عنوان مقاله:

A novel algorithm for economic optimization of renewable energy sources in microgrids

محل انتشار:

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خلاصه مقاله:

Renewable energy sources (RES) technologies can provide energy solutions to some customers that are more cost-effective, more environmentally friendly, or provide higher power quality or reliability than conventional solutions. The RES can be used by utilities to both enhance existing systems and to delay the purchase of transmission and distribution equipment. This paper sets up thermal power, wind power and photovoltaic grid combination model of the microgrid (MG) based on the DE algorithm, with the MG operation cost inimum as the objective function, the energy storage system changes in the MG as state constraints. A combination optimization approach has been used to simulate the operation of RES combination model in 69-bus MG uses MATLAB and analyzes the result of the simulation. The DE algorithm, to minimize the objective function, including total active and reactive power mismatch in an island microgrid.

کلمات کلیدی:

Microgrid (MG), Wind power, Differential Evolution (DE) algorithm, Optimization,photovoltaic, Thermal power

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