Abstract

Nowadays the research on the integration of DG's and Capacitor banks in radial distribution system is going on, to meet the increased electricity demand and to improve the technical aspects like power loss reduction, voltage profile improvement etc., where the major concerns are finding the optimal sizing of DG's and Capacitor banks and their locations. This paper presents application of new optimization algorithm; Backtracking Search Algorithm (BSA) to solve the optimal placement of both DG and fixed capacitor banks in order to reduce the power loss and improve voltage profile of distribution system. A detailed performance analysis is carried out on 33-bus and 69-bus radial distribution system to demonstrate the effectiveness of the proposed algorithms and the results are compared with the GA/PSO, ICA/GA and Analytical approach which are available in the literature.


Simultaneous Optimal Placement of DGs and Fixed Capacitor Banks in Radial Distribution Systems using BSA Optimization

- Paulo M. D, Oliveira D J. The standard backward/forward sweep power flow.

Index Terms

Computer Science Circuit And Systems

Keywords

Distribution Generation (DG) Fixed Capacitor bank Backtracking search Algorithm (BSA).