Smart Microgrid Control Method PQ

This study presented a comprehensive framework for real-time monitoring of PQ in renewable-dominated microgrids, incorporating synchronized phasor measurements, wavelet-based signal ...

This manuscript presents a Matrix Pencil-based Energy Management Control (MPEMC) approach to improve power quality (PQ) and power flow in grid-integrated solar PV systems.

This research introduces innovative control methodologies utilizing a Back-stepping controller combined with Model Reference Adaptive Control (MRAC) to enhance power quality (PQ) ...

Abstract--The increasing penetration of inverter-based re-sources (IBRs) calls for an advanced active and reactive power (PQ) control strategy in microgrids.

To enhance the controllability and flexibility of the IBRs, this paper proposes an adaptive PQ control method with trajectory tracking capability, combining model-based analysis, physics-informed ...

To enhance the controllabil- ity and flexibility of the IBRs, this paper proposed an adaptive PQ control method with a guaranteed response trajectory, combining model-based analysis, physics-informed ...

This paper introduces a hybrid control method designed to address two significant challenges in microgrid (MG) applications: active resonance damping (ARD) and unbalanced voltage ...

The efficacy of these control strategies has been tested in a hardware setup of a microgrid fed by two 5kVA 208V droop-controlled inverters, and the results are presented in ...

In cases of both nominal and variable reference active power values, the proposed APEO-based P-Q control method can improve the performance of a three-phase grid-connected inverter in a microgrid ...

Analysis of the principal control techniques to be implemented in smart grids that can handle different control conditions based on system variables and the power quality of the microgrids.

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