

A proper investigation of microgrid architectures is presented in this work. This research also explores deep investigations for the improvement of concerns and challenges in various power ...

For ST based meshed microgrid, continuous operation is highly important and one of the effective ways to achieve it is by minimizing line losses. This paper proposes a power loss ...

One of the practical solutions to this disturbance is to reduce conversion losses in domestic distribution systems through the optimal deployment of the battery storage system and ...

To address these intricacies, we use a more precise modeling approach of power loss and propose a collaborative optimization method integrating the Deep-Q-Network (DQN) algorithm with ...

Fuel deliveries may be significantly delayed. They are often sized for the maximum load and do not use fuel efficiently when loads are much less. To optimize available generation and make power available ...

Motivated by the need for decentralized control strategies with minimal communication among grid components to support a robust and plug-and-play operation, a communication-free decentralized ...

Microgrids that incorporate renewable energy resources can have environmental benefits in terms of reduced greenhouse gas emissions and air pollutants. In some cases, microgrids can sell power ...

This paper extends a hierarchical control approach for power balancing in a meshed DC microgrid while minimizing the power losses in the central transmission network.

The objective of this study is to integrate microgrid system with STATCOM (static synchronous compensator) controller to ensure the higher power flow with enhanced voltage profile ...

Microgrids can help manage energy use and demand more efficiently at different times, making the overall grid more resilient and adaptable. Recently, I gave a presentation on microgrids to ...

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