Title: Current balancing method of microgrid
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Zhou et al. (2020) introduced an optimal control method for multi-battery energy storage systems in islanded DC microgrids, leveraging the PI consensus algorithm to enhance robustness ...

A mathematical description of the operating process and a small signal model of the proposed method are established to evaluate the system feasibility and stability. A laboratory-scale ...

Solutions to the voltage imbalance issue in BDCMGs are comprehensively summarized from the perspectives of voltage balancing converters, multi-input integrated converters, coordinated control of ...

This paper proposes a voltage balancing method that applies the functions of bidirectional converters and voltage balancers to a single energy storage system.

As the proposed method does not rely on communication links, it is applicable to widespread microgrids. Simulation results confirm that the proposed method benefits from proper ...

The voltage regulation and balancing achieved with the support of switched capacitors at POI of microgrid is summarized in Table 3 for microgrid islanded operation at both +40% and -7% ...

Compared to traditional methods, the proposed strategy accelerates SOC balancing, yielding superior balancing effects in scenarios involving line impedance mismatch.

To address this issue, in [24], a communication-free SoC balancing strategy was proposed. This strategy establishes a positive and negative ratio of the droop coefficient to the SoC ...

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