OPTIMAL PLACEMENT AND SIZING OF CAPACITOR BANKS IN TRANSMISSIONS LINE USING BEE COLONY ALGORITHM

ABSTRACT

Industrial growth is followed high reactive power demand cause planning and operating of the interconnection system become more complex so that the quality of the system becomes less reliable. Reactive power flow can cause a voltage drop and line losses in the transmission system. Installation of capacitor in the transmission system is one way to solve this problem. Function of capacitor is to supply reactive power so capacitor can improve power factor, reduce drop voltage and reduce power loss in the transmission line. The transmission power system has a lot of variations load, so installing capacitors need to consider the placement and sizing of capacitor. Bee Colony Algorithm method is a kind of artificial intelligence to determine optimal placement and sizing of capacitor banks.

Keywords: Capacitor Bank, Artificial Bee Colony (ABC) Algorithm.