Abstract

This paper proposes an Artificial Bee Colony (ABC) algorithm to Generator Maintenance Scheduling (GMS) in competitive market. In the regulated market the problem of generating optimal maintenance schedules of generating units for the purpose of maximizing economic benefits and improving reliable operation of a power system, subject to satisfying system
Artificial Bee Colony Algorithm to Generator Maintenance Scheduling in Competitive Market

constraints. In case of deregulated market, the self-governing generation company GENCO prepares GMS aims to maximize their revenue with less consideration on reliability. The Independent System Operator (ISO) receives the maintenance schedules from GENCO and compares with ISO schedules for sanction. This paper proposes an ABC algorithm to solve the GMS in GENCO to maximize their revenue without considering expected renewal cost. Numerical examples on 4 and 32 unit power producers are utilized to demonstrate the effectiveness of the proposed ABC algorithm.

Reference

Artificial Bee Colony Algorithm to Generator Maintenance Scheduling in Competitive Market


Index Terms

Computer Science

Power Systems

Key words

Deregulation

artificial bee colony algorithm
generation scheduling
market clearing price
generator maintenance scheduling