عنوان مقاله:

Optimal Capacitor placement and Sizing based on Capacitor cost, voltage stability Index, loses and different loading used GOA algorithm

محل انتشار:

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خلاصه مقاله:

The paper provides a new index in order to determine optimal size and location of Capacitor units, minimize system power loses and Capacitor cost, optimize voltage profile and increase voltage stability margin. A multi- objective optimization method is used in order to size and allocate Capacitor; Optimized Improve GOA algorithm is used for this aim. The load variations effects on optimal capacity are studied in this paper. The load variations effects on voltage profile, voltage stability and loses are determined after bus and capacity identification. Linear load variations are considered from 50 to 150% of base load (with 10% steps). Present constraints are system voltage, feeders flow and C capacity limitations. Offered method is used for 34 bus experimental system. All experiments are simulated in MATLAB software. The simulation results show considerable effects of system loses, voltage profile improvement and increased voltage stable margin through expending the least cost

کلمات کلیدی:

Capacitor location and sizing; GOA Algorithm; cost index; voltage stability index; voltage profile improvement; voltage stability margin; minimize active power loses.

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