Abstract

Voltage instability occurs in power systems when the system is unable to maintain an acceptable voltage profile under an increasing load demand and/or configuration changes. The operating conditions of the present day distribution systems are closer to the voltage stability boundaries due to the ever increasing load demand. This paper presents a new algorithm for optimal locations and sizing of static and/or switched shunt capacitors in order to enhance voltage stability in addition to improving the voltage profile and minimising losses. Test results on 33 and 69-node distribution systems reveal the superiority of this algorithm.

Reference

Optimal Locations and Sizing of Capacitors for Voltage Stability Enhancement in Distribution Systems


Index Terms
- Electrical Power Systems

Key words
- Optimal Locations
- Capacitors
- Voltage Stability