Demand Side Response Operational Scenarios

Capacity Senior Task Force
September 9, 2013

Updated for 9/24

July 18th Operations

- Current Emergency Demand Side Response (DSR)
  - 2 hour (~9,000 MWs) and 1 hour (~500 MWs) lead time
- At 12:40 (18th July) call ~950 MWs of Emergency DSR to maintain Reserves over the peak load at 17:00
  - Effective for 14:40
- At the peak (17:00) PJM reserves were:
  - Sync Reserves were + 2,600 MWs above the requirement
  - Primary Reserves were + 4,000 MWs above the requirement

Load and Reserve Snapshots

	July 18, 2013 1200					July 18, 2013 1700				
	RTO	RFC	DOM	MID ATL	MAD	RTO	RFC	DOM	MID ATL	MAD
Peak Load Estimate	157,786	138,929	18,857	58,469	77,326	158,426	139,426	19,000	59,024	78,024
Current Load	153,582	135,413	18,170	57,319	75,489	158,163	139,178	18,981	59,038	78,023
Delta Load	4,277	3,577	700	1,186	1,885	262	262	(0)	3	3
SR Requirement	1,318	N/A	N/A	1,191	1,189	1,321	N/A	N/A	1,184	1,186
SR Available	2,597	2,169	333	1,015	1,516	3,935	3,391	443	937	1,676
Primary Requirement	1,978	N/A	427	1,700	1,700	1,982	N/A	427	1,700	1,700
Primary Available	3,971	3,543	333	2,182	2,241	4,970	4,426	443	1,427	2,482
Secondary	1,655					1,593				
Beyond 30	2,605					1,630				
Sec + Beyond 30	4,260					3,223				

What If…

- Assumption: DR products with 30, 60 and 120 minute lead time evenly distributed, ~3,000 MWs in each bucket
- On July 18th PJM would have waited longer to make the decision to use DSR
  - As we get closer to the peak uncertainty is reduced
  - Having 3 times the amount of DSR requested on July 18th (~950MW) with a 30 minute notification time
  - High probability that DSR would not have been needed in this case