
Efficient energy management and accurate load forecasting are one of the critical aspects for improving the operation of microgrids. Various approaches for energy prediction and load ...

This article proposes an innovative Online Learning (OL) algorithm designed for efficient microgrid energy management, integrating Recurrent Neural Networks (RNNs), and Model Predictive Control ...

This paper proposes a new energy management framework for the optimum scheduling of distributed generation resources within a smart distribution system that contains multiple ...

The growing integration of renewable energy sources into grid-connected microgrids has created new challenges in power generation forecasting and energy management.

This study presents a comprehensive review of recent advancements in integrating machine learning (ML) techniques into microgrid management systems, focusing on enhancing ...

This study comprehensively reviews model predictive control (MPC) strategies for power converters in microgrids across primary, secondary, and tertiary control levels. Key developments ...

The various challenges in microgrid deployment and management are of course pointed out in a discussion at large about the future trends in microgrids, including their characterization as ...

The paper first starts by presenting the conventional control system of microgrids and their energy management, along with the basics of AI tools and techniques. Then, the features and ...

This study aims to design energy demand forecasting models for energy management in hybrid microgrid systems using optimized machine learning techniques. By incorporating temperature, ...

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