LOCATIONAL MINIMUM INSTALLED CAPACITY REQUIREMENTS STUDY

COVERING THE NEW YORK BALANCING AUTHORITY AREA
For the 2017–2018 Capability Year

NYISO Operating Committee
January 13, 2017

Locational Minimum Installed Capacity Requirements Report

I. Recommendation

This report documents a study conducted by the New York Independent System Operator (NYISO) to determine Locational Minimum Installed Capacity Requirements (LCRs) for the Localities of New York City (Load Zone J), Long Island (Load Zone K), and the G-J Locality (Load Zones G, H, I, and J) for the 2017–2018 Capability Year beginning May 1, 2017.

Currently, for the 2016–2017 Capability Year, the New York City (NYC) LCR is 80.5% of the NYC forecast peak load and the Long Island (LI) LCR is currently 102.5% of the Long Island forecast peak load. The G-J Locality requirement is currently 90.0% of the G-J forecast peak load.

The New York State Reliability Council (NYSRC) approved the 2017–2018 Installed Reserve Margin (IRM) at 18.0% on December 2, 2016. The NYISO then determined the LCRs taking into consideration changes that have occurred since the NYSRC approved the IRM base case. After adjusting the model to use the approved IRM, the only change to the database for this analysis is the final 2017 ICAP load forecast.

The below table shows the difference between the load forecasts used in setting the 2016 LCR values versus the 2017 LCR values.

Area	Final 2016 ICAP/LCR Load Forecast (MW) (12/2015)	Final 2017 ICAP/LCR Load Forecast (MW) (12/2016)	Change (MW)
Zone J (NYC)	11,794	11,670	-124
Zone K (LI)	5,479	5,427	-52
Zones G-J	16,309	16,061	-248
NYCA	33,359	33,178	-181

Based on the NYSRC base case for the 2017–2018 Capability Year and the changes identified above, the NYISO's calculations result in increasing the currently effective LCR of 80.5% of the forecast peak load for the New York City Locality to **81.5%**. The NYISO's calculations also result in increasing the currently effective LCR of 102.5% of the forecast peak load for the Long Island Locality to **103.5%.** Lastly, the NYISO's calculations result in increasing the currently effective LCR of 90.0% for the G-J Locality to **91.5**%.

II. Updating LCR Values

As its starting point, the NYISO LCR study utilized the statewide Installed Reserve Margin (IRM) study directed by the NYSRC. The IRM study is available on the NYSRC web site[1].

[1] www.nysrc.org

The NYISO follows the Locational Capacity Requirement Calculation Process to develop the LCRs for the Zone J, Zone K and the G-J Locality[2]. The only additional adjustment the NYISO has made to the final IRM base case with IRM adjusted to the established 18.0% is the inclusion of the final 2017 ICAP/LCR peak load forecast. This forecast updated the October 2016 peak load forecast used in the IRM study. The NYCA system peak had a decrease of 94 MW while Zones J and K had a net 23 MW decrease. Zones G-J had a net decrease of 12 MW. These changes in the peak forecast used in the LCR study had only a small impact on the final LCR values when compared to the IRM results.

The LCR analysis is an optimization process for the NYCA system to meet the LOLE reliability criteria by setting minimum requirements for each of the defined localities. As the outcome of the process, the NYC, LI, and G-J LCRs increased, with respect to the 2016–2017 LCR values.

Factors identified in the IRM study as the drivers in the change to the IRM were also the drivers in the change in the LCRs from last year's study. These are:

1. Less assistance available from NY's neighbors.
2. Higher NY generator EFORds.
3. 146 MW of NYC Generator retirements.

III. Summary of Study

The calculations made in this study, and its supporting analysis, utilize the NYISO process for setting the LCRs. The final 2017 IRM base case maintains the Loss of Load Expectation (LOLE) criterion at not more than 0.1 days/year with a statewide reserve margin of 18.1% and corresponding preliminary locational requirements of 81.6% and 103.5% for NYC and LI, respectively. After adjusting the model to use the NYSRC approved IRM of 18.0%, the NYISO's LCR study examined the effects of the final 2017 ICAP/LCR peak load forecast to determine the final LCRs for the three localities.

Based on the NYSRC's final IRM base case for the 2017–2018 Capability Year with IRM adjustment to 18.0% and the NYISO's final 2017 ICAP/LCR peak forecast, the LOLE criterion of 0.1 days/year is met with an LCR of **81.5%** for the New York City (Zone J) Locality, an LCR of **103.5%** for the Long Island Locality (Zone K), and an LCR of **91.5%** for the G-J Locality.

[2] http://www.nyiso.com/public/markets_operations/market_data/icap/index.jsp