

In this paper, a hybrid energy storage model comprising battery energy storage unit (BESU) and superconducting magnetic energy storage (SMES) is proposed to effectively regulate ...

For the microgrid with shared energy storage, a new frequency regulation method based on deep reinforcement learning (DRL) is proposed to cope with the uncertainty of source load, which ...

This paper explores the coordinated operation of an airport microgrid with a ship-based microgrid incorporating several sources of renewable energy along with various types of energy ...

Performance evaluation against conventional controllers (PID, FO-PID, FO- (PD-PI)) confirms the superiority of the proposed approach in LFC. Extensive testing under various load ...

Load Frequency Control (LFC) plays a crucial role in controlling power exchanges within multi-area networks, ensuring grid stability in modern power systems. This study proposes a ...

In summary, this integrated strategy presents a robust solution for modern power systems adapting to increasing renewable energy utilization. Energy storage systems (ESSs) are ...

In this paper, the frequency control strategy is designed for a hybrid stand-alone microgrid, which is robust against load disturbances, variations in weather conditions, and uncertainties...

Performance evaluation against conventional controllers (PID, FO-PID, FO- (PD-PI)) confirms the superiority of the proposed approach in LFC. ...

This paper proposes a combined feedback and feed-forward control system to support the frequency regulation of multi-area interconnected hybrid microgrids considering renewable energy ...

This study explores a sophisticated approach to managing frequency deviations in an islanded micro grid, which integrates a solar PV system, wind turbine, tidal turbine, and diesel ...

Our paper presents a simulation-based optimization approach for the design of policy incentives and planning of microgrids with renewable energy sources, targeting isolated communities.

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