

(Initial Draft: ICS Approval Item for August)

2027-2028 IRM Study - Sensitivity Cases (based on PBC)

Sensitivity cases in the IRM study evaluate the impact of key modeling assumptions and system conditions on the resulting IRM. These cases isolate inputs within the study framework to identify primary drivers of reliability risk in the New York Control Area (NYCA).

As part of each study cycle, the sensitivity case list is reviewed in consideration of current system conditions, preliminary base case (PBC) assumptions, study objectives and priorities, as well as emerging and potential future system changes. Sensitivity cases complement the PBC results by evaluating existing assumptions and reasonable alternative scenarios not reflected in the base case.

<i>2027-2028 IRM Impacts of Key MARS Study Parameters</i>		
Case	Description	Objective
1	NYCA Isolated	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	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	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 – All Wind Units	Shows wind impact for both land-based and offshore wind units and can be used to understand EFORD sensitivity
5	Fuel Availability with Firm Fuel Characteristic Elections (Tan45)	Shows the impact of modeling winter fuel availability in each Load Zone based on firm fuel character elections for the 2027-2028 Capability Year

All results are calculated by shifting capacity from Load Zones A - K unless otherwise noted

While a core set of sensitivities has historically been maintained, changes in system conditions and PBC assumptions over time warrant annual reassessment to ensure continued alignment with study objectives and monitoring of changes in drivers of reliability risks.

<i>Sensitivity Cases Recommended for Removal</i>	
Sensitivity Case	Basis for Recommendation
No Special Case Resource (SCR) Capacity	This sensitivity is recommended for removal from the 2027-2028 IRM study as SCRs represent one step within the emergency operating procedures and this sensitivity case does not directly influence subsequent study processes.

In addition to the sensitivity cases that evaluate the impact of certain key modeling parameters, additional sensitivity cases based on changes to the base case assumptions are identified below. These sensitivity cases reflect current-year PBC inputs and are identified to evaluate the uncertainty of certain key assumptions. These sensitivity cases may therefore vary by study cycle to capture evolving system conditions and the drivers of reliability risk.

<i>2027-2028 IRM Impacts of Base Case Assumptions Changes</i>		
Case	Description	Objective
6	Empire and Sunrise Wind Included (Tan45)	Shows the impact of including the Empire and Sunrise Wind units in the 2027-2028 IRM study. For the PBC, these units are not included in the study.
7	No New Generator Inclusion (Tan45)	Shows the impact of modeling an alternative assumption in which no new generator additions are included in the 2027-2028 IRM study (i.e., removes the new generator additions modeled as part of the PBC).
8	2020-2024 Thermal EFORD Data (Tan45)	Shows the impact of modeling thermal generator EFORD values based on the 2020–2024 outage data set instead of the 2021–2025 outage data set used in the PBC.

All results are calculated by shifting capacity from Load Zones A - K unless otherwise noted

Appendix: 2026-27 IRM Study – PBC Sensitivity Cases

Case	Description	Reason
0	2026-27 IRM Preliminary Base Case	These are the Base Case technical results derived from knee of the IRM-LCR curve
<i>IRM Impacts of Key MARS Study Parameters</i>		
1	NYCA Isolated	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	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	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 – All Wind Units	Shows wind impact for both land-based and off-shore wind units and can be used to understand EFORD sensitivity
5	No SCR Capacity	Shows sensitivity of IRM to Special Case Resource (SCR) program
<i>IRM Impacts of Base Case Assumptions Changes</i>		
6	No Winter Fuel Availability Constraints (Tan45)	Shows the level of winter reliability risk due to the winter fuel availability constraints
7	CHPE + Barges Alternative Assumptions (Tan45)	Show impact of modeling alternative assumptions for the status of CHPE and the Gowanus/Narrows barges • With the PBC assuming that CHPE is included and barges are out-of-service, the sensitivity will exclude CHPE and include the barges

All results are calculated by shifting capacity from Load Zones A - K unless otherwise noted