Removal of the Cordova Energy Stability Special Protection System (SPS)

ComEd / Exelon Corporation
Transmission Planning
September 2016
Cordova Energy Stability SPS

✔ Original Purpose
  • To prevent Cordova Energy Center generating units from going unstable following close-in 3-phase faults with breaker failure that are cleared in backup time
  • Described in ComEd System Planning Operating Guide (SPOG) 1-3-G
  • SPS is normally in-service

✔ SPS Action
  • Trips Cordova Energy Center combustion turbine units for a 3-phase fault within an approximately 3 mile zone beyond Quad Cities 345 kV bus that persists for more than 6 cycles

✔ Cordova Energy Center units also trip from Quad Cities multi-line outage unit trip scheme
  • Described in SPOG 1-3-C (Quad Cities)
Cordova Stability SPS No Longer Required

 ✓ All 345kV circuit breakers at Station 4 Quad Cities are now Independent Pole Operated (IPO) devices
   • Severity of a breaker failure following 3-phase faults is reduced
   • Generators are stable for all faults specified by ComEd and PJM stability criteria

 ✓ SPS is no longer required and can be removed.
Cordova Stability SPS Removal

✓ SPS is implemented in relaying owned by Cordova Energy Center.
  • Plans to remove SPS relays by end of 2016
✓ Only the Cordova Energy Center stability SPS is being removed
  • Trip from Quad Cities multi-line outage unit trip scheme will remain
✓ Reliability First has been informed of planned SPS removal per RF SPS Review Procedure
Questions?