

## PSEG BERGEN SPARE EQUIPMENT STUDY VIOLATION

The Bergen 138 kV series reactors on the R-1344 and M-1339 lines configuration include a normally open bypass switches. During an outage of the series reactors, the bypass switches will be closed to keep the circuits operational. The current rating of the two bypass switches are lower than the circuit rating, as a result the rating of the circuits will be limited by the bypass switches.

PJM annually evaluates the spare equipment strategy that could result in the unavailability of major transmission equipment that has a lead time of one year or more and assess the impact of this possible unavailability on system performance using NERC category P0, P1 and P2 contingency categories identified in Table 1 of NERC TPL-001-4.

As part of the 2021 RTEP spare equipment study, PJM identified the Bergen series reactors, in violation of criteria in year 2022. The Bergen series reactors don't have spare and as a result, for an outage of the series reactors, the normally open bypass switches will be closed, this switching mitigation will result in an overload on the normally open bypass switches. The bypass switches need to be replaced with higher rating matching or exceeding the rating of the connected lines.

As a result of the timing of the violation, this project will be designated immediate need to address the PJM criteria in 2022. Given the voltage level, and type of facilities, PSEG will be designated the entity to mitigate these violations.