New York ISO
Independent System Operator

# Preliminary LCR Results


## Nathaniel Gilbraith

Supervisor, Resource Adequacy


## ICAPWG

December 14, 2021

# Agenda

- Updated Net CONE Curves
- Updated Transmission Security Limits (TSLs) for 2022
  - Using the Fall load forecast
- Preliminary Locational Minimum Installed Capacity Requirements (LCR) Results
- Next Steps

New York ISO

# Background

- **Each year the NYISO produces preliminary LCR values for informational and discussion purposes.**
  - The process used to produce these preliminary LCRs follows the process used to determine final LCRs, i.e., the optimized LCR method.
- **This presentation provides preliminary LCR values using the NYSRC IRM Final Base Case and other inputs (e.g., Net CONE Curves).**

New York ISO

# 2022 Final Net CONE Curves

- **Associated Proxy Units:**
  - NYCA: 326.7 MW
  - Zones G-J: 347.0 MW
  - Zone J: 348.8 MW
  - Zone K: 348.8 MW

| 2022-2023 Net CONE Curves | | |
|---|---|---|
| Location | LCR (%) | Net CONE ($/kW-yr) |
| NYCA | 112.9 | 82.62 |
| | 115.9 | 84.25 |
| | 118.9 | 85.63 |
| | 121.9 | 86.94 |
| | 124.9 | 87.49 |
| G-J | 84.0 | 110.17 |
| | 87.0 | 112.33 |
| | 90.0 | 113.9 |
| | 93.0 | 115.34 |
| | 96.0 | 116.03 |
| Zone J | 80.6 | 157.48 |
| | 83.6 | 162.36 |
| | 86.6 | 164.34 |
| | 89.6 | 165.9 |
| | 92.6 | 167.01 |
| Zone K | 97.4 | 76.97 |
| | 100.4 | 86.44 |
| | 103.4 | 92.28 |
| | 106.4 | 95.23 |
| | 109.4 | 97.78 |

New York ISO

# 2022 Final TSL Values

| Transmission Security Limit | Formula | GHIJ | NYC | Long Island | Description |
|---|---|---|---|---|---|
| Load Forecast (MW) | [A] = Given | 15171.1 | 10944 | 5159 | Load Forecast from 2022 Fall Forecast |
| Transmission Security Limit (MW) | [B] = Studied | 3425.0 | 2900 | 325 | Bulk power transmission capability into the Locality consistent with reliability rules, less generation source contingencies (NYC: Ravenswood 3. LI: Neptune). |
| Resource Unavailability (MW) | [C] = Given | 492.0 | 407 | 37 | Special Case Resources, per NYSRC IRM Study. SCRs do not contribute to transmission security under normal transfer criteria. |
| ICAP Requirement (MW) | [D] = [A]-[B]+[C] | 12,238 | 8,451 | 4,871 | |
| ICAP Requirement Floor (%) | [E] = ROUND([D]/[A],1) | **80.7%** | **77.2%** | **94.4%** | |

The final TSL report will be posted to the NYISO website concurrent with this presentation.

New York ISO

# Preliminary 2022 LCR Results (PBC)

| | | Optimized LCRs | | |
|---|---|---|---|---|
| | NYCA IRM | G-J | NYC | LI |
| 2022 PBC Tan45 | 18.6%* | 90.2% | 80.6% | 96.1% |
| 2022 Prelim LCRs (PBC) | 18.6%* | 90.8% | 81.2% | 94.7% |

* Determined by ICS Tan 45 Process

** The TSL Limit for Long Island was binding

- Values discussed at October 5th ICAWG
https://www.nyiso.com/documents/20142/25091789/5%202022_prelim_lcrs_final.pdf/848aaf4c-062d-915f-d189-27e9c77fff39

New York ISO

# Preliminary 2022 LCR Results (FBC)

| | | Optimized LCRs | | |
|---|---|---|---|---|
| | NYCA IRM | G-J | NYC | LI |
| 2022 FBC Tan45 | 19.6%* | 90.7% | 80.7% | 99.8% |
| 2022 Prelim LCRs (FBC) | 19.6%* | 89.2% | 81.2% | 99.5% |

* Determined by ICS Tan 45 Process

New York ISO

# 2022 Preliminary LCR Results (FBC)

- **IRM Increased from PBC; factors include:**
  - Additional Solar Facilities
    - Various units added in Zones A-F
  - Updated Load Forecast
  - Extension of Neptune outage
- **G-J LCR**
  - Zone G marginal reliability is close to those values in Zones A, C and D
    - Lower load forecast and capacity re-ratings create more excess
    - More MWs transferred from Zone G/H/I to Zones A/C/D
    - Upstate is less expensive and MWs there have equivalent impact as downstate MW

New York ISO

# 2022 Preliminary LCR Results (cont.)

- **J LCR**
  - Minor increase in LCR due to economic optimization process
  - Consistent with Tan45 value
- **K LCR**
  - Both Tan45 LCR and optimized LCR increased due to the ongoing derate of the Neptune cable
  - Consistent with Tan45 value

New York ISO

# Next Steps

- **Finalize the LCR database**
  - NYSRC approved an IRM of 19.6% on December 10
  - If a material system change occurs, as determined by the NYSRC, then the LCR case will be updated. Otherwise, no updates to the LCR case will be made.
- **Present final LCRs to the NYISO Operating Committee in January 2022**

New York ISO

# Questions?

Questions or comments can be sent to IRM@nyiso.com

New York ISO

# Our mission, in collaboration with our stakeholders, is to serve the public interest and provide benefit to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policymakers, stakeholders and investors in the power system

New York ISO