March 1, 2017 NYSRC ICS Meeting Report

Prepared for the March 10, 2017 NYSRC EC meeting

2017 ICS Task List Update

1. Modeling of NYISO Locality Sales

The NYISO reported that GE is continuing work on the modeling aspects of the locality sales in MARS. Additional information will be provided in the coming weeks to stakeholders at ICAP WG meetings as well as to the ICS. The NYISO is scheduled to provide a draft white paper at the April ICS meeting.

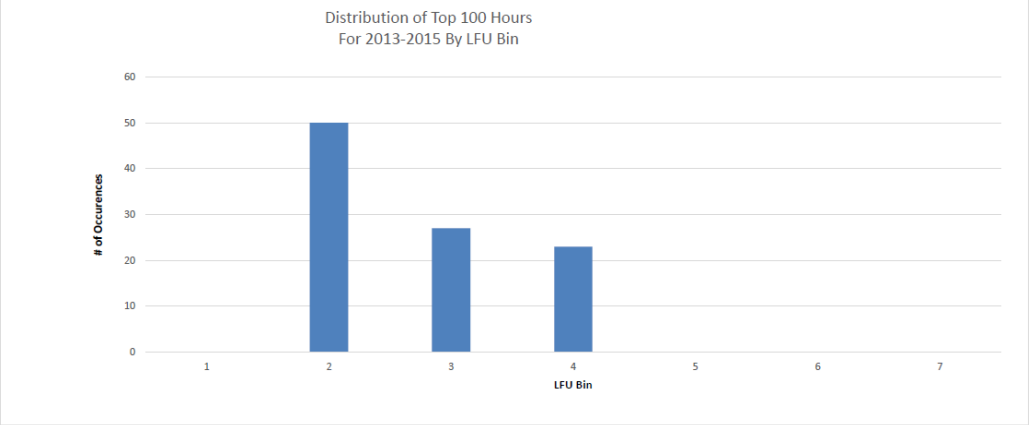
2. Emergency Assistance Limit Analysis

Mr. John Adams provided an update to the analysis. The first part analyzed how historical annual peak loads aligned with the LFU bins for the period 1999-2016.

LFU Probability Distribution Based on Data 1999 to 2016

Bin	Annual Peak as PU of the Forecast for the Bin Mid Pt.	Prob.	Expected Occurrences in 18 yrs.	Actual Occurrences in 18 yrs.	Number of Occurrences 2013 to 2016
1	0.852	0.0062	0	1	1
2	0.900	0.0606	1	1	
3	0.950	0.2417	4 to 5	5	2
4	1.000	0.3830	6 to 7	5	1
5	1.047	0.2417	4 to 5	4	
6	1.090	0.0606	1	2	
7	1.125	0.0062	0	0	

The second part analyzed the top 100 hours from 2013-2015 in relation to the load uncertainty bins.



A regression analysis was performed on these hours. One concern raised was the lack of observations in the upper bins for the period 2013-2015. A significant discussion ensued on how to develop data for these bins as well as the availability of external control area reserve data.

As part of the Emergency Assistance evaluation, the ICS had requested the NYISO to provide the distribution of the Loss of Load Events in the 2017 IRM preliminary base case to help with the study. The NYISO presented the results.

Load Level	Base Shape	Weight	NYCA LOLE (dys/yr)
1 (Highest)	2006	0.0062	0.017
2	2002	0.0606	0.070
3	2007	0.2417	0.010
4	2007	0.3830	0.002
5	2007	0.2417	0.001
6	2007	0.0606	0.000
7 (Lowest)	2007	0.0062	0
	Total:	1.0000	0.100

The NYISO also displayed the contribution per month by load level for the NYCA LOLE in days per year.

Load Level	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1	0	0	0	0	0	0.000	0.002	0.015	0	0	0	0	0.017
2	0	0	0	0	0.000	0.000	0.018	0.052	0	0.000	0	0	0.070
3	0	0	0	0	0.000	0.000	0.002	0.008	0.000	0	0	0	0.010
4	0	0	0	0	0	0	0.000	0.002	0.000	0	0	0	0.002
5	0	0	0	0	0	0	0	0.001	0	0	0	0	0.001
6	0	0	0	0	0	0	0	0.000	0	0	0	0	0.000
7	0	0	0	0	0	0	0	0	0	0	0	0	0
Total:	0	0	0	0	0.000	0.000	0.022	0.078	0.000	0.000	0	0	0.100

At the conclusion of the discussions, the majority of the ICS members acknowledged that the model currently overstates the amount of Emergency Assistance available while agreeing there is still uncertainty in what the value should be. Mr. Adams will continue to work in March on developing a range of limits. The NYISO will test those values in the MARS model for IRM impact. Mr. Adams will provide a recommendation and draft white paper for ICS discussion at the April ICS meeting. The white paper, as well as a recommendation for a limit, will be presented for consideration and approval to the EC in May.

3. Review NYISO Alternative LCR Methodology

The NYISO presented a recap of the 2016 effort as well as the plan for 2017. The NYISO has a 2017 commitment to propose an alternative methodology for determining LCRs based on economic optimization. The proposed methodology will use the final approved IRM from the NYSRC. The NYISO outlined the six phases of the project. The first is proof of concept where the NYISO will demonstrate that the method is stable, robust, predictable and least cost. They are still in this initial phase where they are looking at varying generation, load, EFORd and unit net CONE parameters. The additional phases are refine methodology, market simulations, defining process, demonstrating market benefits with the final phase being a proposed market design. The NYISO will continue to provide updates at the monthly ICS meetings.

4. Sensitivity to assess the impact on the IRM of a high penetration of renewable resources

Mr. Alan Adamson provided a draft scope for review. The sensitivity study will start with the preliminary 2018-19 IRM Study base case and determine the IRM assuming various levels of wind and solar capacity, as follows:

- Renewable Level 1: No wind and no solar
- Renewable Level 2: Preliminary 2018-19 base case, including projected base case wind and grid connected solar capacity
- Renewable Level 3: Add 2,000 MW of wind capacity above base case levels
- Renewable Level 4: Add 2,000 MW of grid connected solar capacity above base case levels
- Renewable Level 5: Add the 2,000 MW wind and 2,000 MW solar sets of resources to the preliminary base case and perform a tan 45 analysis in accordance with Policy 5 procedures.

The NYISO will provide recommendations as to where the wind and solar resources are to be added.

5. Review of A/B/C , J/K and 5018 lines for topology

The NYISO indicated there were no proposals at this time.

2018-2019 IRM Study Assumptions Matrix

The NYISO noted that there were no changes from the previous month. The NYISO did highlight a potential new parameter, Behind the Meter Solar Resources. This would involve a zonal forecast of hourly solar production. The ICS decided this to keep it as part of the load forecast as was done in the 2017-2018 IRM model assumptions. It will become a white paper topic for study and recommendation for the 2019-2020 IRM.