

NYISO 2025 Fault Current Assessment

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OPERATING COMMITTEE

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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)

Major System Changes¹

- B3402 PAR1 out-of-service
- C3402 PAR2 out-of-service
- Warren-Falconer out-of-service
- Lovett 345 kV was placed in-service
- Stamp load project was placed in-service
- Dover PAR modeled in-service
- Gowanus 138kV PAR modeled in-service
- Goethals 138kV PAR modeled in-service

¹The starting point for this representation was the NYISO 2025 Statewide Short Circuit representation, with updates to reflect the planned system changes listed in the NYISO 2025 Load and Capacity Data Report (“Gold Book”).

2025 Results

General Changes in fault current levels

- 153 Stations reviewed
- Fault Currents significantly decreased at the Cricket Valley 345 kV substation due to the Dover PAR modeled in-service.
- Fault Currents significantly decreased at the S Ripley 230 kV substation due to Modeling updates related to the shift in the commercial operation date of a queue project in the area.
- Fault Currents significantly decreases at the E13 ST 345 kV substation due to the E13 St. Transformer replacement.

2025 Results (Cont.)

- Fault Currents significantly increased at the Farragut 345 kV, Goethals 345 kV, Gowanus 345 kV, Rainey 345 kV, Fox Hills 138 kV, and Greenwood N 138 kV substations due to the Goethals and Gowanus PARs being placed in-service.
- Fault Currents significantly increased at the E River 69 kV substation due to the E13 St. Transformer replacement.
- Fault Currents significantly increased at the Kintigh 345 kV substation due to a transformer modeling update at Beowolf from NYSEG.
- Fault Current significantly increased at the Willis 230 kV substation due to modeling updates to the WPN1 line from NYPA.

Findings and Recommendations

- The fault current assessment found no overdutied breakers.
- The NYISO recommends continued application of the Operating Protocol for Astoria East and West Stations - Fault Current Mitigation approved by the Operating Committee on May 16, 2024, to prevent overduty conditions at the Astoria East station for certain Astoria East and West configurations

Next Steps

- Presented at System Operations Advisory Subcommittee (SOAS) on May 8th
- 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

Questions?