



Determination of the Threshold and Cap for Non-Retail Behind the Meter Generation

Operating Committee
May 14, 2019

- In 2006, the initial threshold for Non-Retail BtMG was set at 1,500 MW. This threshold would then be adjusted each year based on PJM RTO load growth. The current threshold is 2,006 MW.
- In 2006, the initial cap for Non-Retail BtMG was set at 3,000 MW. This cap is not adjusted based on load growth, so it remains at 3,000 MW.
- If total Non-Retail BtMG \leq threshold, full load netting is permitted.
- If threshold $<$ Non-Retail BtMG \leq 3,000 MW, load netting is prorated back to the threshold.
- No load netting is permitted for Non-Retail BtMG in excess of the 3,000 MW cap.

- The load associated with Non-Retail BtMG (or any BtMG) is not required to carry reserves equal to the 16 percent IRM. The Non-Retail BtMG may lean on the reserves of the system when:
 - The Non-Retail BtMG is on a full or partial outage (forced, planned or maintenance)
 - The load exceeds the rating of the BtMG (the load is greater than the 50/50 expected load).
- Therefore, adding any load to PJM without IRM reserves will degrade reliability to worse than 1 in 10 (increase loss of load expectation (LOLE) to greater than 0.1 days/year).

- To accommodate some level of Non-Retail BtMG, the 2006 Settlement allows the PJM LOLE to be relaxed from 1 in 10 to 1 in 9.5 years (or the LOLE to be increased from 0.10 days/year to 0.105 days/year).
- The 2006 analysis indicated that 1,500 MW of Non-Retail BtMG could be accommodated at an LOLE of 0.105 days/year.

- PJM computed the system LOLE as the amount of Non-Retail BtMG was increased from 0 MW to 5,000 MW.
- Non-Retail BtM generators were represented by a series of 10 MW units.
- Three curves were derived based on three assumed values of the equivalent demand forced outage rates (EFORd) of the BtM generators:
 - 0 percent EFORd
 - 5 percent EFORd
 - 10 percent EFORd
- The 5 percent EFORd curve indicates that adding 2,000 MW of Non-Retail BtMG would increase the system LOLE from 0.10 days/year to 0.105 days/year. Note that this 2,000 MW value is nearly identical to the current threshold of 2,006 MW.

Loss of Load Expectation (LOLE) (Days/Year)

