
In this paper, the typical structure of an AC-DC hybrid microgrid and its coordination control strategy are introduced, and an improved microgrid model is proposed.

This paper presents a unified energy management system (EMS) paradigm with protection and control mechanisms, reactive power compensation, and frequency regulation ...

This study presents a novel optimization framework for hybrid AC/DC microgrids that incorporates efficient load allocation, battery storage management, and real-system energy ...

This manuscript proposes a renewable energy-based energy management system for electric vehicles and AC-DC MGs. The ...

In our study, we are focusing on a hybrid AC/DC MG connected to a main AC grid, and using WTs based on a doubly fed induction generator (DFIG), PV panels, AC and DC ...

An autonomous cooperative control of multi-energy MGs is proposed in this paper, which can realize the following targets: 1) In the energy storage period, ice storage systems ...

By combining both AC and DC components, these microgrids offer a versatile platform capable of seamlessly integrating diverse energy sources and storage technologies.

In this paper, an AC-DC hybrid micro-grid operation topology with distributed new energy and distributed energy storage system access is designed, and on this basis, a ...

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This manuscript proposes a renewable energy-based energy management system for electric vehicles and AC-DC MGs. The proposed method is Hermit Crab Optimizer (HCO).

Microgrids (MGs) are essential in advancing energy systems towards a low-carbon future, owing to their highly efficient network architecture that facilitates the flexible integration of various ...

Abstract This paper proposes a centralized supervisory energy management strategy for hybrid AC/DC microgrid with multiple renewable energy (RE) sources. Energy ...

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