Attachment #4 - revised

NYISO Compliance with NYSRC Reliability Rule A2.R1.3

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NYSRC Reliability Rule A.2: Establishing Load Serving Entity Installed Capacity Requirements (Version 42)

A. Rule: Load Serving Entity installed capacity requirements and deliverable external area installed capacity for each Capability Year shall be established.

B. Requirements

R1. LSEs shall be required to procure sufficient resource capacity for the entire NYISO defined obligation procurement period so as to meet the statewide IRM requirement determined from A.1. Further, this LSE capacity obligation shall be distributed so as to meet locational ICAP requirements, considering the availability and capability of the NYS Transmission System to maintain A(R1) reliability requirements.

R2. ICAP from resources external to the NYCA for satisfying a portion of LSE ICAP requirements must be demonstrated to be available and deliverable to the NYCA borders. ICAP from resources external to the NYCA shall be permitted to the extent A.1 reliability requirements are satisfied.

R3. The NYISO shall prepare a report for the next Capability Period showing (1) LSE IRM and ICAP requirements so as to meet the statewide IRM requirement, (2) LSE locational ICAP requirements for applicable NYCA zones, such as New York City and Long Island, and (3) the allowable amount of LSE ICAP requirements that may be located externally to the NYCA. The report shall include the procedures, factors, and assumptions utilized by the NYISO to determine these LSE ICAP requirements. The NYISO Installed Capacity Manual shall include procedures to establish LSE ICAP requirements.

NYSRC Reliability Rule A.2: Establishing Load Serving Entity Installed Capacity Requirements (Version 43)

A. Rule: Load Serving Entity installed capacity requirements, including Locational Capacity Requirements, for each Capability Year shall be established

B. Requirements

R1. The NYISO shall annually establish Load Serving Entity (LSE) installed capacity (ICAP) requirements, including Locational Capacity Requirements (LCRs), in accordance with NYSRC rules and NYISO tariffs. NYISO analyses for setting LCRs shall include the following requirements:

- R1.1 The NYISO LCR analysis shall use the IRM established by the NYSRC as determined in accordance with Reliability Rule A.1.
- R1.2 The NYISO LCR analysis shall maintain a LOLE of 0.1 days/year, as specified by the Requirement A.1: R1.1.
- **R1.3 The NYISO LCR analysis shall use the software, load and capacity data, and models consistent with that utilized by the NYSRC for its determination of the IRM, as described in Sections 3.2 and 3.5 of NYSRC Policy 5, "Procedure for Establishing NYCA Installed Capacity Requirements."**
- R1.4 The NYISO shall document the procedures used to calculate the LCRs.
- R1.5 The NYISO shall prepare a report for the next Capability Year describing the analyses for establishing (1) LSE ICAP requirements, and (2) LCRs for applicable NYCA zones, prepared in accordance with R1.1 through R1.3. The report shall include the procedures, factors and assumptions utilized by the NYISO to determine these LSE ICAP requirements and LCRs.

R2, R3.

Introduction of NYSRC A2.R1.3

- Minutes of the December 8, 2017 EC Meeting
  - ICS discusses the Alternative LCR Proposal (total capacity cost minimization process) being developed by NYISO that includes locality LCR floor established by a transmission security evaluation
  - "R. Clayton identified the need for RRS to develop revised A.1 and A.2 rules followed by the development of a compliance certification statement relative to the application of the proposed alternative LCR methodology relative to NYSRC Rule A.2. "
- ICS Report at the January 11, 2018 EC meeting
  - "The Alternative LCR Methodology is proposing a transmission security limit and how that limit would be included in the next ICR study. **M. Sasson raised the concern regarding how to handle an outcome if the Tan (45) result was lower than the security floor."**
- RRS Report at the March 9. 2018 EC meeting
  - PRR 141 on A2 revisions is approved for posting for comments containing the new wording of A2.R1.3
- Minutes of the May 11 EC Meeting
  - **RRS recommended that the EC approve PRR 141-A.2. G. Loehr made a motion to approve the rule which M. Sasson seconded**. Motion was unanimously approved (13-0)
- Version 43 of the NYSRC Rules, dated May 11, 2018, contains the new wording of A2.R1.3

FERC activity on NYISO's total capacity cost minimization Alternative LCR Methodology

- June 5, 2018, filed by NYISO
- July 10, 2018, FERC issues a Deficiency Letter asking for more details
- August 9, 2018, NYISO responds to FERC's Deficiency Letter
  - "The GE MARS probabilistic model determines the LOLE constraint function for the system modeled at the NYSRC-determined IRM. Transmission security limits act as reliability-based constraints limiting how low the LCRs in each Locality can be set when achieving the least cost solution."
  - NYISO responds to FERC's question: *How the Alternative LCR Methodology ensures the transmission security limits are respected? "The proposed tariff language addressing the Alternative LCR Methodology explicitly requires that LCRs do not violate identified transmission security limits ("TSL"). Therefore, each TSL acts as a floor below which the optimizer cannot select a LCR value for the least cost solution."*

NYISO RCMS Compliance Support with A2.R1 Submitted on June 5, 2025

- NYISO quotes Measurement 1 on compliance:

  "**M1.** The *NYISO* conducted an annual analysis to establish *LSE* and Locational Capacity Requirements for the next *Capability Year* in accordance with R1.1, R1.2, and R1.3 requirements. The procedures used to calculate LCRs were documented in accordance with R1.4 and a report prepared in accordance with R1.5."

- In the body of their submittal to RCMS, NYISO states:
  - The LCR methodology of economic optimization meets the NYSRC's 0.1 days/year LOLE reliability standard while respecting the NYSRC-approved IRM as well as the Locality transmission security limits.
  - Transmission security limit (TSL) floor values are designed to ensure that the program **selects LCRs that are feasible from an operations perspective**. These TSL floor values are based on the bulk power system transmission capability into each Locality as determined by power flow and contingency analysis. Each Locality LCR satisfies its respective TSL floor value.

Compliance Issue with A2.R1.3

- The NYISO's cost optimization process was developed concurrently with the NYSRC's A2.R1.3 revisions to assure its compliance
  - It is compliant because it models the system at the NYSRC-approved IRM level and uses the MARS program to ensure the LOLE remains at 0.1 as LCR values are shifted between different areas
- However, when directly substituting a lower LCR by a higher TSL, the MARS program is not used and therefore it raises a compliance issue
- What should be of concern to the NYSRC is that the NYISO justifies this substitution by stating that it **selects LCRs that are feasible from an operations perspective**
- This implies that the NYISO considers that the **NYSRC IRM study results without this substitution is deficient because it is not feasible from an operations perspective**

LCR and TSL Values are Fundamentally Different

- LCR: Outcome of a **probabilistic** analysis determining the **minimum resources** necessary for the **state** to have a **LOLE of 0.1**
- TSL: Outcome of a **deterministic** analysis determining the **resources** necessary for a **locational area** to meet **transmission security** requirements
- LCR: Non-unique value determined from a Tan 45 point on an LCR/IRM curve where all points meet the LOLE = 0.1 condition
  - Load forecast uncertainty. external assistance and EOPs considered
  - Curve conditioned to the percentage of J versus K resources shifted upstate
  - Tan 45 point selected for J and K curves followed by an interpolation
- TSL: Value determined separately for each locational area observing NERC criteria, transfers into area, derating internal resources, and no external assistance or EOPs

Alternatives to Address Compliance Issue

- NYSRC could considerer modifying A2.R1.3
  - A2.R1.3 can be required specifically for the total capacity cost minimization process with updated assumptions
  - Substitution can then proceed provided end results meet NYSRC's IRM and LOLE = 0.1
  - Concern that if all LCRs are lower than their TSLs no minimization can be performed, and LOLE will be < than 0.1 after substitution, pressuring the NYSRC to compensate by setting a lower IRM
- NYSRC could considerer eliminating A2.R1.3
  - Consideration would be given to NYISO's need to have markets that reflect an operations environment
  - LCR is an outcome of a minimum resource study while TSL is an outcome of an operational environment study with all its resources
  - No consideration to LOLE conditions may be acceptable in an operational environment provided the system has enough resources to meet or exceed the IRM