Installed Capacity Subcommittee Report to the Executive Committee

NYISO ALTERNATIVE LCR PROPOSAL

Purpose of Report

This report covers the Installed Capacity Subcommittee's (ICS) review of the NYISO's Alternative LCR proposal. The report includes a brief background and discussion of key features as well as conclusions and recommendations.

NYISO Alternative LCR Methodology Proposal

1. Background

The NYISO established an LCR Task force under the Installed Capacity Working Group (ICAP WG) in March 2015 with the scope of discussing stakeholder concerns with the current LCR process as well as exploring other viable options. The LCR Task Force met twice more in 2015 and once in early 2016. The development of the current alternative proposal began in September 2016 at the ICAP WG with the final design proposed in November 2017. The NYISO has been attending the ICS meetings during the development to provide status updates. The NYISO presented the alternative methodology to the BIC on November 15.th At the meeting the stakeholders voted to support tariff development in 2018, with projected implementation of the alternative proposal beginning with the 2019 capability year.

2. Key Features/Discussion

- The Alternative LCR methodology uses an economic optimization to determine LCRs while preserving the 0.1 LOLE criteria and the approved IRM.
- The NYISO will utilize the same process that is currently used to develop the final LCR base case.
- The NYISO has also developed transmission security limit (TSL) that determines a lower bound on the LCRs as part of the methodology. These TSLs will be established in January of each year. The NYISO analyzed the N-1-1 thermal transfer limits for the NYCA interfaces associated with the G-J, Zone J and Zone K Localities to determine the transmission security import limits into each Locality. The use of the TSL "LCR floor" results in a relatively small LCR difference between the optimized methodology and the current Tan 45 methodology for Zone J (See Table 1 below). The ICS supports the development and use of the TSLs.

- The NYISO does not expect the alternative LCR methodology to impact the current timeline to set the LCRs.
- The current Tan 45 anchor point (knee of the curve) minimizes exposure to deviations in assumptions and provides the most accurate and stable determination of IRMs and LCRs by definition. Tan 45, by definition is the point at which any input data uncertainty, errors, GE-MARS program convergence deviations, and other as yet unidentified program anomalies are equally allocated on both parameters by the same changing rate of percentage magnitude.
- Under the alternative methodology, the NYC LOLE and LOEE reliability indexes are higher than that using the Tan 45 methodology (See Table 2). Under the Tan 45 methodology the reliability indexes for NYC are already the highest of any zone).
- The overall NYCA cost savings of the optimized economic LCR (based on the alternative LCR methodology with TSL), compared to the LCR based on the Tan 45 methodology, are relatively small – 0.4% (based on data taken from an NYISO presentation to ICS, dated 10/30/17) – however, there is shifting of costs between the Localities.

3. Additional Considerations

The NYISO should consider running additional sensitivity cases to examine the behavior of the alternative methodology – in addition to the optimal economic value – for evaluating the final LCRs as part of the 2018 NYISO project scope:

- Changes to the generation mix/topology in future – additional renewable resources, distributed generation as well as behind the meter resources
- The uncertainty of key study parameters including cost assumptions

NYISO is currently working through the ICAP WG concepts for elimination and creation of capacity zones – the NYISO should examine the results of the optimized method on Zones J and K with the elimination of Zone G- J.

4. Conclusion/Recommendations

- ICS does not object to continued development and application of the alternative LCR method that was proposed and approved at the BIC, assuming this method is found to be compliant with NYSRC rules.
- The ICS has asked the RCMS to develop a separate NYSRC rule compliance confirmation based on Reliability Rule A.2.
- The ICS recommends the following future actions:

- Review the need for revising Policy 5 to recognize the alternate LCR methodology and,
- RRS should consider modifying Reliability Rules A.1 and A.2 which date back to the early versions of the rules manual. There may be certain aspects of these rules that may be out of date or no longer applicable.

Table 1
LCR Comparison – Tan 45 vs. Optimized Methodologies

Scenario	Zone J - NYC	Zone K - LI
1. Tan 45 Methodology (2017 IRM Study)	81.4%	103.2%
2. Tan 45 Methodology (2018 IRM Study)	80.7%	103.2%
3. Optimized Methodology w/o TSL LCR floor (2017 Study)	78.0%	105.3%
4. Optimized Methodology with preliminary TSL LCR floor (2017 Study)	80.16%	104.15%

Notes: Scenarios 1, 3, and 4 Scenario LCRs taken from NYISO presentation dated 10/30/17; Scenario 2 LCRs taken from NYSRC 2018 IRM Study final base case; and the final TSL LCR floor for NYC is 80.6%.

Table 2
New York City (Zone J) -- Reliability Index Comparison

	LOLE (days/year)	LOEE (MWh/year)
Tan 45 Methodology	0.084	64
Optimized Methodology	0.091	81

Notes: (1) Data taken from curves from August 11, 2017 NYISO presentation to the Executive Committee; (2) No TSL floor assumed in Optimized Methodology reliability index