Low-carbon smart microgrid

The proposed method can provide a theoretical framework and technical path for low-carbon economic dispatch of multi-microgrids and help the power system to evolve into a zero ...

This article investigates the characteristics, operation and challenges of zero carbon microgrids, including size, generation from renewable sources, energy balance, and costs.

The smart microgrid integrates distributed energy resources, energy storage, and demand response capabilities into a unified system, enabling effective self-management, protection, ...

Accordingly, an EN-D3QN-MPF algorithm is presented to achieve low-carbon economic and EV users" charging satisfaction operation of the microgrid. The effectiveness of the proposed method is verified ...

Amidst climate change threats, carbon emissions have become a key consideration in power system operations. This paper proposes a low-carbon economic dispatching for smart ...

The economic and low-carbon operation strategy of multi-energy microgrids (MEM) has become an important research topic in smart grids. The operation of MEM is affected by uncertain ...

This study aims to integrate electric vehicles, photovoltaic and battery energy storage systems, and distribution network information in a microgrid to achieve decarbonized optimal operation.

To address these gaps, this paper proposes a climate-driven low-carbon dispatch strategy for photovoltaic-storage-charging microgrids. This strategy bridges the gap between ...

To deal with this problem, this research first reviews the real-world and simulation cases of zero-carbon microgrids in recent years and classifies them into two categories, i.e., on-grid mode ...

Integrating electricity, natural gas, and heat carriers in a multi-energy microgrid (MEMG) presents a cost-effective solution, requiring efficient optimal scheduling methods to address these ...

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