

2024 IRM Study - Sensitivity Cases

Case	Description	IRM (%)	NYC (%)	LI (%)	IRM (%) Change from Base	LOLH (hrs/yr)	EUE (MWh/yr)
0	2024 IRM Preliminary Base Case	20.8	72.7	109.9	-	0.33711	180.827
	These are the Base Case technical results derived from knee of the IRM-LCR curve						
1	NYCA Isolated	27.0	77.2	116.2	+6.2	0.30757	195.821
	Track Total NYCA Emergency Assistance – NYCA system is isolated and receives no emergency assistance from neighboring control areas (New England, Ontario, Quebec, and PJM). UDRs are allowed						
2	No Internal NYCA transmission constraints	18.8	71.3	107.9	-2.0	0.34624	272.719
	Track level of NYCA congestion with respect to the IRM model – internal transmission constraints are eliminated and the impact of transmission constraints on statewide IRM requirements is measured						
3	No Load Forecast Uncertainty	15.7	69.1	104.7	-5.1	0.25842	59.361
	Shows sensitivity of IRM to load uncertainty, if the forecast peak loads for NYCA have a 100% probability of occurring						
4a	No Wind Capacity – Land-Based Wind Only	15.1	72.7	109.9	-5.7	0.34157	185.615
	Shows wind impact for the land-based wind units and can be used to understand EFORD sensitivity (A – F Shifting)						
4b	No Wind Capacity – All Wind Units	14.0	73.4	108.4	-6.8	0.3442	195.546
	Shows wind impact for both land-based and off-shore wind units and can be used to understand EFORD sensitivity						
5	No SCR Capacity	17.7	69.5	109.9	-3.1	0.31885	161.200
	Shows sensitivity of IRM to SCR program						

Case	Description	IRM (%)	NYC (%)	LI (%)	IRM (%) Change from Base	LOLH (hrs/yr)	EUE (MWh/yr)
6a	EOP (Emergency Operating Procedures) Whitepaper Recommendation	23.0	72.4	109.5	+2.2	0.36814	227.886
	Shows impact of modifying Emergency Assistance (EA) from neighboring areas modeled during the EOP steps in accordance with the EOP Whitepaper recommendation (Tan45)						
6b	EOP Whitepaper Recommendation plus Winter EA Zeroed Out	23.0	72.4	109.5	- (Based off 6a)	0.36823	227.895
	Built upon Sensitivity 6a, shows impact of reducing EA from neighboring areas to 0 in winter						
7a-1	Winter Constraints plus S06a (3,500 MW)	23.0	72.4	109.5	- (Based off 6a)	0.36814	227.886
	Shows impact to reliability when winter capacity is reduced due to gas constraints and can be used to understand tightening winter conditions						
7a-2	Winter Constraints plus S06a (7,000 MW)	23.1	72.4	109.6	+0.1 (Based off 6a)	0.36537	224.831
	Shows impact to reliability when winter capacity is reduced due to gas constraints and can be used to understand tightening winter conditions						
7b-1	Winter Constraints plus S06b (3,500 MW)	23.0	72.4	109.5	- (Based off 6b)	0.36824	227.898
	Shows impact to reliability when winter capacity is reduced due to gas constraints and can be used to understand tightening winter conditions						
7b-2	Winter Constraints plus S06b (7,000 MW)	23.8	72.9	110.3	+0.8 (Based off 6b)	0.33256	191.207
	Shows impact to reliability when winter capacity is reduced due to gas constraints and can be used to understand tightening winter conditions						
8	Dover PAR						
	Shows impact of reducing AC Transmission transfer limits due to Dover PAR installation delay						

* All results are calculated by adding/removing capacity from Zones A - K unless otherwise noted

2024 & 2023 IRM Study - Sensitivity Cases Comparison

	IRM (%)	NYC (%)	LI (%)	IRM% Change from Base
Preliminary Base Case				
2023	20.1	80.1	104.4	0.0
2024	<u>20.8</u>	<u>72.7</u>	<u>109.9</u>	<u>0.0</u>
<i>Delta</i>	0.7	-7.4	5.5	0.0
NYCA Isolated				
2023	27.7	85.3	112.0	7.6
2024	<u>27.0</u>	<u>77.2</u>	<u>116.2</u>	<u>6.2</u>
<i>Delta</i>	-0.7	-8.1	4.2	-1.4
No Internal NYCA Transmission Constraints				
2023	18.1	78.7	102.4	-2.0
2024	<u>18.8</u>	<u>71.3</u>	<u>107.9</u>	<u>-2.0</u>
<i>Delta</i>	0.7	-7.4	5.5	0.0
No Load Forecast Uncertainty				
2023	11.9	74.5	96.2	-8.2
2024	<u>15.7</u>	<u>69.1</u>	<u>104.7</u>	<u>-5.1</u>
<i>Delta</i>	3.8	-5.4	8.5	3.1
No Wind Capacity				
2023	14.0	80.1	104.4	-6.1
2024				
<i>No Wind Capacity – Land Based Wind Only</i>	<u>15.1</u>	<u>72.7</u>	<u>109.9</u>	<u>-5.7</u>
<i>Delta</i>	1.1	-7.4	5.5	0.4
<i>No Wind Capacity – All Wind Units</i>	<u>14.0</u>	<u>73.4</u>	<u>108.4</u>	<u>-6.8</u>
<i>Delta</i>	0.0	-6.7	4.0	-0.7
No SCR Capacity				
2023	17.2	76.9	104.7	-2.9
2024	<u>17.7</u>	<u>69.5</u>	<u>109.9</u>	<u>-3.1</u>
<i>Delta</i>	0.5	-7.4	5.2	-0.2