

2023-2024 IRM Y49 Sensitivity

Kevin Osse
NYISO

ICS Meeting #267

October 5, 2022

Sensitivity Case 9 – Model Changes

- Based on the latest information, the outage on the transformer SPRNBRK_-EGRDNCTR_345_Y49 will be in effect between October 1, 2022 and May 31, 2023 (<http://mis.nyiso.com/public/pdf/ttcf/ttcf.pdf>)
- To model the extension of this outage beyond June 2023, the NYISO proposed the following transfer limits to be used in the sensitivity case:
 - These limits are modeled to be applied for the entire year

Interface	Current Transfer Limits (PBC)	New Transfer Limits (Sensitivity 9)
Zone I to Zone K	1293 MW	656 MW
Zone K to Zone I	515 MW	0 MW
Zone I and J to Zone K (grouping)	1613 MW	976 MW

Results and Conclusions

Sensitivity Case 9		PBC	Delta (%)
IRM	20.7%	20.1%	+0.6
J LCR	80.9%	80.1%	+0.8
K LCR	105.6%	104.4%	+1.2

- Decreasing the Zone K inertia rating has a medium impact on both the IRM and Zone J LCR
- The change has a higher impact on the Zone K LCR

Sensitivity Case 10 – Model Changes

- The outage rate for Y49 is modeled in the IRM study using a transition rate matrix considering outages from both Y49 and Y50. During the past 5 years, Y50 has been in normal operations, while Y49 has been subject to long outages
- To model a different outage rate for Y49 with normal operation conditions, the NYISO proposed to apply the transition rate of Y50 to Y49
 - This means that the transition rate matrix in the IRM model would only consider outages from Y50, making Y49 in the same operating conditions as Y50
 - Used the same 5-year period (2017-2021)
 - This methodology proved to be nonviable
- PSEG LI and NYISO agreed to an outage rate for Y49 that reverts to 2021 IRM Study values (2015-2019 data)
 - This data set rolls back two years of poor performance on Y49, bringing the transition rate matrix more in line with how the circuit will likely perform after repairs / upgrades are made
 - These conditions are consistent with its performance before it was subjected to long outages

Results and Conclusions

Sensitivity Case 10		PBC	Delta (%)
IRM	19.6%	20.1%	-0.5
J LCR	79.5%	80.1%	-0.6
K LCR	103.5%	104.4%	-0.9

- Improving the availability of Y49 results in decreases in the IRM and both LCRs

Questions?

Our Mission & Vision



Mission

Ensure power system reliability and competitive markets for New York in a clean energy future



Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation