Attachment D

Superseding First Second Revised Sheet No. 427 Superseding First Second Revised Sheet No. 427

#### ATTACHMENT D

## DATA REQUIREMENTS FOR INTERNAL GENERATORS FOR LBMP BIDDERS

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## Attachment D Table D-1

#### **Data Requirements for Internal Generators for LBMP Bidders**

Data Item	Cat.	Bid	Variability	Comments
		Parameters		
Company Name	G		Static Required	Parent Oorganization
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 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 iInstalled 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. Pprovided it is at least 90% of DMNC.
Installed Capacity Contracts	G	MW	May vary Required	This is required for Generators receiving Voltage Support Payments.  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 <u>unit Generator</u> 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 <u>∈</u> Capability.
Emergency Upper Operating Limit	<u>C/D</u>	<u>MW</u>	May change Required by hour for Day-Ahead	Maximum output that a Generator's owner expects it can reach during extraordinally conditions. A Generator's Emergency Upper Operating Limit may be no less that 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. 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 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; 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.

 $Cat. = Data\ Categories: \textbf{G} = General; \textbf{P} = Pre-Qualification; \textbf{C} = Commitment; \textbf{B} = Balancing; \textbf{D} = Dispatch; \textbf{I} = Installed\ Capacity.$ 

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

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.

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			Attachr	nent D
			Table	D-1a
		Data Requiremen		ide Resource <u>s</u> for LBMP Bidders
Data Item	Cat.	Bid Parameters	Variability	Comments
Company Name	G		Static Required	Parent Ogranization.
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 eCurtailment bBid.
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 <del>change</del> <u>varv</u> Required by hour for Day-Ahead	Maximum output of a demand <u>Demand <u>s</u>Gide <u>r</u>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 less <u>e</u>Capability.</u>
Emergency Upper Operating Limit	<u>C/D</u>	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 requirements To be provided as an expected response rate for RTD. Demand Side Resources may specify up to three NRRs. 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.
Reactive Power CapabilityPhysical Minimum Demand Reduction Limit	P/G	Piecewise linear curve with MW as independent variable and +/- MVArs as dependent variableMW	Static OptionalRequired	Values to be initialized pursuant to ISO requirements.

#### 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.

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## 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 Oorganization.
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 iInstalled eCapacity 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 <u>unit Generation</u> 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 <u>←</u> Capability.
Emergency Upper Operating Limit	<u>C/D</u>	MW	May vary 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	<u>MW</u>	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.

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## Attachment D Table D-3

### Data Requirements for Generator Commitment Bids for LBMP Bidders

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 or Real-Time Commitment  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 specified hourly or Piecewise linear curve with #hours Ooff-Line as an independent variable and \$ to Start as a dependent variable	May be changed hourly for any Day-Ahead Commitment May only be lowered in the Real-Time Commitment in any hour in which the Generator has a Day-Ahead schedule.  Required	
Minimum Run Time	C/B	Hours:Minutes	May be changed for any Day-Ahead Commitment; but may not be changed once unita Generator is online. May be changed in Real-Time if the Generator is not currently is-on-line.  Required	Duration of time that a Generator must run once started before it can subsequently be decommitted. Minimum Run Time cannot be honored past the end of the Dispatch Day. The longest Minimum Run Time allowed in the Real-Time Market shall be one hour.
Minimum Down Time	C/B	Hours:Minutes	May be changed for any Day-Ahead or Real-Time Commitment	Duration of time that a Generator must remain off-line following decommission before it can be re-started. 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.
Maximum Number of Startups per Day	C/B	No	Static Required	RTC will monitor but will not honor this parameter.

Notes:

 $Cat. = Data\ Categories:\ \mathbf{G} = General;\ \mathbf{P} = Pre-Qualification;\ \mathbf{B} = Balancing;\ \mathbf{D} = Dispatch;\ \mathbf{I} = Installed\ Capacity.$ 

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

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## Attachment D Table-<u>D-</u>3a

## Data Requirements for Demand Side Resource Commitment Bids for LBMP Bidders

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 or Real-Time Commitment Required	ISO will provide assumed value.
Startup Bid Price	C/B	\$\$ to Start specified hourly or Piecewise linear curve with Hours Off-Line as independent variable and \$ to Start as dependent variable	May be changed hourly for any Day-Ahead Commitment and, for any Real-Time Commitment in an hour in which the Demand Side Resource does not have a Day-Ahead schedule.	The Curtailment Initiation Cost should be entered here
Minimum Run Time	C/B	Hours:Minutes	May be changed for any Day-Ahead or Real-Time Commitment; may not be changed once unit Resource is on-line Required	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.
Minimum Down Time	C/B	Hours:Minutes	May be changed for any Day-Ahead or Real-Time Commitment  Required	Duration of time that the Demand Side Resource must remain off-line following decommission before it can be re-started. 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 Demand Side Resource has a Day-Ahead Schedule for any portion of RTC's optimization period. Values to be initialized pursuant to ISO requirements.
Maximum Number of Startups per Day	C/B	No	Static (but may be changed in Real-Time Bids.)  Required	RTC will monitor but will not honor this parameter.

#### 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.

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			Attachment D Table D-4	
		Data Require	ments for Gener	ator Energy Bids
Data Item	Cat.	Bid Parameters	Variability	Comments
Minimum Generation Energy Block and Bid Price	C/B	MW and \$/ <del>MW</del> hour	May vary by hour	Must be provided for commitment.  Gas Turbine units that fully load on startup can use this form or b in lieu of a Dispatchable Energy Bid, but will set LBMP when economic.
Dispatchable Energy Bids	C/B	For Single Price Block Bids: -No. of Blockssteps \$/MW/Block  or  For Piecewise Linear Price Bids: Piecewise linear curve with MW Output as independent variable \$/MWh_and \$/MWs_of_each_step as_dependent variable	May vary by hour	Block bids would be separated by a narrow steep slope segment between each block. Bids may consist of up to eleven constant cost incremental Energy steps. The cost of each step must exceed the co of the preceding step.  Resulting bid "curves" must be monotonically increasing (possessing a positive slope at all points) for SCD.
Dispatch Status	C/B	ISO-Committed Flexible. ISO- Committed Fixed. Self- Committed Flexible. or Self-Committed FixedOn/Off	May vary.  ISO-Committed Flexible or Self-Committed Flexible Resources that are scheduled Day-Ahead may not be ISO-Committed Fixed in real-time, unless a physical operating problem makes it impossible for them to be flexible, by hour	Indicates if a unit will be on or off dispatch in real time. ISO-Committed Fixed Generators are eligible to receive a Dav-Ahead schedule on request.

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

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			Attachment Table D-4a	
I	)ata I	Requirements fo	or Demand Side	e Resource Reduction Bids
Data Item	Cat.	Bid Parameters	Variability	Comments
Minimum Generation Energy Block and Bid Price	C/B	MW and \$/ <del>MW hour</del>	May vary by hour,	Enter dDemand &Side #Resources' minimum reduction and bBid price Must be provided for commitment.
Dispatchable Energy Bids	C/B	For Single Price Block Bids: -No. of Blockssteps \$/MW/Block  or  For Piecewise Linear Price Bids: Piecewise linear curve with MW Output as independent variable and \$/MW as dependent variable	May vary by hour	Block bids would be separated by a narrow steep slope segment between each block.  Resulting bid "curves" must be monotonically increasing (possessing a positive slope at all points) for SCD. Bids may consist of up to eleven constant cost incremental Energy steps. The cost of each step must exceed the cost of the preceding step.
Dispatch Status Bidding	C/B	\$/MWh. and MWs of each step On/OffISO-Committed	May vary by hour	N/A.
Mode  Notes:		Fixed if participating in DADRP.  ISO-Committed Flexible if providing non-synchronized reserves in real-time (to the extent that ISO's software can support such participation.)		

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

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## Attachment D Table D-5

### Data Requirements for Generator Regulation (and Frequency Control) Service Bids

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

#### Notes:

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

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

Regulation Service not scheduled for use by the ISO may be marketed by the bidder providing no other terms or forward contracts are violated.

Unscheduled Regulation Service may be bid into the BME (Hour Ahead)Real-Time 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.

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Attachment D

# Attachment D Table D-6

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

	Demand Side Resources accepted to provide Energy will be treated as offering Reserves at a price of \$0/MW.	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.
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#### 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 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.

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### Attachment D Table D-7

## Data Requirements for Virtual Transaction Bids to Purchase 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 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 its own composite  Load forecast as a reliability commitment to ignoure 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.

#### Notes:

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

 $Cat. = Data\ Categories; \textbf{G} = General; \textbf{P} = Pre-Qualification; \textbf{C} = Commitment; \textbf{B} = Balancing; \textbf{D} = Dispatch; \textbf{I} = Installed\ Capacity.$ 

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

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## Attachment D Table D-8

### **Data Requirements for Interruptible Load Spinning Reserve Bids**

Data Item	Cat.	Bid Parameters	<b>Variability</b>	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 (definition, all Load being served is synchronized) located within the NYCA the is interruptible on demand.
				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.
				An interruptible Load is equivalent to Class B 10 Minute Spinning Reserve.
				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-Tim Spinning Reserve Availability Clearing Price.
				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 the is interruptible on demand.
				An interruptible load 30-minute reserve Bid must include an Energy Load Bid
				to or greater than the interruptible Load Bid (i.e., it must be consuming Energy i 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.
				An interruptible Load that is scheduled Day-Ahead to provide 30-minute Reserville 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.
				An interruptible Load providing 30-minuteReserve must meet the requirements 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.

### Reserved for future use.

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