A NEW APPROACH FOR SUBTRANSMISSION SYSTEM EXPANSION PLANNING WITH GENETIC ALGORITHM

This paper proposes a new approach for expansion planning of Subtransmission System (SS). Distribution network (downward grid) is considered in the problem by modeling it as the load points, then Modified Mathematical Clustering Algorithm (MMCA) has been used for candidate selection of subtransmission substations. Finally Genetic Algorithm (GA) is employed to allocate the load points to the existing or candidate substations, and to find the best configuration of lines among the candidate ones. The proposed method is applied on a typical SS and the results are presented.

Keywords: Expansion Planning, Genetic Algorithm, Modified Mathematical Clustering, Subtransmission Lines, Subtransmission Substations.

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