Abstract

This research analyse the static security of the electrical power system according to the security constraints after the transient state of the N-2 Contingency, i.e., two components outage together. Active power performance index (PIP) has had the greatest share of attention because of overloading some branches which led to cascading outages which led to isolating of some loads. Several techniques have been taken to reduce this deterioration and mitigate the transmission system from the consequences of it such as using a HVDC Link instead of a HVAC Link, addition of a line parallel to the line that suffers from overload and small local generation stations to ensure security. The IEEE 14 Bus system was selected as a model for study and representation in MATLAB.

References


Index Terms

Computer Science

Security
Keywords

Static security analysis, Contingency, Double branch outage, Active power performance index.