

Aiming at the VF regulation of microgrid caused by wind disturbance and load fluctuation, a comprehensive VF control strategy for an islanded microgrid with electric vehicles (EVs) based on ...

An efficient power control technique for inverter-based distributed generation (DG) in an islanded microgrid is investigated in this work. The objective is to raise the caliber of the...

To solve the problem in which the stability of island microgrid is greatly affected by random power sources, and it is difficult to control frequency and voltage together, a VF control strategy of islanded ...

This paper presents a method for controlling a photovoltaic (PV) system with maximum power point tracking (MPPT) controller and battery storage to provide voltage-frequency (v-f) support ...

Microgrids became popular because of their ability to work in isolation. A microgrid operation can be in two modes. When the microgrid fulfills its energy demand by the main grid, it is ...

When switch-ing from microgrid to island mode or changing loads, the DG unit uses the VF control mode, which uses the GA-PSO meta-heuristic algorithm to regulate the system voltage and frequency.

This paper proposes a decentralized and coordinated voltage and frequency (V-f) control framework for islanded microgrids, with full consideration of the limited capacity of distributed energy ...

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 ...

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