2021 IRM Study: Parametric Cases between the 2021 IRM PBC and the updated 2021 IRM case

Presented at 11/4/2020 NYSRC ICS Meeting

Material Changes						
Number	**Adjustment Type**	**Description**	**Impact on Margins**			
			NYCA	NYC	LI	LHV
		IRM 2021 Preliminary Base Case	**20.1**	**82.7**	**97.3**	**91.5**
0	**N/A**	**Updated MARS Version**	**0.0**	**0.0**	**0.0**	**0.0**
1	**A-K**	**Topology Updates ***	0.0	0.0	0.0	0.0
2	**A-K**	**Capacity Deactivations ****	-0.2	0.2	-1.6	0.2
3	**A-F**	**DSM Shapes Final Data and Refresh**	-0.2	0.0	0.0	0.0
4 ***	**A-K**	**October Load Forecast Update (Including BTM)**	-0.4	1.5	-2.0	1.5
5	**A-F ******	**ELR - Simplified**	1.2	0.1	0.1	0.1

		Sum of Changes	0.5	1.8	-3.5	1.8
		Updated Parametric Results	20.6	84.5	93.8	93.3

Note: A slight adjustment to the ISO-NE LOLE became necessary after the Tan45 was conducted on the final parametric case. That adjustment is not captured in these results. For additional details please see the Tan45 results document posted with these meeting materials.

*   QA/QC updates per ConEd PBC review. Updated VFT rating from NYCA into PJM. Updated E to G static line rating.

**   Includes Albany LFGE and 8/1/2020 UDR elections

***   These results are a parametric result and do not necessarily replicate a Tan45 outcome. See the next page for additional information.

****   Multiple ELR parametric cases (one for each individual election) were aggregated. Adjustments were primarily, but not exclusively, in Zones A-F.

Updated Load Forecast information:

The parametric study process differs from the Tan45 process and <u>will</u> produce different estimates of statewide or locational reserve margins. A parametric case is run as follows:

1. Begin with a starting case that meeting the LOLE criterion (i.e., 0.1 LOLE)
    a. The statewide and locational reserve margins are the (As-Found ICAP + cumulative adjustments) divided by (Peak Load)
2. Implement a single modeling or data change (e.g., update the load forecast)
3. Identify the resulting LOLE and review LOLE changes for reasonableness
4. Add/Remove capacity to return database to the LOLE criterion
    a. Re-calculate the statewide and locational reserve margins, per step 1.a above

Details of the parametric process as applied to the 2021 IRM load forecast, which included meaningful changes in Zone J and Zone K load:

1. The starting case met the LOLE criterion
2. Load was updated, including a reduction in Zone J load and an increase in Zone K load
    a. Even before making adjustments, calculated locational reserve margins changed
        i. For illustrative purposes, assume the NYC reserve margin was 80% before the load forecast update (8000 ICAP, 10000 Load) and the load decreased 200 MW. The re-calculated reserve margin would be 1.6% higher: (8000 ICAP / 9800 Load) = 81.6%
        ii. For illustrative purposes, assume the LI reserve margin was 100 % before the load forecast update (5000 ICAP, 5000 Load) and the load increased by 100 MW. The re-calculated reserve margin would be 2% lower: (5000 ICAP / 5100 Load) = 98%
3. The resulting LOLE was better than criterion (i.e., < 0.1 LOLE)
4. Capacity was removed NYCA wide until the LOLE criterion was met
    a. **The parametric results are not necessarily predictive of the reserve margins that will be produced by the Tan45 process and result from the parametric process employed by Policy 5.**