PQ control in microgrid

The integration of Microgrids (MGs) into the mains must be done with consideration of control techniques that ensure the appropriate synchronization and power b

These PQ issues should be taken care of for the efficient operation of the MG system and the effective utilization of the power at the load side. This study provides an elaborate discussion of ...

The authors analyzed the PQ issues in the smart grid, including harmonic distortion, voltage sag, voltage swell, and voltage unbalance. They also reviewed various control techniques, ...

Strategy II has good tracking performance for both active and reactive power with an acceptable settling time. The low PCC voltage has a larger impact for Strategy I because its power control loop is a ...

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 ...

The purpose of this paper is to control the adopted grid-tied MG performance and manage the power flow from/to the parallel DGs and the main grid using discrete-time active/reactive ...

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

ategy in microgrids. To enhance the control-lability and i!?exibility of the IBRs, this paper proposes an adaptive PQ control method with trajectory tracking capability, combining model-based analysis, ...

pled P-Q control method for the optimal P-Q control issue of three-phase grid-connected inverters in a microgrid. The key ideas behind this proposed APEO-based P-Q control method include encoding ...

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.

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