

Distribution Planning with Renewable Energy Units Based on Improved Honey Bee Mating Optimization

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Abstract : This paper proposed an Improved Honey Bee Mating Optimization (IHBMO) for a planning paradigm for network upgrade. The proposed technique is a new meta-heuristic algorithm which inspired by mating of the honey bee. The paradigm is able to select amongst several choices equi-cost one assuring the optimum in terms of voltage profile, considering various scenarios of DG penetration and load demand. The distributed generation (DG) has created a challenge and an opportunity for developing various novel technologies in power generation. DG prepares a multitude of services to utilities and consumers, containing standby generation, peaks chopping sufficiency, base load generation. The proposed algorithm is applied over the 30 lines, 28 buses power system. The achieved results demonstrate the good efficiency of the DG using the proposed technique in different scenarios.

Keywords : distributed generation, IHBMO, renewable energy units, network upgrade

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