

1. Introduction Despite their large energy potential, the harmful effects of energy generation from fossil fuels and nuclear are widely acknowledged. Therefore, renewable energy (RE) ...

To address this gap, this paper establishes a two-stage stochastic optimization model for the configuration and operation of an integrated power plant that includes wind power, photovoltaics,...

In this study, a simulation model of a wind-hydrogen coupled energy storage power generation system (WHPG) is established. The effects of different operating temperatures on the ...

The U.S. Department of Energy has identified five water application areas in which wind energy could contribute: thermoelectric power plant/water processes, irrigation, municipal water supply, ...

The system under study comprises of an alkaline water electrolyzer (AWE), a battery energy storage system (BESS), and solar PV and wind installations for renewable power generation.

Consequently, clean energy sources such as wind, solar, hydro, and hydrogen are garnering more attention from experts and scholars. Driven by the "dual-carbon" goals, China has ...

Abstract In this paper, a novel concept of small isolated electric power generation from pumped-hydro energy storage (PHES) using wind as primary energy is proposed for rural and remote ...

In this paper, a wind-solar combined power generation system is proposed in order to solve the absorption problem of new energy power generation. Based on the existing installed ...

The study presents modelling a novel hybrid wind power generator-water distillation system that provides sustainable solutions for isolated communities. The results demonstrate the ...

China's roadmap to low-carbon electricity and water: Disentangling greenhouse gas (GHG) emissions from electricity-water nexus via renewable wind and solar power generation, and ...



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