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(57) Abstract:

Exemplary aspects of the spresent disclosure are directed towards Combined Heat and Power Emission Dispatch(SHPEmD) using Shuffled Differential Evolution Algorithm. The primary motivation for this invention is to disclose a novel metaheuristic algorithm SDE augments the features of both shuffled frog-leaping algorithm and differential evolution algorithm by employing partitioning and shuffling. In order to verify the effectiveness of the shuffled-differential evolution (SDE) algorithm and also to identify the ideal solution of the CHPEmD problem, test systems having two caliber test units are considered. The outcomes attained from the projected technique are contrasted with the other optimization techniques and found that the projected technique shows remarkable performance in the resolution and the conjunction characteristics.

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