



Synchronized Reserve Market Data

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❑ Synchronized Reserve Offers Page

❖ This page is used to submit Tier2 synchronized reserve offers into PJM Synchronized Reserve Market

- Consists of Tier2 Offer MW, Price/Cost Data, Mode of Tier2 service
- Data due by 18:00 EPT, the day before operating day;
- Data cannot be changed after 18:00 EPT, the day before operating day;
 - Cost/Price data are locked for the entire operating day
 - Tier2 Offer MW can be revised up to 60 min before operating hour on the Synchronized Reserve Update Page

Unit	Schedules	Dispatch Lambda	Market Results	Regulation Market	Synchronized Reserve Market	Nonsynchronized Reserve Market	DA Scheduling Reserve Market	Con Ed	Parameter Limits	Interface Pricing	Opportunity Cost Calculator
Synchronized Reserve Offers											
Synchronized Reserve Updates											
Synchronized Reserve Bilaterals											
Synchronized Reserve Offers Results for ALL LOCATIONS on 09/04/2013											
Location	Offer MW	Offer Price	Cond. Energy Use	Cond. Startup Cost	Cond. To Gen. Cost	Full Heat Rate	Reduced Heat Rate	VOM Rate	Spin as Cond.	Cond. Available Status	
Regular Online Steam	75.0	7.50	(null)	(null)	(null)	7413.000	7449.000	0.12	No	Not Available	
Cond. Tier2 CT	30.0	7.50	3.4	1709.62	731.36	(null)	(null)	242.00	Yes	Available	

- ❑ Offer MW: The amount of Tier2 synchronized reserve MW offered quantity for the unit.
 - It is defined as the increase in output achievable by the unit in ten (10) minutes;
 - Value can be adjusted up to 60 minutes before operating hour;
 - Data is required if the unit is either available or self-scheduled to provide Tier2;
 - Data must be positive;
 - Tier2 floor offer MW quantity is capped at 0.1 MW;
 - Tier2 maximum offer MW quantity is unlimited but Tier2 Cleared MW will be capped at Ramp Rate * 10

- ❑ Offer Price (\$/MWh): The price at which Tier2 MW is offered into the Synchronized Reserve Market
 - Value must be a positive number;
 - Required if the unit is available for Tier2 synchronized reserve;
 - Value may not exceed the unit's O&M cost (as determined by the Cost Development Task Force) plus \$7.50/MWh margin;
 - Data is due by 18:00 EPT a day before operating day;
 - Data is locked (cannot be revised) for the operating day

- Cond. Energy Use: Energy use for condensing Tier 2 resources (MW). This is the amount of instantaneous energy a condensing resource consumes while operating in the condensing mode. The value submitted as part of the synchronized reserve offer must be less than or equal to the actual energy consumed as observed in real time;
- Cond. Startup Cost: This is the actual cost associated with getting a resource from a completely off-line state into the condensing mode including fuel, O&M, etc;
- Cond. To Gen Cost: This is the cost of transitioning a condenser to the generating mode. The value submitted for this cost must be less than or equal to the condense Startup cost;
- Spin As Cond.: This is used to identify if a combustion turbine can be committed for Tier2 synchronized reserve as a condenser.
- Cond. Available Status: Status of the resource availability for condensing (Available/Unavailable)



SR Offer Data – Other Daily Cost Data (2)

- Full Heat Rate: The heat rate of the unit, specified in BTU/kWh, when the unit is at full load;
- Reduced Heat rate: The heat rate of the unit, specified in BTU/kWh, when the unit is at reduced load;
- VOM Rate: The variable rate, in dollars, of operating and maintenance costs;

❑ Synchronized Reserve Updates Page

- ❖ To accurately reflect unit's reserve capability and availability during the operating day, this page can be used to make Tier2 hourly updates;
 - Hourly updates can be made up to 60 minutes prior to the start of the operating hour;
 - Hourly updates supercedes all others
 - Unavailability by 0 MW in hourly updates AND set to 'Unavailable'

Unit	Schedules	Dispatch Lambda	Market Results	Regulation Market	Synchronized Reserve Market	Nonsynchronized Reserve Market	DA Scheduling Reserve Market	Con Ed	Parameter Limits	Interface Pricing	Opportunity Cost Calculator
Synchronized Reserve Offers		Synchronized Reserve Updates			Synchronized Reserve Bilaterals						
Synchronized Reserve Update Results [redacted] on 09/11/2013											
<input type="button" value="Submit"/>											
Hour Ending	Offer MW	Spin Max	Available Status	Self Scheduled MW							
01	(null)	(null)	Available	(null)	Default page						
04	90.0	(null)	Available	(null)	Offer MW updated for HE04						
07	(null)	(null)	Not Available	(null)	Availability Status updated						
10	60.0	(null)	Available	40.0	Offer and Self MWs updated						
17	(null)	420.0	Available	(null)	SpinMax updated for SR Limitation						

- SR Ramp Rate \geq Energy Ramp Rate
- **Energy Ramp Rate used to monitor must offer compliance**
- SR Ramp Rate **ONLY** use for Tier 1 Estimates
- Default Ramp Rate **ONLY** used for DA Market

Energy Ramp Rate

Segment	MW	Ramp Rate (MW/Min)
1	100	1.0
2	200	5.0
3	450	10.0
4	550	1.0

Synchronized Reserve Ramp Rate

Segment	MW	Ramp Rate (MW/Min)
1	200	5.0
2	450	15.0

Default Ramp Rate = 10

Unit
Schedules
Dispatch Lambda
Market Results
Regulation Market
Synchronized Reserve Market
Nonsynchronized Reserve Market
DA Scheduling Reserve Market
Con Ed
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Opportunity Cost Calculator

Unit Hourly Updates
Unit Detail
Energy Ramp Rates
SyncRes Ramp Rates
Weather Forecast
Wind Forecast

Unit Detail Result for [REDACTED] on 09/06/2013

Name	Value	Name	Value
Type Of Unit	Single Boiler	Plant Name	[REDACTED]
Unit Number	1	Unit Shortname	[REDACTED]
Node	[REDACTED]	Operating Company	[REDACTED]
Capacity Resource	Yes	Regulation Resource	Yes
Default Status	Economic	Default Ramp Rate	1.8
Fixed Gen.	No	Self Supply	No
Emergency Min(MW)	110.0	Emergency Max(MW)	628.0
Economic Min(MW)	110.0	Economic Max(MW)	550.0
Regulation Min(MW)	300.0	Regulation Max(MW)	430.0
Reduced Ramp Rate (%)	0	Spinning Max(MW)	550.0
Condense Available	No	Condense Startup Cost(\$)	(null)
Condense Energy Usage(MW)	(null)	Condense To Gen Cost(\$)	(null)
Condense Notification Time	(null)	Condense Hourly Cost(\$)	(null)
Parameter Limits Description	[REDACTED]	Turndown Ratio Limit	1.5
Maximum Daily Starts Limit	1	Maximum Weekly Starts Limit	2
Minimum Runtime Limit	24	Minimum Downtime Limit	24

Unit | Schedules | Dispatch Lambda | Market Results | Regulation Market | Synchronized Reserve Market | Nonsynchronized Reserve Market | DA Scheduling Reserve Market | Con Ed | Parameter Limits | Interface Pricing | Opportunity Cost Calculator

Unit Hourly Updates | Unit Detail | Energy Ramp Rates | SyncRes Ramp Rates | Weather Forecast | Wind Forecast

Unit Hourly Updates Search

Portfolio: 1 - ALL UNITS | Unit: XYZ | Date: 09/04/2013 (mm/dd/yyyy) | |

Hourly Values | Apply To: 08-23 | |

Defaults | Emergency Min: 139.0 | Economic Min: 139.0 | Economic Max: 490.0 | Emergency Max: 560.0 | Commit Status: Economic | Fixed Gen: No

Unit Hourly Updates for XYZ (12345678) on 09/04/2013

Hour Ending	Em. Min. Def.	Em. Min. MW	Ec. Min. Def.	Ec. Min. MW	Ec. Max. Def.	Ec. Max. MW	Em. Max. Def.	Em. Max. MW	Commit Status	Fixed Gen.	Notification Time
01	139.0	125.0	139.0	280.0	490.0	491.0	560.0	560.0	Economic	No	(null)
02	139.0	125.0	139.0	125.0	490.0	235.0	560.0	560.0	Economic	No	(null)
03	139.0	125.0	139.0	125.0	490.0	235.0	560.0	560.0	Economic	No	(null)
04	139.0	125.0	139.0	125.0	490.0	493.0	560.0	560.0	Economic	No	(null)
05	139.0	125.0	139.0	125.0	490.0	493.0	560.0	560.0	Economic	No	(null)
06	139.0	125.0	139.0	125.0	490.0	494.0	560.0	560.0	Economic	No	(null)
07	139.0	125.0	139.0	280.0	490.0	495.0	560.0	560.0	Economic	No	(null)
08	139.0	125.0	139.0	280.0	490.0	560.0	560.0	560.0	Economic	No	(null)
09	139.0	125.0	139.0	280.0	490.0	560.0	560.0	560.0	Economic	No	(null)
10	139.0	125.0	139.0	280.0	490.0	560.0	560.0	560.0	Economic	No	(null)
11	139.0	125.0	139.0	280.0	490.0	560.0	560.0	560.0	Economic	No	(null)
12	139.0	125.0	139.0	280.0	490.0	560.0	560.0	560.0	Economic	No	(null)
13	139.0	125.0	139.0	280.0	490.0	560.0	560.0	560.0	Economic	No	(null)
14	139.0	125.0	139.0	280.0	490.0	560.0	560.0	560.0	Economic	No	(null)

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PJM eSuite - Intern... | Inbox - Microsoft O... | Info re: Tier 2 - Mess... | 5:58 AM