عنوان مقاله:

Optimal Simultaneous Allocation of Fixed Capacitors and Static Var Compensators in Distribution Systems with Distributed Generations

محل انتشار:

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نویسندگان:

Haleh Soleimany - *Department of Electrical Engineering, Faculty of Engineering, University of Guilan, Rasht, Iran*

Hossein Afrakhte - *Department of Electrical Engineering, Faculty of Engineering, University of Guilan, Rasht, Iran*

خلاصه مقاله:

Wind generators in radial distribution systems may cause voltage variation due to random-like wind speed. To solve the problem, this paper presents an optimal simultaneous allocation of Fixed Capacitors (FCs) and Static Var Compensators (SVCs) to radial distribution systems with these kinds of Distributed Generations (DGs) using Imperialistic Competitive Algorithm (ICA). Loss sensitivity method is used to find candidate locations for reactive compensating and wind speed data is clustered by Particle Swarm Optimization (PSO) algorithm. The objective function is maximizing the profit earned by reducing active power loss and improving voltage profile. Finally, 33-bus distribution system is used to show the effectiveness of the proposed method.

کلمات کلیدی:

capacitor allocation, Imperialistic Competitive Algorithm, loss sensitivity factor, SVC allocation, wind generators