New York ISO
Independent System Operator

NYISO 2024 Fault Current Assessment

Aashish Murti
Manager, System Modeling

OPERATING COMMITTEE

May 16, 2024

Background

- **Purpose**
  - Perform symmetrical fault duty analysis on selected New York stations to determine whether the circuit breakers present in the New York Control Area system would be subject to fault levels in excess of their rated interrupting capability
  - Required annually by the New York State Reliability Council Rules (C.5)

New York ISO

Major System Changes[1]

- B3402 PAR1 out-of-service
- C3402 PAR2 out-of-service
- Warren-Falconer out-of-service
- L34P was placed in-service
- Somerset load project in-service
- AC Transmission Segment A Topology
  - Princetown to Edic 345 kV double circuit in-service
- Retirement of Western NY Wind
- Retirement of Ravenswood GT 1
- Retirement of Ravenswood GT 11

[1]The starting point for this representation was the NYISO 2024 Statewide Short Circuit representation, with updates to reflect the planned system changes listed in the NYISO 2024 Load and Capacity Data Report ("Gold Book").

New York ISO

2024 Results

General Changes in fault current levels

- 152 Stations reviewed
- Fault Currents significantly decreased at the Dysinger 345 kV, Niagara 345 kV and Stolle Road 345 kV substations due to the Modeling updates for the Dysinger PAR.
- Fault Currents significantly decreased at the Kintigh 345 kV substation due to Modeling updates at Kintigh related to the Somerset load project going in-service.

New York ISO

2024 Results (Cont.)

- Fault Currents significantly increased at the Alps 345 kV, Knickerbocker 345 kV, N Scotland 77K 345 kV, N Scotland 99K 345 kV, Pleasant Valley 345 kV, Van Wagner 345 kV substations due to modeling updates at Knickerbocker.

- Fault Currents significantly increased at the Edic 345 kV, Gordon Road 345 kV, Marcy 345 kV, Princetown 345 kV substations due to addition of the Princetown to Edic 345 kV double circuit .

- Fault Currents significantly increased at the ST Lawrence 230 kV substation due to the L34P PAR being placed back in-service.

New York ISO

2024 Sensitivity Analysis Results

- NYISO performed sensitivity analysis for Astoria configurations per the existing Operating protocol for Astoria East and West Stations- Fault Current Mitigation approved at the Operating Committee on May 18th, 2023.
- Overdutied breakers at Astoria East 138 kV would result when Astoria dual yard steam unit 3 and 5 are connected to the Astoria East bus.
- The NYISO recommends revision to the existing Operating Protocol for Astoria East and West Stations - Fault Current Mitigation approved at the Operating Committee on May 18th , 2023 to prevent overduty conditions at Astoria East for Astoria 3 and 5 connected to the Astoria East bus.

New York ISO

Findings and Recommendations

- The fault current assessment found no overdutied breakers.
- Based on the Sensitivity results performed according to the existing Operating Protocol, the NYISO recommends revision to the existing Astoria East and West Stations - Fault Current Mitigation approved at the Operating Committee on May 18th , 2023.

New York ISO

Next Steps

- Presented at System Operations Advisory Subcommittee (SOAS) on May 9th
- NYISO Operating Committee Review and Approval

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

New York ISO

Questions?

New York ISO