Abstract

Relieving the power system from the effects of heavy losses and higher voltage magnitude deviations is very important to improve the voltage profile at the load buses. In this paper, multiple FACTS devices with the view to minimize load voltage magnitude deviations and network losses using particle swarm optimization have been presented. The strategy uses multiple static VAR compensators and offers optimal locations for placement of the devices and parameters. Test results on IEEE 30 bus system with and without FACTS device reveals the superiority of the algorithm and operation of SVC in power system.

References

- Asian development bank, power systems efficiency through loss reduction and load management, proc. of the regional conference on power systems efficiency through loss reduction and loss management, 1985.
- A. Subramanian, Dr. G. Ravi, “Voltage collapse enhancement and loss reduction by reactive power reserve”; IJCA, 2011.
- . Sakthivel, Dr. D. Mary, Praticle Swarm Optimization algorithm for voltage stability enhancement by optimal reactive power reserve management with multiple TCSCs, IJCA, 2010.
- Andrale, A. C. , Detection of the point of voltage collapse using the FSQV method, IEEE conference, 2005.

Index Terms

Computer Science       Power Systems
Keywords
Pso Fsqv Facts Devices Svc Voltage Stability