

# **A NOVEL MULTI-OBJECTIVE APPROACH FOR PLANNING OF DGs IN EMERGING POWER SYSTEMS**

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## **ABSTRACT**

In this paper, a novel multi-objective evolutionary computational algorithms such as Particle Swarm Optimization (PSO) technique has been proposed for planning of DGs form the different performance parameters of power systems viewpoint such as minimize the active power losses and cost of system, improve the voltage profile, increase the loadability of systems, and provide the reactive power support in emergency case such fault occur or suddenly change in field excitation of alternators, or suddenly load increased in power systems. A simulation for proposed algorithm has been not performed on any test systems. Only algorithms are developed in this paper. The simulation and results discussed in the next paper on test systems such as IEEE-14, IEEE-57, and IEEE-300 bus systems for planning of DGs and the results obtained are encouraging and will be useful in electrical restructuring. Index Terms- Distributed Generations (DG), Particle Swarm Optimization (PSO) technique, Optimal Location, Power Systems.