to ISO requirements~~<br><u>Duration of time that the Demand Side Resource must remain off-line following decommission before it can be re-started. SCUC shall honors Minimum Down Time within a twenty four hour Dispatch Day. RTC will honor Minimum Down Times in the Real-Time Market unless the Demand Side Resource has a Day-Ahead Schedule for any portion of RTC's optimization period.</u></td>
</tr>
<tr>
<td>Maximum Number of Startups per Day</td>
<td>C/B</td>
<td>No</td>
<td>Static <u>(but may be changed in Real-Time Bids)</u> Required</td>
<td>~~RTC will monitor but will not honor this parameter~~</td>
</tr>
<tr>
<td colspan="5"><strong>Notes:</strong><br>Cat. = Data Categories:  <strong>G</strong> = General; <strong>P</strong> = Pre-Qualification; <strong>B</strong> = Balancing; <strong>D</strong> = Dispatch; <strong>I</strong> = Installed Capacity.<br>Static Data remains relatively constant over the lifetime of bids but can be changed.</td>
</tr>
</table>

| Attachment D<br>Table D-4<br>Data Requirements for Generator Energy Bids | | | | |
|---|---|---|---|---|
| **Data Item** | **Cat.** | **Bid Parameters** | **Variability** | **Comments** |
| Minimum Generation Energy Block and Bid Price | C/B | MW and $/~~MW~~hour | May vary by hour | Must be provided for commitment.<br><br>~~GT~~Gas turbine units that fully load on startup can use this form~~of bid in lieu of a Dispatchable Energy Bid~~, but will set LBMP when economic. |
| Dispatchable Energy Bids | C/B | ~~For Single Price Block;~~<br>Bids:<br> No. of ~~Blocks~~steps, $/~~MW/Block~~<br><br>~~or~~<br><br>~~For Piecewise Linear Price Bids:~~<br>~~Piecewise linear curve with MW Output as independent variable~~ $/MWh, and $/~~MW~~MWs of each step<br>~~as~~<br><br>~~dependent variable~~ | May vary by hour | ~~Block bids would be separated by a narrow steep slope segment between each block.~~<br><br>~~Resulting bid "curves" must be~~ Bids may consist of up to twelve monotonically increasing ~~(possessing a positive slope at all points) for SCD~~ constant cost incremental Energy steps in both SCUC and RTC. |
| ~~Dispatch~~Operating ~~Status~~Mode | C/B | ~~On/Off~~ISO-Committed Flexible, Self-Committed Flexible, or Self-Committed Fixed | ~~May vary by hour~~ | ~~Indicates if a unit will be on or off dispatch in real time.~~ Self-Committed Fixed Generators are eligible to receive a Day-Ahead schedule on request. |
| **Notes:**<br>Cat. = Data Categories: **G** = General; **P** = Pre-Qualification; **C** = Commitment; **B** = Balancing; **D** = Dispatch; **I** = Installed Capacity. | | | | |

<table>
<tr><td colspan="5" align="center"><b>Attachment D</b><br><b>Table D-4a</b><br><b>Data Requirements for Demand ~~Side Resource~~ Reduction Bids</b></td></tr>
</table>

| Data Item | Cat. | Bid Parameters | Variability | Comments |
|---|---|---|---|---|
| Minimum Generation Energy Block and Bid Price | C/B | MW and $/~~MW~~hour | May vary by hour | Enter ~~demand side resource~~Demand Side Resource's minimum reduction and ~~bid~~Bid price . Must be provided for commitment. |
| Dispatchable Energy Bids | C/B | ~~For Single Price Block Bids:~~<br><br>No. of ~~Blocks~~steps, $/MW/~~Block~~<br><br>~~or~~<br><br>~~For Piecewise Linear Price Bids: Piecewise linear curve with MW Output as independent variable~~ $/MWh, and ~~$/MW~~MWs of each step ~~as dependent variable~~<br><br>~~Ω~~ | May vary by hour | ~~Block bids would be separated by a narrow steep slope segment between each block.~~<br><br>~~Resulting bid "curves" must be~~Bids may consist of up to twelve monotonically increasing (*i.e.,* possessing a positive slope at all points) ~~for SCD~~ constant cost incremental Energy steps in both SCUC and RTC. |
| Dispatch Status | C/B | ~~On/Off~~ISO Committed Flexible | May vary by hour | ~~N/A.~~All Demand Side Resources shall automatically be ISO-Committed Flexible. |

**Notes:**
Cat. = Data Categories: **G** = General; **P** = Pre-Qualification; **C** = Commitment; **B** = Balancing; **D** = Dispatch; **I** = Installed Capacity.

Issued by:      William J. Museler, President                              Effective:           May 1, 2001

Issued on:      April 4, 2001

<table>
<tr><td colspan="5" align="center"><strong>Attachment D<br>Table D-5<br>Data Requirements for Generator Regulation <s>(and Frequency Control)</s><u>Service</u> Bids</strong></td></tr>
</table>

| Data Item | Cat. | Bid Parameters | Variability | Comments |
|---|---|---|---|---|
| Regulation Capacity Availability Bid | C/B | Table D-4 is required<br><br>MW | May vary by hour<br><br>Optional | Generator must be able to respond to AGC Base Point Signals from the ISO. The Regulation Capacity Availability Bid along with the submitted Regulation Response Rate (from Table E<u>D</u>-1) represent the maximum response range in MW and change Rate in MW/Min.<br><br><s>LSEs engaged in Bilateral Transaction wishing to Self-Supply regulation must also state Supplier and location.</s> |
| Regulation Capacity Price Bid | C/B | $/MW | May vary by hour<br><br>Optional | |

**Notes:**
Cat. = Data Categories: **G** = General; **P** = Pre-Qualification; **C** = Commitment; **B** = Balancing; **D** = Dispatch; **I** = Installed Capacity.
Regulation <u>Service</u> Bids made for the Day-Ahead Market which are accepted are binding for the next 24 hour operating day.
Regulation <u>Service</u> not scheduled for use by the ISO may be marketed by the bidder providing no other terms or forward contracts are violated.
Unscheduled Regulation <u>Service</u> may be bid into the <s>BME (Hour Ahead)</s> <u>Real-Time</u> Market, and may have a different Bid price than the Day-Ahead Bid.
Optional = Required only when providing or bidding to p rovide the associated service.

| Attachment D | | | | |
| --- | --- | --- | --- | --- |
| **Table D-6** | | | | |
| **Data Requirements for ~~Generator~~ Operating Reserve Bids** | | | | |
| **Data Item** | **Cat.** | **Bid Parameters** | **Variability** | **Comments** |
| ~~Class A 10 Minute~~ Spinning Reserve  ~~Energy and Availability.~~v Bid | C/B/D | ~~Same as in~~ Table D-4~~4~~. ~~is required~~  ~~Also, MW Available and~~ Day-Ahead-only $/MW  Availability Price Bid | ~~May~~ Required Day-Ahead and nav vary by hour, in the Day-Ahead Market.  Real-Time Availability Bids will not be accepted.  All Generators accepted to provide Energy will be treated as offering Reserves at a price of $0/MW.  ~~Optional~~ | ~~Spinning Reserve is energy available in 10 minutes from a synchronized resource located within the NYCA that is otherwise not committed or dispatched to its Upper~~ ~~Operating Limit. The Energy must be available for at least 30 minutes.~~  ~~All Generators with this bid type may be dispatched down by SCD and will be paid Lost Opportunity Cost if this occurs.~~  ~~A Class A unit not scheduled at maximum Bid Capacity in the Day-Ahead Market is limited in the amount of Energy it may otherwise market in the Day-Ahead Market, such that its original Day-Ahead Energy schedule~~ **plus** ~~its Day-Ahead Spinning Reserve schedule is still available to the ISO. Bidding into Day-Ahead Energy Market may create a forward contract for providing Class A Spinning Reserve.Energy produced in place of providing Spinning Reserve will be paid Real-Time LBMP.~~  ~~If a Class A unit availability bid is accepted Day-Ahead, it will be paid the Day-Ahead Spinning Reserve Availability Clearing Price. If accepted for Real-Time, it will be paid the Real-Time Spinning Reserve Availability Clearing Price.~~ MW Available is not separately Bid but is a function of the Bidder's ERR  ~~An Emergency Response Rate (ERR) must be provided.~~If no Day-Ahead Availability price is bid, an Availability Bid of $0/MW will be assigned. |
| ~~Class B 10 Minute~~ ~~Spinning Reserve Availability Bid~~ | ~~C/B/D~~ | MW Available and ~~$/MW~~ Availability Price Bid | May  Required Day-Ahead and nav vary by hour, in the Day-Ahead Market.  Real-Time Availability Bids will not be accepted.  All Generators accepted to provide Energy will be treated as offering Reserves at a price of $0/MW.  Optional | ~~Spinning Reserve is Energy available in 10 minutes from a synchronized resource located within the NYCA that is otherwise not operating at its Upper Operating Limit. The Energy must be available for at least 30 minutes.~~  ~~A Class B unit is not committed or scheduled for LBMP Energy, but can bid an Availability for Spinning Reserve. If accepted Day-Ahead, it will be paid the Day-Ahead Spinning Reserve Availability Clearing Price. If accepted for Real-Time, it will be paid the Real-Time Spinning Reserve Availability Clearing Price. It will not be paid Lost Opportunity Cost. Any Energy produced will be paid Real-Time LBMP, but Class B units will not set LBMP.  An Emergency Response Rate (ERR) must be provided.~~ |
| 10-Minute Non-Synchronized  ~~10 Minute Operating~~ ~~g~~ Reserve Bid | C/B/D | MW Available and Day-Ahead only $/MW Availability Price Bid | May  Required Day-Ahead and nav vary by hour, in the Day-Ahead Market.  Real-Time Availability Bids will not be accepted. All Generators accepted to provide Energy will be | ~~MW Bid must be available 10 minutes after requested.~~  ~~May be located External to NYCA provided the Inter-Control Area DNI Associated with this Resource can be changed in the required time.~~ MW Available is not separately Bid but is a function of the Bidder's ERR  ~~If accepted Day-Ahead, it will be paid the Day-Ahead Non-Synchronized 10 Minute~~ ~~Reserve Availability Clearing Price. If accepted for Real-Time, it will be paid the Real-Time Non-Synchronized 10 Minute Reserve Availability Clearing Price. Any Energy produced will be paid Real-Time LBMP.~~If no Day-Ahead Availability price is bid, an Availability Bid of $0 /MW will be assigned. |

| | | | | |
|---|---|---|---|---|
| | | | ~~treated as offering Reserves at a price of $0/MW.~~ ~~Optional~~ | |
| 30 Minute Operating Reserve Spinning or Non-Synchronized | C/B/D | ~~MW Available and Day-Ahead only~~ $/MW Availability Price Bid | ~~May~~ ~~Required Day-Ahead and nay~~ vary by hour ~~, in the Day-Ahead Market.~~ ~~Real-Time Availability Bids will not be accepted. All Generators and Demand Side Resources accepted to provide Energy will be treated as offering Reserves at a price of $0/MW.~~ ~~Optional~~ | ~~MW Bid must be available 30 minutes after requested.~~ ~~MW Available is not separately Bid but is a function of the Bidder's ERR~~ ~~May be located External to NYCA provided the Inter-Control Area DNI Associated with this Resource can be changed in the required time.~~ ~~If no Day-Ahead Availability price is bid, an Availability Bid of zero $/MW will be assigned.~~ ~~If accepted Day-Ahead, it will be paid the Day-Ahead 30 Minute Reserve Availability Clearing Price. If accepted for Real-Time, it will be paid the Real-Time 30 Minute Reserve Availability Clearing Price. Any Energy produced will be paid Real-Time LBMP.~~ |

**Notes:**

Cat. = Data Categories: **G** = General; **P** = Pre-Qualification; **C** = Commitment; **B** = Balancing; **D** = Dispatch; **I** = Installed Capacity.

Operating Reserve Bids made for the Day-Ahead Market which are accepted are binding for the next 24 hour operating day.

Operating ~~Reserve~~Reserves not scheduled for use by the ISO may be marketed by the bidder providing no other terms or forward contracts are violated.

~~Unscheduled Operating Reserve may be bid into the BME (Hour Ahead) Market, and may have a different Bid price than the Day-Ahead Bid.~~

Optional = Required only when providing or bidding to provide the associated service.

Issued by:     William J. Museler, President                    Effective:            January 2, 2001
Issued on:     January 16, 2001
Filed to comply with order of the Federal Energy Regulatory Commission, Docket No. ER99-4235-000, issued December 18, 2000.

**Attachment D**
**Table D-7**
**Data Requirements for Virtual Transaction Bids to Purchase Energy <u>in the Day-Ahead Market</u>**

| Data Item | Cat. | Bid Parameters | Variability | Comments |
|---|---|---|---|---|
| Company Name | G | -- | Static | LSE, Energy Service Co. or other Transmission/Distribution Co. providing Load forecast. |
| Point of Withdrawal (Sink) Location | G | For Internal Loads: LBMP Zone or Zone and Bus **or** For External Loads: Control Area or Control Area and Proxy Bus | Static | |
| Submitted By | G | Name | May Vary | Organization submitting Bid. |
| Energy Forecast | C/B/D | MWh/hr | Variable by Hour | Total Estimate for Bid and non-Bid Load; ISO will rely on <u>its</u> own composite Load forecast as a reliability commitment to ~~insure~~ensure that all Load is served. May be updated after DAM and/or Real Time to indicate adjusted Load served |
| Energy Commit Bid | C/B/D | MW that will be committed for Day-Ahead Forward Contract | Variable by hour | Bidding is limited to the Day-Ahead Market. |
| Price Capped Energy Block Bids | C/B/D | No. of Blocks, MW/Block, and $/MW/Block | Variable by hour | Bidding is limited to the Day-Ahead Market. |

<u>Notes:</u>
 Cat. = Data Categories: **G** = General; **P** = Pre-Qualification; **C** = Commitment; **B** = Balancing; **D** = Dispatch; **I** = Installed Capacity.
 Energy Bids made for the Day-Ahead Market which are accepted are binding for the next 24 hour operating day.

**Attachment D**
**Table D-7.1**
**Data Requirements for Virtual Transaction Bids to Supply Energy**

| Data Item | Cat. | Bid Parameters | Variability | Comments |
|---|---|---|---|---|
| Company Name | G | -- | Static | LSE, Energy Service Co. or other Transmission/Distribution Co. providing Load forecast. |
| Point of Injection (Source) Location | G | LBMP Zone | Static | |
| Submitted By | G | Name | May Vary | Organization submitting Bid. |
| Price Capped Energy Block Bids | C/B/D | No. of Blocks, MW/Block, and $/MW/Block | Variable by hour | Bidding is limited to the Day-Ahead Market. |

**Notes:**

New York Independent System Operator, Inc.
FERC Electric Tariff                                                                        Original Sheet No. 435
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Attachment D

| Attachment D<br>Table D-8<br>Data Requirements for Interruptible Load Spinning Reserve Bids | | | | |
|---|---|---|---|---|
| **Data Item** | **Cat.** | **Bid Parameters** | **Variability** | **Comments** |
| Interruptible Load for 10-Minute Spinning Reserve | C/B/D | MW Available, and $/MW Availability Price Bid | May Bid Day-Ahead | Spinning Reserve is Energy available in 10 minutes from a synchronized Load (by definition, all Load being served is synchronized) located within the NYCA that is interruptible on demand.<br><br>An interruptible Load spinning reserve Bid must include an Energy Load Bid equal to or greater than the interruptible Load Bid (i.e., it must be consuming Energy in order to provide spinning reserve in the form of a Load interruption); must be reflected to an ISO bus location; must interrupt full amount within 10 minutes; and must be able to be interrupted for at least 30 minutes.<br><br>An interruptible Load is equivalent to Class B 10 Minute Spinning Reserve.<br><br>An interruptible Load that is scheduled Day-Ahead to provide Spinning Reserve will be paid the Day-Ahead Spinning Reserve Availability Clearing Price. If scheduled to provide Spinning Reserve in real-time, it will be paid the Real-Time Spinning Reserve Availability Clearing Price.<br><br>An interruptible Load providing Spinning Reserve must meet the requirements of the ISO including the ability to be monitored to measure interruptions. |
| Interruptible Load for 30-Minute Reserve | C/B/D | MW Available, and $/MW Availability Price Bid | May Bid Day-Ahead | 30-Minute Reserve is Energy available in 30 minutes from a synchronized Load (by definition, all Load being served is synchronized) located within the NYCA that is interruptible on demand.<br><br>An interruptible load 30-minute reserve Bid must include an Energy Load Bid equal to or greater than the interruptible Load Bid (i.e., it must be consuming Energy in order to provide operating reserve in the form of a Load interruption); must be reflected to an ISO bus location; must interrupt full amount within 30 minutes.<br><br>An interruptible Load that is scheduled Day-Ahead to provide 30-minute Reserve will be paid the Day-Ahead 30-minute Reserve Availability Clearing Price. If scheduled to provide 30-minute Reserve in real-time, it will be paid the Real-Time 30-minute Reserve Availability Clearing Price.<br><br>An interruptible Load providing 30-minuteReserve must meet the requirements of the ISO including the ability to be monitored to measure interruptions. |

**Notes:**
Cat. = Data Categories: **G** = General; **P** = Pre-Qualification; **C** = Commitment; **B** = Balancing; **D** = Dispatch; **I** = Installed Capacity.
Operating Reserve Bids made for the Day-Ahead Market which are accepted are binding for the next 24 hour operating day.
Operating Reserve not scheduled for use by the ISO may be marketed by the bidder providing no other terms or forward contracts are violated.
Unscheduled Operating Reserve may be bid into the BME (Hour Ahead) Market, and may have a different Bid cost than the Day-Ahead Bid.

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Sheet Nos. 436 through 439 are reserved for future use.

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