Abstract

In this paper, a new evolutionary approach has been discussed for reactive power dispatch (loss reduction) with the contribution of particle swarm optimization. Proposed algorithm has been applied to achieve the major objective as the system loss minimization with satisfied equality and inequality constraints. Tap settings of transformer, voltage at generator bus and shunt capacitor banks have been considered as control variables. Successful application of proposed algorithm is done on different IEEE bus systems. In comparison of other previous work, this proposed algorithm provides the better results.

References

Power Loss Reduction in Power System based on PSO: Case Study

Power Syst., vol.9, no.1, pp.136-146.


Index Terms

Computer Science

Algorithms
Keywords

Reactive power optimization, particle swarm optimization, genetic algorithm and loss reduction