Abstract

This paper reviews the existing developments in Security Constrained Optimal Power Flow (SCOPF) from 1960’s to till date. Diverse schemes and approaches on Single Area/Multi-area, Algorithms, Contingency Selection, Steady and Dynamic SCOPF, Artificial Intelligence based SCOPF, Real time and SCOPF using Parallel/Distributed Processing, Economic Dispatch with Security Constraints, Decentralized SCOPF, Voltage Constrained SCOPF (VSCOPF), Incorporation of FACTS on SCOPF studies and Literatures on Applications of SCOPF etc., are appraised in a structured manner chronologically with detailed reviews on the strategies and the test systems used for the analysis are reported. A brief summary of the existing stratagems and test system data which can be retrieved are given in the conclusion for easy access of researchers.
Reference

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Index Terms

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Computer Science

Power Systems

Key words

Optimal Power Flow

Optimization Techniques

Security Constrained Optimal Power Flow (SCOPF)

Security Analysis

Flexible AC Transmission System