Microgrid power compensation

This work presents a methodology for optimal compensation of reactive power in Electric Microgrids using a multicriteria decision algorithm based on heuristic methods.

Active power compensation and dc current retention are achieved simultaneously. The theoretical analysis is verified through extensive simulations, whereas experimental validation is carried out on a ...

Subsequently, the challenges and power quality issues faced in the microgrid are observed and succeeded by a review of compensation methods against these concerns using various control ...

A proactive power compensation strategy applicable to achieving transient ride-through of ship microgrid (SM) under pulsed load is presented in ...

This manuscript presents a novel approach to designing a smart-microgrid (SMG) system that uses advanced power compensation methods to ...

This paper presents a method to determine the capacity and location of compensating capacitors to reduce power loss and improve voltage quality in the Microgrid.

Reactive power compensation is becoming a challenging task to sustain an acceptable degree of power quality in microgrids due to tightly ...

We then consider the specific problem of commanding the microgenerators connected to the microgrid, in order to achieve the optimal injection of reactive power. For this task, we design a randomized, ...

The study''s findings indicate a methodical approach to the control design of the Unified Power Quality Conditioner (UPQC), offering a comprehensive answer to a number of power quality issues like load ...

Abstract This article looks into the integration of a grid-connected photovoltaic (GCPV) system with a unified

power quality conditioner (UPQC) to address power quality issues in ...

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