2027-2028 IRM FBC Tan45 Points and Curves

For information at the NYSRC ICS Meeting #324 on 11/03/2026

Executive Summary:

Overview of the 2027-2028 IRM FBC Tan45 results and supporting reliability metrics. Included for ICS discussion.

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Contents Guide:

Section	Description
Tan45 Results (Tables 1-6)	Provides the final Tan45 results, comparison to the 2027-2028 IRM PBC Tan45 results, regression outcomes, and regression formulas used in the development of the Load Zone J and K Tan45 curves.
Tan45 Curve Visualizations (Fig. 1-4)	Illustrates the final Load Zone J and Load Zone K Tan45 curves and supporting graphical outputs.
Modeled Capacity and Margin Information (Tables 7, 8)	Provides summer and winter modeled ICAP, ICAP requirements at criteria, peak load assumptions, and the resulting reserve margins for the NYCA, Load Zone J, Load Zone K, and G-J Locality.
EOP Results (Tables 9, 10)	Summarizes annual and monthly EOP activations.

Tan45 Results

Table 1.

Tan45 Results Comparison			
	2027-2028 IRM Preliminary Base Case	2027-2028 IRM Final Base Case	Delta
IRM (%)	30.8%	30.9%	+0.1%
LOLH (hours/yr) [1]	0.355	0.363	+0.008
EUE (MWhr/yr)	178.423	190.237	+11.814
Summer Risk (%)	90.8%	91.6%	+0.7%
Winter Risk (%)	9.2%	8.4%	-0.7%
Normalized EUE (ppm) (Simple Method)	1.151	1.240	+0.089
Normalized EUE (ppm) (Bin Method)	1.038	1.127	+0.089

Table 2.

2027 - 2028 IRM FBC Tan45				
	IRM (%)	J LCR (%)	K LCR (%)	G-J (%)
IRM Tan45	30.9	85.094	110.687	89.556

Table 3.

Standard Error and Confidence Interval of LOLE [2]			
	Relative Standard Error	Standard Error	95% Confidence Interval
2027-2028 IRM FBC (Final Parametric Case)	0.032	0.0032	0.1 ± 0.0063

[1] **Note:** The LOLH and EUE metrics reported here for information purposes only were requested by the NYS Reliability Council. The data used to calculate the LOLH and EUE were obtained from the GE MARS output. (See EUE Calculation Methods)

[2] As per policy 5 Standard Error is reported at the conclusion of the FBC study before the 2027-2028 IRM FBC Tan45 run.

Table 4.

Low point and the 12 points on the Tan45 Curve		
IRM	**J LCR**	**K LCR**
28.32	93.91	114.53
28.50	92.59	114.07
29.00	89.64	113.08
29.50	87.66	112.21
30.00	86.53	111.64
30.50	85.60	111.05
31.00	85.00	110.64
31.50	84.49	110.32
32.00	84.07	110.02
32.50	83.83	109.77
33.00	83.60	109.56
33.50	83.42	109.43
34.00	83.21	109.25

Table 5.

J/K Individual Tan45 Regression Formulae and Outcomes					
	IRM (%)	**ax^2**	**bx**	**c**	**LCR (%)**
J	**31.319**	0.1772	-12.0968	289.7505	**84.664**
K	**30.517**	0.2669	-17.2891	390.1056	**111.045**

Table 6.

Sections on J and K Curves for the final Tan45 Results			
J Curve Section		**K Curve Section**	
First Point	Last Point	First Point	Last Point
30.5	**32.0**	**30.0**	**31.5**

Tan45 Curve Visualizations

Fig 1. 2027-2028 IRM FBC Tan45 – Load Zone J Curve

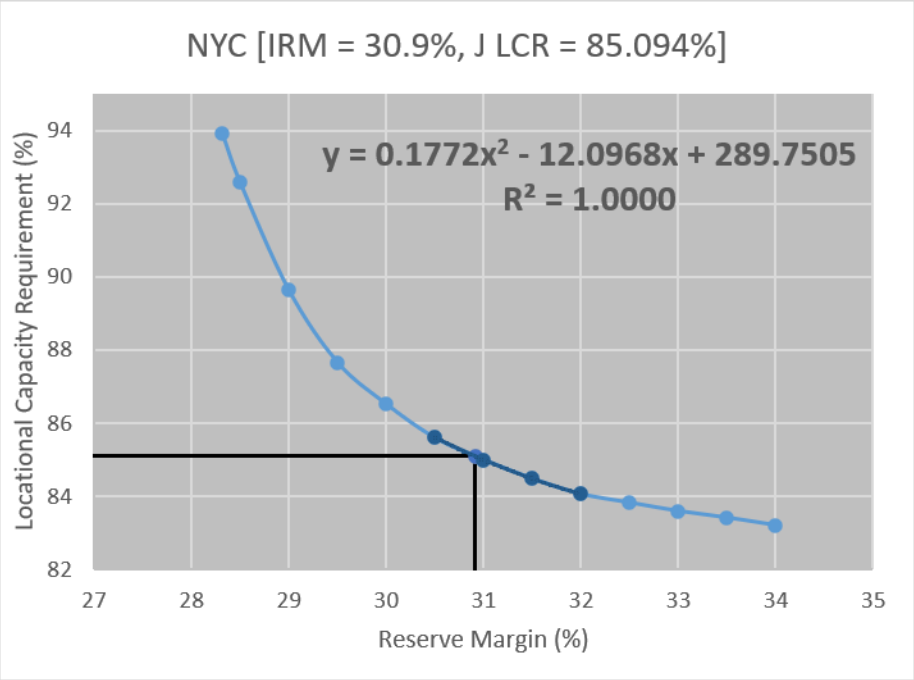


Fig 2. 2027-2028 IRM FBC Tan45 – Load Zone K Curve

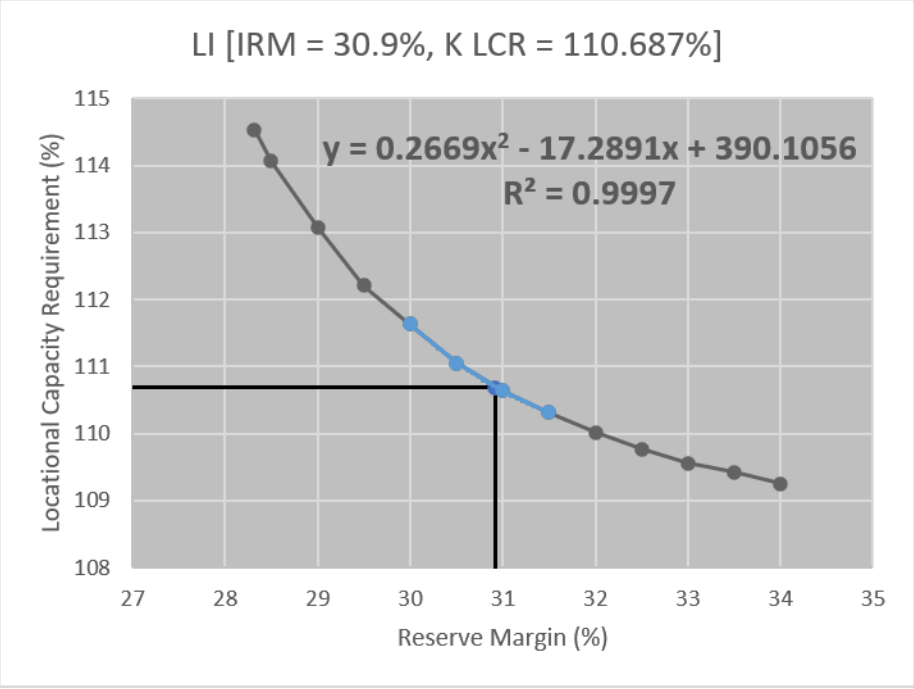


Fig 3.

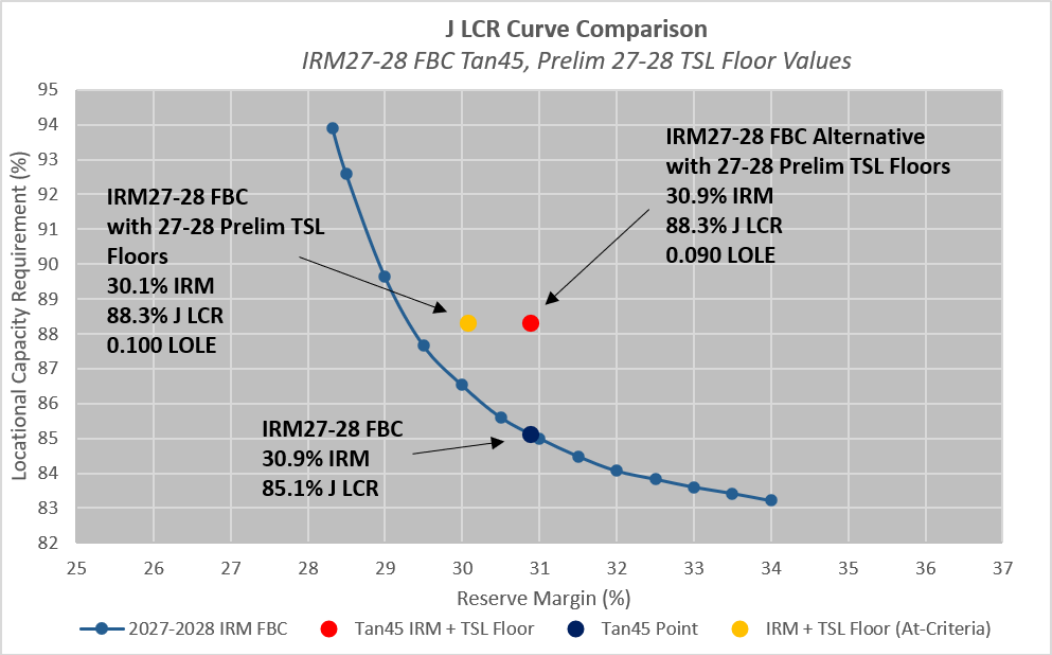
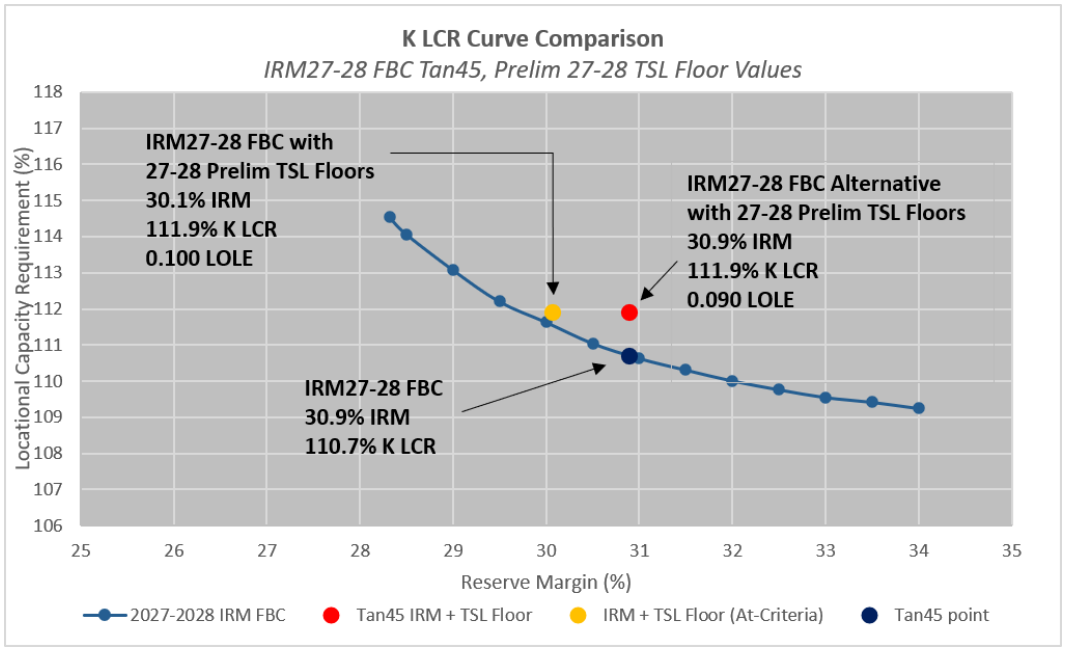

J LCR Curve Comparison
IRM27-28 FBC Tan45, Prelim 27-28 TSL Floor Values
Locational Capacity Requirement (%)
Reserve Margin (%)
IRM27-28 FBC
with 27-28 Prelim TSL
Floors
30.1% IRM
88.3% J LCR
0.100 LOLE
IRM27-28 FBC Alternative
with 27-28 Prelim TSL Floors
30.9% IRM
88.3% J LCR
0.090 LOLE
IRM27-28 FBC
30.9% IRM
85.1% J LCR
2027-2028 IRM FBC
Tan45 IRM + TSL Floor
Tan45 Point
IRM + TSL Floor (At-Criteria)

Fig 4.


K LCR Curve Comparison
IRM27-28 FBC Tan45, Prelim 27-28 TSL Floor Values
Locational Capacity Requirement (%)
Reserve Margin (%)
IRM27-28 FBC with
27-28 Prelim TSL Floors
30.1% IRM
111.9% K LCR
0.100 LOLE
IRM27-28 FBC Alternative
with 27-28 Prelim TSL Floors
30.9% IRM
111.9% K LCR
0.090 LOLE
IRM27-28 FBC
30.9% IRM
110.7% K LCR
2027-2028 IRM FBC
Tan45 IRM + TSL Floor
IRM + TSL Floor (At-Criteria)
Tan45 point

Modeled Capacity and Margin Information

Note: all margins are rounded to three decimal points of precision.

Table 7.

2027-2028 IRM FBC Tan45 Modeled ICAP – Summer (July)					
Area	**Total ICAP (MW)**	**ICAP Adjusted (MW)**	**ICAP Requirement at Criteria (MW)**	**Peak Load (MW) [3]**	**Margin (%)**
NYCA	42,541.1	-1,507.4	41,033.7	31,347.4	30.900%
J	10,437.8	-979.7	9,458.1	11,114.9	85.094%
K	5,897.2	-198.0	5,699.2	5,148.9	110.687%
G-J	14,693.9	-979.7	13,714.2	15,313.5	89.556%

Table 8.

2027-2028 IRM FBC Tan45 Modeled ICAP – Winter (January)					
Area	**Total ICAP (MW)**	**ICAP Adjusted (MW)**	**ICAP Requirement at Criteria (MW)**	**Peak Load (MW) [4]**	**Margin (%)**
NYCA	42,004.7	-1,507.4	40,497.3	24,803.0	63.276%
J	9,725.8	-979.7	8,746.1	7,766.4	112.615%
K	6,331.4	-198.0	6,133.4	3,364.9	182.277%
G-J	14,133.1	-979.7	13,153.4	10,959.4	120.020%

Emergency Operating Procedure (EOP) Results

Table 9.

Emergency Operating Procedures			
Step	**EOP**	**2027-2028 IRM PBC Tan45 (days/year)**	**2027-2028 IRM FBC Tan45 (days/year)**
1	Require SCRs (Load and Generation)	5.2	4.8
2	5% manual voltage reduction	4.5	4.1
3	30-minute reserves to zero	4.4	4.0
4	Voluntary load curtailment	2.8	2.3
5	Public appeals	2.7	1.8
6	5% remote controlled voltage reduction	2.6	1.8
7	Emergency purchases	2.0	1.3
8	10-minute reserves to 450MW	0.2	0.2
9	Customer disconnections	0.1	0.1

[3] 2027-2028 IRM FBC Assumptions Matrix (Item 1a)

[4] 2027-2028 IRM FBC Assumptions Matrix (Item 1b)

Table 10.

	Emergency Operating Procedures Monthly Activations (2027-2028 IRM FBC Tan45)								
	Margin State (Days/Month)								
	1	2	3	4	5	6	7	8	9
JAN	0.33	0.30	0.29	0.23	0.21	0.21	0.17	0.02	0.01
FEB	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
MAR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
APR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JUN	0.07	0.06	0.06	0.01	0.01	0.01	0.01	0.00	0.00
JUL	1.53	1.37	1.31	0.86	0.63	0.60	0.49	0.14	0.07
AUG	1.87	1.56	1.52	0.77	0.63	0.59	0.42	0.03	0.02
SEP	0.85	0.67	0.64	0.33	0.25	0.24	0.15	0.01	0.00
OCT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NOV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEC	0.18	0.16	0.15	0.12	0.10	0.10	0.08	0.01	0.00

Key	
Margin State	**EOP**
1	Require SCRs (Load and Generation)
2	5% manual voltage reduction
3	30-minute reserves to zero
4	Voluntary load curtailment
5	Public appeals
6	5% remote controlled voltage reduction
7	Emergency purchases
8	10-minute reserves to 450MW
9	Customer disconnections