2027-2028 IRM FBC TSL Impact Analysis

Transmission Security limit floor values (TSL Floors) are inputs to the NYISO's Locality Capacity Requirement (LCR) study and are not considered in the IRM under the Tan45 process described in NYSRC Policy 5-20. In cases where the TSL floor values are greater than the MLCRs associated with the NYSRC-approved IRM, the resulting LCRs in combination with the NYSRC-approved IRM can potentially result in a system with a loss of load expectation (LOLE) that is lower than the LOLE associated NYSRC-approved IRM. The LCR study is required to maintain the NYSRC-approved IRM and exceed the LOLE associated therewith, while also not exceeding the Locality-specific TSL Floors.

For the 2027-2028 Capability Year, NYISO developed seasonal TSL floor values and associated minimum LCR percentages. The minimum LCR percentages account for the more binding of the seasonal TSL floor values when determining LCRs. For the preliminary 2027-2028 assessment, the summer TSL floor values are more binding than the winter values. The preliminary TSL floor values are shown below in Figure 1.

Summer Transmission Security Limit Calculation	Units	Formula	G-J	NYC	LI	Notes
Non-Coincident Load Forecast	MW	$[A_S]$ = IRM Study Assumption	15,314	11,115	5,149	[1]
Bulk Power Transmission Limit	MW	$[B_S]$ = Studied	4,525	2,475	275	[2]
Net Flow Adjustment	MW	$[N_S]$ = Study Assumption	275	0	0	[3]
Offshore Wind UCAP Adjustment	MW	$[O_S]$=Calculated from IRM Study Assumption	0	0	41.6	[4]
UCAP Requirement	MW	$[C_S] = [A_S]-[B_S]+[N_S]+[O_S]$	11,064	8,640	4,916	
UCAP Requirement Floor	(%)	$[D_S] = [C_S]/[A_S]$	72.2%	77.7%	95.5%	
Composite 5-Year Derating Factor	(%)	$[E_S]$ = Calculated	10.53%	7.58%	14.27%	[5]
Special Case Resources	MW	$[F_S]$ = IRM Study Assumption	533.4	468.4	25.6	[6]
ICAP Requirement	MW	$[G_S] = ([C_S]/[1-[E_S]]) + [F_S]$	12,899.6	9,817.0	5,759.4	
Transmission Security Limit Floor	(%)	$[TSL_S] = [G_S]/[A_S]$	84.2%	88.3%	111.9%	

[1] Fall Load Forecast for the 2027-2028 Capability Year
[2] 2027-2028 Locality Bulk Power Transmission Capability Report
[3] LI Bulk Power Transmission Limit Adjustment
[4] Difference in Resource Adequacy and Transmission Security UCAP Valuation
[5] Summer Composite 5-Year Derating Factor
[6] July SCR ICAP from 2027-2028 IRM FBC

Winter Transmission Security Limit Calculation	Units	Formula	G-J	NYC	LI	Notes
Non-Coincident Load Forecast	MW	$[A_W]$ = IRM Study Assumption	10,959	7,766	3,365	[1]
Bulk Power Transmission Limit	MW	$[B_W]$ = Studied	5,225	2,900	450	[2]
Net Flow Adjustment	MW	$[N_W]$ = Study Assumption	450	0	0	[3]
Offshore Wind UCAP Adjustment	MW	$[O_W]$=Calculated from IRM Study Assumption	0	0	28.4	[4]
UCAP Requirement	MW	$[C_W] = [A_W]-[B_W]+[N_W]+[O_W]$	6,184	4,866	2,943	
UCAP Requirement Floor	(%)	$[D_W] = [C_W]/[A_W]$	56.4%	62.7%	87.5%	
Composite 5-Year Derating Factor	(%)	$[E_W]$ = Calculated	10.27%	7.40%	14.32%	[5]
Special Case Resources	MW	$[F_W]$ = IRM Study Assumption	322.0	282.8	15.4	[6]
ICAP Unavailable Fuel Constraints	MW	$[P_W]$ = IRM Study Assumption	2,988	1,830	571	[7]
ICAP Requirement	MW	$[G_W]=([C_W]/[1-[E_W]]) + [F_W]+[P_W]$	10,201.8	7,367.7	4,021.7	
Transmission Security Limit Floor	(%)	$[TSL_W] = [G_W]/[A_W]$	93.1%	94.9%	119.5%	

[1] Fall Load Forecast for the 2027-2028 Capability Year
[2] 2027-2028 Locality Bulk Power Transmission Capability Report
[3] LI Bulk Power Transmission Limit Adjustment
[4] Difference in Resource Adequacy and Transmission Security UCAP Valuation
[5] Winter Composite 5-year DF
[6] January SCR ICAP from 2027-2028 IRM FBC
[7] Firm Fuel Derates 2027-2028 IRM FBC

Figure 1: Preliminary TSL Floor Values.[1]

The 2027-2028 Final Base Case (FBC) Tan45 analysis results in a 30.9% IRM, with LCRs of 85.1% for Load Zone J, 110.7% for Load Zone K, and 89.6% for the G-J Locality, and an NYCA LOLE of 0.100 days/year.

Applying the preliminary TSL minimum LCR percentages while maintaining the 30.9% Tan45 IRM changes the locational capacity requirements. Under this case, the Load Zone J LCR increases from 85.1% to 88.3%, the Load Zone K LCR increases from 110.7% to 111.9%, and the G-J Locality LCR decreases from 89.6% to 84.2%. With these changes and the IRM held at 30.9%, the modeled NYCA LOLE changes from 0.100 to 0.090 days/year.

NYISO also evaluated the IRM corresponding to an LOLE of 0.100 days/year with the preliminary TSL minimum LCR percentages in place. In this case, the Zone J and Zone K

[1] Recommended Transmission Security Limit (TSL) Floor Methodology-10/8/26 ICAPWG

LCRs remain at 88.3% and 111.9%, respectively, while the resulting statewide IRM is 30.1%, or 0.8 percentage points below the 30.9% Tan45 IRM.

TSL Floor Impact Case	IRM	Load Zone J	Load Zone K	G-J Locality	LOLE
2027-2028 IRM FBC Tan45	**30.9%**	**85.1%**	**110.7%**	**89.6%**	**0.100**
Tan45 IRM + Preliminary TSL Floors	30.9%	88.3%	111.9%	84.2%	0.090
Preliminary TSL Floors at Criterion	**30.1%**	**88.3%**	**111.9%**	**84.2%**	**0.100**

Figure 2: TSL Floor Impact Cases

The analysis demonstrates the interaction between the Tan45 methodology and the TSL minimum LCR percentages. This analysis is shown overlaid with the Tan45 curves below in figure 3.

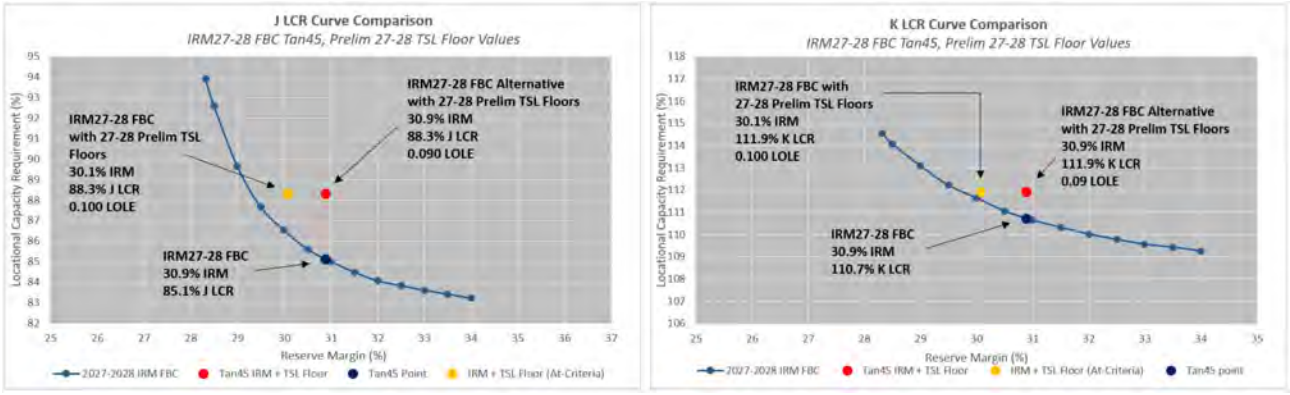


Figure 3: Tan45 Curves with TSL Floor