

Wild goats optimization approach for capacitor placement problem

ABSTRACT

This paper deals with Capacitor Placement (CP) issue. The topic is an optimization problem including two types of variables: capacitor location as an integer variable, capacitor size as a continuous one. To cope with this problem, a new approach entitled Wild Goats Algorithm (WGA) is used. WGA is a new heuristic approach which has been proved recently. In this paper, WGA is successfully implemented to the CP problem with the objective of total loss reduction. Power flow criteria as well as operation constraints are all together accommodated in the process of optimization. Two various scenarios at three load levels are also recognized to cover all possible conditions. The validity of the WGA approach in handling CP problem is assured by testifying it on IEEE 33-bus and 69-bus test systems