

# Informational LCR Results

---

Ryan Carlson

Senior Resource Adequacy Analyst

**ICAPWG**

October 27, 2020

# Agenda

- Review Net CONE curves used in 2020 LCRs
- Updated Preliminary Net CONE curves for 2021
- Review Transmission Security Limit (TSL) used in 2020 Study
- Updated Preliminary TSL for 2021
  - Using the Gold Book forecast and Preliminary Base Case EFORd values
- Results
- Next Steps

# 2020 Net CONE Curves

- Published to the NYISO website  
11/19/2019

- <https://www.nyiso.com/documents/20142/3679493/2019-Net-CONE.pdf/66fd5afa-ea9c-792e-0213-793477adcb61>

- Proxy Units:

- NYBA: 217.0 MW
- Zones G-J: 218.0 MW
- Zone J: 217.6 MW
- Zone K: 219.1 MW

2019-2020 Capability Year LCRs: Net CONE Curves		
Location	LCR	Net CONE
NYCA	111.5	95.92
	114.5	96.98
	117.5	97.56
	120.5	98.10
	123.5	98.62
G-J	84.0	145.27
	87.0	145.93
	90.0	146.66
	93.0	147.90
	96.0	148.71
Zone J	74.5	169.85
	77.5	173.83
	80.5	178.34
	83.5	180.82
	86.5	182.34
Zone K	96.5	121.26
	99.5	127.06
	102.5	132.36
	105.5	136.07
	108.5	138.21

# 2021 Preliminary Net CONE Curves

- **Created as part of the Demand Curve Reset process**
  - Since it is a Demand Curve Reset year, the full curve has been updated\*
- **Updated Proxy Units:**
  - NYBA: 328.5 MW
  - Zones G-J: 347.0 MW
  - Zone J: 348.8 MW
  - Zone K: 348.8 MW

\*Note: MST § 5.11.4 states that NYISO shall use filed CONE values to be applicable in the first Capability Year covered by applicable periodic ICAP Demand Curve review.

2021-2022 Capability Year LCRs: Preliminary Net CONE Curves		
Location	LCR (%)	Net CONE (\$/kW-yr)
NYCA	112.9%	78.82
	115.9%	80.45
	118.9%	81.83
	121.9%	83.14
	124.9%	83.69
G-J	84.0%	110.9
	87.0%	113.06
	90.0%	114.63
	93.0%	116.07
	96.0%	116.76
Zone J	80.6%	156.13
	83.6%	161.01
	86.6%	162.99
	89.6%	164.55
	92.6%	164.66
Zone K	97.4%	90.31
	100.4%	99.78
	103.4%	105.62
	106.4%	108.57
	109.4%	111.12

# 2020 Final TSL Values

## 2020 Final TSL calculations

Transmission Security Requirements	Formula	GHIJ	NYC	LI	Source
Load Forecast (MW)	[A] = Given	15,695.3	11,477	5,269.5*	2019 ICAP forecast
Transmission Security Limit (MW)	[B] = Given	3,400	3,200	350	2019 Final TSL Report
Minimum UCAP Needed (MW)	[C] = [A]-[B]	12,295	8,277.1	4,919.5	
UCAP Needed Percent	[D] = [C]/[A]	78.34%	72.12%	93.36%	
5 Year EFORD	[E] = Given	9.93%	10.05%	9.69%	2020 IRM FBC EFORD
ICAP Needed (MW)	[F] = [C]/(1-[E])	13,651	9,201.9	5,447.3	
ICAP Floor Requirement (TSLs)	[G] = [F]/[A]	<b>87.0%</b>	<b>80.2%</b>	<b>103.4%</b>	2020 FBC TSLs

\* This value includes the ACHL from BTM:NG in Zone K (38.9 MW)

# 2021 Preliminary TSL Values

## Preliminary Base Case TSL calculations

Transmission Security Requirements	Formula	GHIJ	NYC	LI	Source
Load Forecast (MW)	[A] = Given	15,660	11,460	5,181*	2021 load from 2020 GB 2019 TSL Report
Transmission Security Limit (MW)	[B] = Given	3,400	3,200	350	
Minimum UCAP Needed (MW)	[C] = [A]-[B]	12,260	8,260	4,831	
UCAP Needed Percent	[D] = [C]/[A]	78.29%	72.08%	93.24%	
5 Year EFORD	[E] = Given	10.07%	9.17%	9.24%	2021 PBC EFORD
ICAP Needed (MW)	[F] = [C]/(1-[E])	13,633	9,093.9	5,322.8	
ICAP Floor Requirement (TSLs)	[G] = [F]/[A]	<b>87.1%</b>	<b>79.4%</b>	<b>102.7%</b>	2021 PBC TSLs

\* This value includes the ACHL from BTM:NG in Zone K (42.0 MW)

Note: Final TSL calculations will be available in December 2020

# 2021 Preliminary TSLs

- **TSL Analysis updates due by December 20<sup>th</sup>**
  - N-1-1 analysis and posting of the final TSL report
  - Final ICAP Load Forecast
  - Updated Zonal EFORd values based potential changes to model

# Preliminary LCR Results

## ■ Master Input File

- IRM Preliminary Base Case (PBC) MIF

		Optimized LCRs		
	NYCA IRM	G-J	NYC	LI
2021 PBC Tan 45	20.1%*	91.5%**	82.7%	97.3%
2021 PBC LCRs	20.1%*	88.5%	81.5%	102.7%***
<i>deltas</i>	0.0%	-3.0%	-1.2%	5.4%

\* Determined by ICS Tan 45 Process

\*\* As found condition for the G-J Locality given the PBC IRM and LCRs

\*\*\* The TSL Limit for Long Island was binding



# Final Base Case Updates

- **Potential Addition of Energy Limited Resource Modeling**
- **Update to October Load Forecast**
  - NYCA: +114 MW
  - Zone G-J: -274.7 MW
  - Zone J: -227.7 MW
  - Zone K: +143 MW
- **LCR Results will be recalculated once an updated case is created and approved**

# Next Steps

- **The NYISO will return to ICAPWG in November and present informational LCRs based on the final IRM study case, as presented to the New York State Reliability Council**
  - NYISO will also present materials to the NYSRC Installed Capacity Subcommittee
- **The NYISO will calculate final LCRs in January 2021**
- **Final LCRs will be presented to the OC in January 2021**

# Questions?

Questions or comments can be sent to [IRM@nyiso.com](mailto:IRM@nyiso.com)

# 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

