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Title: Grid-connected inverter under weak power grid

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To investigate the harmonic characteristics of a photovoltaic (PV) system connected to the weak grid, a passive impedance network is constructed using the impedance model of a PV inverter ...

Although the voltage feedforward control based on the point of common coupling (PCC) has been widely studied in the grid-connected inverters to suppress the harmonics in the grid current, harmonic ...

Under an ultra-weak grid, the phase angle margin of the inverter decreases drastically, and an easy-to-implement strategy is proposed in this paper. In addition, in the situation of a large ...

Driven by the "dual carbon" goals, the proportion of renewable energy in the power grid continues to increase. However, as these energy sources are primarily distributed in remote areas ...

As a common interface circuit for renewable energy integrated into the power grid, the inverter is prone to work under a three-phase unbalanced weak grid. In this paper, the instability of ...

He, Y.; Liu, F. 2021: A Robust Grid-Voltage Feedforward Scheme to Improve Adaptability of Grid-Connected Inverter to Weak Grid Condition IEEE Transactions on Power Electronics 36 (2): 2384 ...

This review provides a comprehensive overview of the research efforts focused on investigating the stability of PV grid-connected inverters that operate under weak grid conditions.

The paper concludes the widely-used control strategy of LCL grid-connected inverter, including adjusting inverter parameters, introducing a filter, voltage source admittance control strategy, and ...

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