

Demand Side Response in the Synchronous Reserve Market

Operating Committee
September 11, 2012

The current PJM tariff limits:

- The amount of DR to 25% of the total amount of each Ancillary Service (day ahead scheduling reserves, synchronized reserves, regulation) requirement.
 - The amount of batch load DR resources to 20% of the Synchronized Reserve Requirement
 - Currently only the SR market is seeing participation near the 25% cap
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- **Tariff and Manual References**
 - 25% DR Limit for SR:
 - Manual 11: Sections 3.2.7, 4.2.9, and 11.2.2
 - 20% Limit on Batch Load Resources:
 - Tariff: Attachment K – APPENDIX, Sections 1.5A.8, 3.2.3A, 3.2.3A.01
 - Manual 11: Section 4.2.9 and 11.2.2

- SR Performance Data was reviewed in the June and July Operating Committee Meetings
- Performance data indicated a portion of DR receiving Tier 2 assignments did not submit meter data
 - Lack of meter data results in 0 MW compliance, penalty assessed for >10 minute events
 - Concern lack of meter data could alter the overall performance rate of DR

- MWh response to all Synchronized Reserve events
- Tier 2 data includes the response from all assigned resources
- 0 MW response assumed for DSR that did not submit data

MWh by Year	Tier 2 Response					
	Generation			DSR		
	Response	Assigned	Response Percent	Response	Assigned	Response Percent
2002	364	581	63%			
2003	2,949	4,132	71%			
2004	2682	3603	74%			
2005	2,445	3,600	68%			
2006	1153	1623	71%	25	32	78%
2007	1,089	1,371	79%	76	160	47%
2008	1215	1645	74%	174	396	44%
2009	1,012	1,785	57%	148	416	35%
2010	1656	2302	72%	311	613	51%
2011	1,814	2,764	66%	474	701	68%
2012	139	352	40%	102	217	47%
09-'12 Total	4,621	7,203	64%	1,035	1,947	53%



Sync Reserve Event Performance, 10+ Minute Events

10+ Min Events MWh by Year	Generation TIER2			DSR TIER2							
	Telemetered Data			Total DSR			Submitted Meter Data			Did not Submit	
	Resp MWh	Assign MWh	Response Percent	Resp MWh	Assign MWh	Response Percent	Resp MWh	Assign MWh	Response Percent	Assign MWh	Percent Missing
2002	344	514	67%								
2003	2,045	2,758	74%								
2004	1,410	1,926	73%								
2005	1,805	2,446	74%								
2006	626	698	90%	15	12	128%	15	12	128%	0	0%
2007	1,002	1,195	84%	70	134	52%	70	62	113%	72	54%
2008	659	807	82%	130	200	65%	130	138	94%	62	31%
2009	788	1,311	60%	130	273	48%	130	184	71%	89	33%
2010	1,426	1,819	78%	306	498	61%	306	344	89%	154	31%
2011	1,395	1,997	70%	404	477	85%	404	435	93%	42	9%
2012	3	15	17%	59	58	102%	59	47	126%	11	19%
09-'12 Total	3,611	5,142	70%	899	1,306	69%	899	1,010	89%	296	23%

	Issue	Proposed Change
1	DR performance not clear due to lack of load data provided by CSP	DR load data submission required by CSP for all SR events. Non-compliance results in investigation and exclusion from SR market
2	CSP may not upload load data because of communication issue	PJM to post all SR events on pjm.com within 1 business day. CSP load data submission deadline extended from 1 business day to 2 business days
3	DR is limited to providing 25% of SR Requirement and qualified resources may be excluded from market	Increase threshold to 33% , evaluate again after one year to determine impact of requiring data submission
4	Batch Load Resources limited to providing 20% of SR requirement	No proposed action, limited number of resources to evaluate. Re-evaluate when Batch Load Resource participation close to threshold