

To improve the accuracy of capacity configuration of ES and the stability of microgrids, this study proposes a capacity configuration optimization model of ES for the microgrid, considering ...

Energy management is crucial in microgrid operation to meet energy demands appropriately. It refers to controlling and optimizing energy generation, storage, and consumption to ...

ABSTRACT The concept of microgrids (MGs) as compact power systems, incorporating distributed energy resources, generating units, storage systems, and loads, is widely acknowledged ...

This paper offers a robust strategy for planning and optimizing the integration of renewable resources and energy storage in residential microgrids, paving the way for more resilient ...

These AI models maximize the use of renewable energy, reduce wastage, and improve microgrid resilience and responsiveness to supply and demand fluctuations. Experiments ...

In response to the adverse impact of uncertainty in wind and photovoltaic energy output on microgrid operations, this paper introduces an Enhanced Whale Optimization Algorithm (EWOA) ...

This paper proposes an improved rime algorithm (tGRIME) to optimize microgrid energy management with a hybrid energy storage system. This method utilizes a fusi.

Review of optimization techniques used in microgrid energy management systems. Mixed integer linear program is the most used optimization technique. Multi-agent systems are most ideal ...

To make full use of the electric power system based on energy storage in a wind-solar microgrid, it is necessary to optimize the configuration of energy storage to ensure the stability of a ...

To address this issue, Pan Y et al. [3] proposed an optimization strategy for microgrid clusters incorporating shared hybrid energy storage systems. Their strategy measures the supply-demand ...

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