



**LOCATIONAL MINIMUM INSTALLED CAPACITY**  
**REQUIREMENTS STUDY**

**COVERING THE NEW YORK BALANCING AUTHORITY AREA**  
**For the 2013 – 2014 Capability Year**

NYISO Operating Committee  
**January 17, 2013**

# 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 New York City (Zone J) and Long Island (Zone K) Localities for the 2013 - 2014 Capability Year beginning May 1, 2013.

Currently, the New York City (NYC) LCR is eighty-three percent (83%) of the NYC forecast peak load for the 2012 – 2013 Capability Year. The Long Island (LI) LCR is currently ninety-nine percent (99%) of the Long Island forecast peak load for the 2012 – 2013 Capability Year.

The New York State Reliability Council (NYSRC) in its 2013 Installed Reserve Margin (IRM) study report<sup>1</sup> identified the lowest feasible locational requirements of 83.7% for NYC and 102.0% for LI. The NYISO then determines the actual LCRs taking into consideration changes that have occurred since the NYSRC approved the IRM base case. The changes include the completion of the final 2013 ICAP load forecast and the announced retirements of the Danskammer plant, the Carthage Energy unit, the Kensico plant and the Dunkirk #2 unit<sup>2</sup>.

Based on the NYSRC base case for the 2013 – 2014 Capability Year and the changes identified above, the NYISO recommends that the currently effective LCR of 99% of the forecast peak load for the Long Island Locality be raised to 105%. Further, the NYISO recommends that the currently effective LCR of 83% of the forecast peak load for the New York City Locality be increased to 86%.

## 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 was approved by the NYSRC Executive Committee on December 7, 2012, and is available on the NYSRC web site at [www.nysrc.org](http://www.nysrc.org).

For New York City, there were factors that both tended to increase and decrease its LCR value when compared to the current year's value. Factors tending to lower the NYC LCR were the addition of the Hudson Transmission Project<sup>3</sup> and the calculation of generating units EFORds with an improved methodology. This reduction trend, however, was outweighed by factors tending to increase the LCR value. These factors include the adoption of fixed SCR values, the slightly higher load forecast uncertainty for NYC, increased EFORds of generation units in

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<sup>1</sup> NYSRC Report titled, "New York Control Area Installed Capacity Requirements for the Period May 2013 Through April 2014", December 7, 2012.

<sup>2</sup> Dunkirk 3 and 4 are already retired from the study. Unit 1 remains in service.

<sup>3</sup> The Hudson Transmission Project is modeled without firm capacity contracts and is projected to be available for emergency assistance during the 2013-2014 capability year.

NYC, higher EFORs on the subterranean cables in downstate NY, less assistance provided by the Control Areas surrounding NYC, and the impact of the retirement of Danskammer units.

Long Island also had factors that both tended to increase and decrease its LCR. Factors tending to lower the LI LCR were the addition of the Hudson Transmission Project, a slightly lower load forecast uncertainty for LI, and the calculation of generating units EFORs with an improved methodology. This reduction, however, was more than offset by factors tending to increase the LCR value. These factors include the adoption of fixed SCR values, increased EFORs on the LI generation fleet, higher EFORs on the downstate subterranean cables, less assistance provided by the Control Areas surrounding LI, and the impact of the retirement of the Danskammer units.

When looking at the upward movement of the LCRs with respect to the most recently completed IRM study, the following facts can be observed with their corresponding explanation.

- The retirement of the Danskammer units is the primary factor increasing the LCR values. This is because the Danskammer units are located in Zone G, which provides assistance to both NYC (Zone J) and LI (Zone K). The loss of this large generation source (500 MW) below a key transmission constraint not only has a great impact on the reliability of Zone G, but also significantly influences the reliability situation of NYC and LI due to reduced support to the load center. To compensate for this retirement both the NYC LCR and LI LCR need to be increased.
- The additional plant retirements, other than the Danskammer units, taken into account since the IRM study completion were either in upstate NY (Dunkirk #2 and Carthage Energy unit), or very small in capacity if in downstate NY (Kensico units). Because these retirements remove units with higher EFORs than zones in which they leave, there is some downward pressure on the requirements.
- The final 2013 ICAP load forecast matches the October IRM forecast for New York State. The downstate load however, drops by 85 MW while the upstate load increases by 86 MW. This change is shown in the table below. The reliability benefits of the lower load downstate are equally opposed by the reduction in the upstate's ability, with the now higher load, to assist downstate. For this case, the new load forecast does not affect the LCRs in zones J and K.

<b>Area</b>	<b>IRM Load Forecast (MW) (10/12)</b>	<b>Final 2013 ICAP Forecast (MW) (12/12)</b>	<b>Increase (MW)</b>
Zone J (NYC)	11,532	11,485	-47
Zone K (LI)	5,553	5,515	-38
NYCA	33,278	33,279	1
ROS	16,193	16,279	86

### **III. Summary of Study**

This study and its supporting analysis are based on the unified methodology. A full description of the procedure used for the unified methodology can be found as attachments A, B, and C of the NYSRC's Policy 5-6.<sup>4</sup>

The 2013 IRM study base case indicated that the Loss of Load Expectation (LOLE) criterion of not more than 0.1 days/year can be met with a statewide reserve margin of 17.1% and the lowest feasible locational requirements of 83.7% and 102.0% for NYC and LI, respectively. The NYISO's LCR study then examined the effects of the final ICAP peak load forecast, the changes in retirements, and consideration of the 17.0% IRM established by the New York State Reliability Council, in order to decide the final LCRs for the localities.

Based on the NYSRC base case for the 2013 – 2014 Capability Year and consideration of the changes identified above, the LOLE criterion of 0.1 days/year is met with a Minimum LCR of 86% for the New York City Locality and a Minimum LCR of 105% for the Long Island Locality.

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<sup>4</sup> Policy 5-6 can be found on NYSRC.org website under Documents/Policies.