

Title: Microgrid reactive voltage control

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What is advanced control strategy for AC microgrids?

Adiche,S.,Larbi,M.,Toumi,D. et al. Advanced control strategy for AC microgrids: a hybrid ANN-based adaptive PI controller with droop control and virtual impedance technique.

Can artificial neural networks improve voltage control strategy for microgrids?

Scientific Reports 14, Article number: 31057 (2024) Cite this article 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 with droop control and virtual impedance techniques (VIT).

Can deep learning improve voltage control and regulation in smart micro-grids?

This paper presents an innovative application of deep learning optimization techniques, combined with the Artificial Bee Colony (ABC) algorithm, to enhance voltage control and regulation in smart micro-grids integrated with electric vehicles (EVs).

Can Ann-based PI controller solve load sharing problem in AC microgrids?

In this paper, an efficient ANN-based PI controller has been proposed for voltage control of AC microgrids addressing the load sharing problem. The droop control and VIT have been applied to accurately separate the active and reactive power while ensuring the power-sharing of DGs.

To efficiently improve reactive power sharing, this paper proposes a reactive power-voltage control strategy based on adaptive virtual impedance. This method changes the voltage ...

This paper proposes a robust distributed secondary control strategy for AC microgrids (MGs) that ensures voltage and frequency regulation within a predefined time limit, while effectively ...

Hou S., Chen J., Chen G. (2023) Distributed control strategy for voltage and frequency restoration and accurate reactive power-sharing for islanded microgrid, Energy Rep.9, 742-751.

In order to regulate reactive power distribution precisely in a droop control microgrid and keep bus voltage within a suitable range, authors in [13], proposed an RPP strategy that depends on ...

In this paper, an improved voltage control strategy for microgrids (MG) is proposed, using an artificial neural

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Microgrids (MGs) play a crucial role in modern power distribution systems, particularly in ensuring reliable and efficient energy supply, integrating renewable energy sources, and enhancing ...

Abstract In high-voltage microgrid, the line impedance is mainly inductive and the reactive power of the load cannot be shared equally and reasonably due to the transmission line ...

In this work, a dc voltage droop based hierarchical control is introduced for bidirectional power transfer by an interface converter in a hybrid AC/DC microgrid. This proposed approach can ...

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