

2022 IRM Study- Sensitivity Cases (based on PBC)

Case	Description	IRM (%)	NYC (%)	LI (%)	IRM% Change from Base Case
0	2022 IRM Preliminary Base Case	18.6	80.6	96.1	-
	These are the Base Case technical results derived from knee of the IRM-LCR curve.				
1	NYCA Isolated	27.2	87.0	104.4	+8.6
	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	16.7	79.2	94.2	-1.9
	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	10.7	74.7	88.5	-7.9
	Shows sensitivity of IRM to load uncertainty, assuming that the forecast peak loads for NYCA have a 100% probability of occurring.				
4	No wind capacity	13.0	80.6	96.1	-5.6
	Shows wind impact; performed by freezing J & K at base levels and adjusting capacity in the upstate zones.				
5	No SCRs	15.9	77.7	96.3	-2.7
	Shows sensitivity of IRM to SCR resources.				
6	Zone D PAR sensitivity	18.5	80.6	96.1	-0.1
	Determines IRM if the zone D PAR repair is completed in advance of next summer; performed by freezing J & K at base levels and adjusting capacity in the upstate zones.				
7	Enhanced Energy Limited Resource (ELR) sensitivity.	17.8	80.7	96.3	-0.8
	Selects the TC-4C option from the ELR whitepaper as the basis for testing a functionality of the new MARS ELR software. Includes results on the number of EOPs called. (Tan 45)				
8	Extended partial outage of Neptune UDR	19.8	82.3	98.3	+1.2
	Sensitivity on line remaining partially unavailable (50%) (Shifting performed across Zones G-K)				
9	Revert to 2021 IRM Study Cable Forced Outage Rates	18.5	80.4	93.1	-0.1
	Shows the (Tan45) Impact of Updated Cable Forced Outage Rates.				

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

MARGIN STATE	Corresponding EOP Step
1	Operating Reserves
2	Special Case Reserve (SCR) Resource
3	Mandatory Voltage Reduction
4	30 Minutes Reserve
5	5% Remote Voltage Reduction
6	Voluntary Curtailment
7	Public Appeals
8	Emergency Assistance
9	10 Minutes Reserve
10	EC Adjustments
After EOP Step 10	Firm Load Shedding

Note: At each Margin State, the corresponding EOP step is implemented. The EOP Calls at each Margin State means after corresponding implementation, the need to call for the next EOP step.

MONTH	EOP Calls Per MARGIN STATE – 2022 IRM PBC									
	1	2	3	4	5	6	7	8	9	10
JAN	4.40	2.51	2.34	2.34	1.41	1.41	1.41	0.00	0.00	0.00
FEB	11.99	9.93	9.82	9.79	9.05	9.04	9.04	0.00	0.00	0.00
MAR	3.92	2.66	2.61	1.59	1.28	1.25	1.22	0.00	0.00	0.00
APR	0.43	0.37	0.36	0.10	0.08	0.06	0.05	0.00	0.00	0.00
MAY	1.20	0.87	0.85	0.10	0.08	0.06	0.04	0.00	0.00	0.00
JUN	4.07	1.94	1.84	1.69	1.37	1.35	1.34	0.00	0.00	0.00
JUL	5.70	4.02	3.94	3.73	3.12	3.08	3.07	0.15	0.05	0.05
AUG	8.21	6.46	6.31	5.84	5.13	5.04	5.00	0.15	0.05	0.05
SEP	2.71	1.17	1.13	1.12	0.87	0.86	0.86	0.00	0.00	0.00
OCT	1.46	0.70	0.67	0.25	0.17	0.14	0.13	0.00	0.00	0.00
NOV	0.07	0.03	0.03	0.02	0.02	0.02	0.02	0.00	0.00	0.00
DEC	1.14	0.55	0.53	0.51	0.39	0.39	0.39	0.00	0.00	0.00
TOTAL	45.3	31.2	30.4	27.1	22.9	22.7	22.6	0.3	0.1	0.1

MONTH	EOP Calls Per MARGIN STATE – ELR Sensitivity Case									
	1	2	3	4	5	6	7	8	9	10
JAN	2.25	0.64	0.54	0.54	0.38	0.38	0.38	0.00	0.00	0.00
FEB	10.90	9.46	9.25	9.21	8.51	8.50	8.50	0.00	0.00	0.00
MAR	3.73	2.46	2.39	1.41	1.20	1.17	1.15	0.00	0.00	0.00
APR	0.38	0.34	0.33	0.09	0.06	0.05	0.04	0.00	0.00	0.00
MAY	0.97	0.77	0.76	0.07	0.06	0.04	0.03	0.00	0.00	0.00
JUN	2.63	1.19	1.15	0.94	0.78	0.75	0.74	0.00	0.00	0.00
JUL	4.35	3.18	3.12	2.72	2.46	2.43	2.42	0.15	0.05	0.05
AUG	6.34	4.69	4.60	4.13	3.75	3.71	3.69	0.14	0.05	0.05
SEP	1.65	0.53	0.51	0.49	0.25	0.25	0.25	0.00	0.00	0.00
OCT	0.88	0.48	0.46	0.12	0.08	0.06	0.05	0.00	0.00	0.00
NOV	0.04	0.02	0.02	0.01	0.01	0.01	0.01	0.00	0.00	0.00
DEC	0.67	0.24	0.22	0.21	0.16	0.16	0.16	0.00	0.00	0.00
TOTAL	34.8	24	23.4	20	17.7	17.5	17.4	0.3	0.1	0.1