عنوان مقاله:

Optimum Design of stand-alone Wind/PV/Diesel/Battery Hybrid Systems in Jolfa

محل انتشار:

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خلاصه مقاله:

Many stand-alone diesel units are Supplied Rural and remote loads all around the world. With increases oil price, energy crisis, reduce fossil fuels in the world and the concerns about global warming, the integration of diesel generators with renewable energy systems have become an attractive energy sources for supplying the load demand. This paper performs an optimal design of integrated system involving Wind-PV-Diesel- Battery system for supply remote and rural power demand with CO2 emission evaluation by using PSO (Particle Swarm Optimization). The system components and radiation and wind speed datasets are assumed to be fully deterministic. System costs involve investments, operation and maintenance as well as loss of load costs. Prices are all unfeigned and components are commercially available. Wind and radiation datasets are for northwest region (Jolfa, latitude: 38_56, longitude: 45_37, altitude: 710, m) of Iran. From simulation results the proposed system is able to minimize the total annual cost of the system under study and reduce CO2 emission generated by diesel generator.

کلمات کلیدی:

Renewable energy, PSO Algorithm, Optimization,Diesel generator, Emission

لینک ثابت مقاله در پایگاه سیویلیکا: