

Updated Preliminary 2023-2024 LCR Results

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Agenda

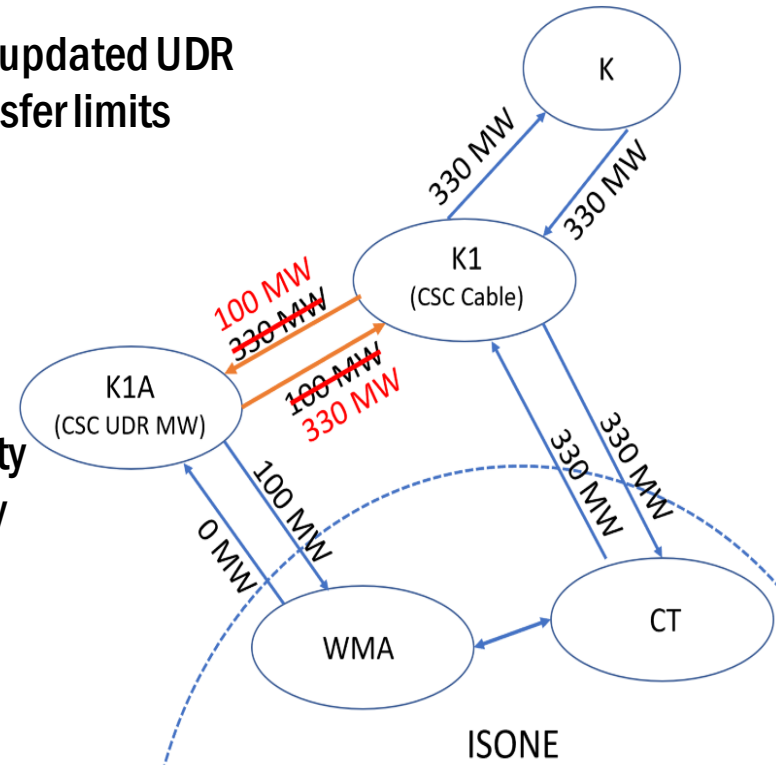
- **Update to the 2023-2024 IRM Final Base Case (“FBC”) after the 11/14 ICAPWG meeting**
- **Updated preliminary 2023-2024 LCRs based on updated IRM FBC**
- **Next Steps**

Background

- **As part of the regular IRM process, the Final Base Case (“FBC”) data is reviewed and QAed by the TOs**
 - The initial Tan45 results for the 2023-2024 IRM FBC were posted to the November 9th meeting. As per the process, TOs subsequently performed review of the database
- **During the TO database review on the 2023-2024 IRM FBC, an error in the UDR modeling was identified**
- **Therefore, the NYISO re-ran the FBC Tan45, with the error corrected in the underlying database**
- **The Updated Tan45 Results for the 2023-2024 IRM FBC were presented at the December 1st NYSRC ICS meeting**
 - [https://www.nysrc.org/PDF/MeetingMaterial/ICSMaterial/ICS%20Agenda%20271/Updated%20IRM%20FBC%20Tan45%20Results_V5\[9346\].pdf](https://www.nysrc.org/PDF/MeetingMaterial/ICSMaterial/ICS%20Agenda%20271/Updated%20IRM%20FBC%20Tan45%20Results_V5[9346].pdf)

Effect of the Correction – Reliability

- The error occurred during the NYISO implementing the updated UDR election for the Cross Sound Cable (“CSC”), in the transfer limits that facilitate the flow of the UDR MW
 - Due to the error in the transfer limits between the dummy bubbles K1A and K1, the UDR MW was bottled at 100 MW, limiting its availability to provide reliability benefits
- Correcting the error practically increases the availability of the UDR MW, improving the overall system reliability and hence reducing ICAP requirements in meeting 0.1 LOLE



Effect of the Correction – K LCR

- **The K LCR has been calculated with the consideration of the change in CSC UDR election**
 - As demonstrated in the FBC parametric results, updating the UDR election increased the K LCR by roughly 6%
 - This is due to counting the addition of the CSC UDR as ICAP supply in Zone K
- **Correcting the transfer limits between the dummy bubbles K1A and K1 does not add or subtract capacity in Zone K. Therefore, the underlying margin calculation is largely not impacted**
- **However, the K LCR, along with the IRM and J LCR, is still reduced, reflecting the improvement in the availability of the CSC UDR and the reliability across the system**
 - The reduction in the LCRs is not significant due to the size of the CSC UDR that is impacted by this database correction

The Updated IRM FBC Tan45 Results

With the data base correction, the FBC IRM is reduced by 0.3%, Zone J LCR is reduced by 0.2% and Zone K LCR is reduced by 0.6%

2023-2024 IRM FBC Tan45 Results	IRM	J LCR*	K LCR*
Initial results posted on 11/9 meeting	20.2%	78.4%	108.0%
Updated results with database correction	19.9%	78.2%	107.4%
<i>Delta</i>	-0.3%	-0.2%	-0.6%

* These LCRs are produced during the Tan45 process and do not consider Transmission Security Limit Floors.

Updated Preliminary 2023-2024 LCRs

- **With the data correction in the IRM model and the updated IRM results, the NYISO re-ran the Optimizer to update the Preliminary 2023-2024 LCR values**
 - Updated FBC database and the updated IRM result of 19.9% as presented at the December 1st ICS meeting
 - Other inputs to the updated optimizer run remain unchanged from the 11/14 ICAPWG presentation

2023-2024 Net CONE Curves

Location & Proxy Unit	LCR (%)	2022-2023 Net CONE Curves	2023-2024 Net CONE Curves
		Net CONE (\$/kW-yr)	Net CONE (\$/kW-yr)
NYCA 326.7 MW	112.9	82.62	71.12
	115.9	84.25	72.75
	118.9	85.63	74.13
	121.9	86.94	75.44
	124.9	87.49	75.99
G-J 347.0 MW	84.0	110.17	80.41
	87.0	112.33	82.57
	90.0	113.90	84.14
	93.0	115.34	85.59
	96.0	116.03	86.27
Zone J 348.8 MW	80.6	157.48	147.67
	83.6	162.36	152.55
	86.6	164.34	154.53
	89.6	165.90	156.09
	92.6	167.01	157.20
Zone K 348.8 MW	97.4	76.97	50.95
	100.4	86.44	60.42
	103.4	92.28	66.26
	106.4	95.23	69.21
	109.4	97.78	71.76

2023-2024 TSL Floors

Transmission Security Limit Calculation	Formula	G-J	NYC	LI	Notes
Load Forecast (MW)	[A] = Given	15,407	11,285	5,133	[1]
Bulk Power Transmission Limit (MW)	[B] = Studied	3,425	2,875	325	[2]
UCAP Requirement (MW)	[C] = [A]-[B]	11,982	8,410	4,808	
UCAP Requirement Floor	[D] = [C]/[A]	77.8%	74.5%	93.7%	
5-Year Derating Factor	[E] = Given	5.4%	4.5%	6.3%	[3]
Special Case Resources (MW)	[F] = Given	496.6	417.5	33.7	[4]
ICAP Requirement (MW)	[G] = (([C]/(1-[E]))+[F])	13,162	9,224	5,165	
ICAP Requirement Floor (%)	[H] = [G]/[A]	85.4%	81.7%	100.6%	

[1] 2023 Forecasted Load values from 2023 Fall Forecast

[2] Based on the Transmission Security Analysis performed for the 2023-2024 LCR Study

[3] 5-year Market EFORD based on the generation mix in the 2023-2024 IRM FBC

[4] Modeled SCRs are final; consistent with the 2023-2024 IRM FBC

Note: The TSL Floor Calculation method was updated and presented on October 4th, 2022:

https://www.nyiso.com/documents/20142/33562316/22_10_04_ICAPWG_Transmission_Security_Limit_Calculation.pdf

Updated Preliminary 2023-2024 LCR Results

Results Comparison	Updated FBC Tan45 Results	Prior Preliminary LCR Results (November 14th ICAPWG)	Updated Preliminary LCR Results (w/ database correction)	LCR Results Delta
NYCA IRM	19.900%	20.200%	19.900%	-0.300%
Zones G - J	88.548%	85.400%**	85.400%**	0.000%
Zone J	78.200%	81.700%**	81.700%**	0.000%
Zone K	107.400%	105.900%	105.100%	-0.800%

** TSL Floor is binding

- Overall, the modeling correction decreased the IRM from 20.2% to 19.9%
- Zones G – J and J remain bound by the TSL Floors at 85.4% and 81.7% respectively
- Zone K decreases to 105.1% as a result of the IRM FBC database correction

Next Steps

- **Finalize the LCRs after the IRM is finalized by the NYSRC on December 9th**
 - The NYISO will utilize the final IRM database and the NYSRC approved IRM to determine the final LCRs
- **Present final LCRs to the NYISO Operating Committee for approval in January 2023**
 - If the final IRM database and the IRM of 19.9% are approved by the NYSRC on December 9th, the LCRs presented today will be the final LCRs to be presented to the Operating Committee for approval

Questions?

Our Mission & Vision



Mission

Ensure power system reliability and competitive markets for New York in a clean energy future



Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation