

Therefore, this paper aims to present a control technique that can effectively regulate the frequency deviation of an isolated micro-grid, which consists of a wind turbine, photovoltaic system, ...

This study aims to address the challenges of frequency regulation in modern microgrids and propose an optimal control strategy to maintain stable operation in the presence of electric vehicles and ...

Firstly, the MPC regulates the ESS according to the system frequency deviation, and secondly, the ADC manages the power of EVs according to system specifications by retaining the ...

This study delves into primary and secondary frequency regulation, emphasizing load frequency control (LFC) for stable grid operation. Investigating existing LFC models for both ...

This article presents a novel combination of two control techniques i.e., model predictive control (MPC) and adaptive droop control (ADC), to tackle the frequency regulation issue in the ...

In this study, at first, stability analysis to assess how varying the initial SOC of the battery affects LFC operation in the isolated microgrids is conducted. Then a battery frequency support ...

Isolated microgrids, which are crucial for supplying electricity to remote areas using local energy sources, have garnered increased attention due to the escalating integration of renewable ...

This chapter explains how voltage regulation can be used to control the frequency of an isolated or islanded microgrid. The voltage sensitivity of loads in isolated microgrids is utilised in the suggested ...

Overall, this study presents a compelling solution for precise frequency regulation in isolated microgrids, offering a robust and practical alternative in the presence of evolving energy landscapes.

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