Microgrid AC bus voltage control

This study proposes a distinct coordination control and power management approach for hybrid residential microgrids (MGs). The method enhances the feasibility of hybrid MGs by reducing ...

When in grid-forming mode, the ILBC operates in voltage control mode, thereby ensuring strict adherence to AC-bus voltage regulations. To maintain a stiff AC output voltage, the capacitor ...

To tackle these issues, this research suggests a new hybrid AC/DC microgrid architecture incorporating advanced control strategies for managing energy flow, improving grid ...

For the problem of bus voltage fluctuation caused by wind power generation in AC microgrid, this paper proposes an ADRC strategy to control the Static Var Compensator (SVC). This strategy can improve ...

In this paper, an improved voltage control strategy for microgrids (MG) is proposed, using an artificial neural network (ANN)-based adaptive proportional-integral (PI) controller combined...

Despite these advantages, managing microgrids presents significant challenges. One of the primary issues is the need for sophisticated control and optimization strategies to balance supply and ...

In this paper, an inertia emulation-based control technique is proposed for the DC microgrid to regulate its DC bus voltage and AC load bus frequency. The control approach regulates ...

This paper aims to coordinate and classifies the investigation conducted in hybrid AC-DC microgrid highlighting main control objective of power management considering bus voltage control ...

During the islanding of a microgrid in this NMG system, load voltage and power balance can get disturbed. A control system and associated converter and inverter control methods are ...

Considering the power generation cost and bus voltage quality, a distributed economic optimization control strategy and a novel bus voltage estimation method is proposed for the multi-bus ...

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