Long-term planning and multi-distribution networks by installing distributed generation (DG) and rearrangement feeders

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In this thesis help to plan a long-term rearrangement of the network and installing DG in distribution networks and reduce present. For this purpose, in order to observe the effect of changes in network planning, load on the distribution networks, It is assumed that the load of 50% to 150% of their nominal value linearly varies in steps of 5%. Then the DG rearrangement and locate each of them individually and simultaneously reduce losses to be resolved. Through curve fitting methods capacity of DG (DG), Derived as a function of load changes. Finally, the results are discussed. Given that the issue of distribution network development planning because of the number of decision variables is a much more complex, To solve the problem of a new intelligent algorithm optimization algorithm based on teaching-learning (TLBO) is used. MATLAB software was used to simulate and eventually the results will be analyzed.

Keywords : Key words: algorithm TLBO, planning distribution networks, rearrangement, load changes, DG