Abstract

The aim of this work is obtaining the optimal power flow for the Iraqi distribution network represented by Al- RUSTAMIYA_Feeder09, through adding the capacitors to the system in order to reach the best improvement of voltage profile and power losses reduction. A Fuzzy Logic (FLC)-Particle Swarm Optimization (PSO) controller was proposed to detect the optimal location and size of the capacitor banks in electrical distribution system. Three load variation levels were considered during the study those are 60%, 80%, and 100% load variation. From the obtained results it was very clear that the proposed intelligent algorithm was very accurate and efficient for obtaining the optimal location and size of the capacitors in the system.

References

2. Duran H. 1968. Optimum number, location and size of shunt capacitors in radial


**Index Terms**

Computer Science  
Networks
Keywords

Reactive power control; Capacitor Placement and Sizing; FLC-PSO Approach, Iraqi distribution network