DC Microgrid Voltage Stabilizer

The behavior of constant power loads is known to be a potential cause of instability in DC microgrids. This issue is addressed by the DC microgrid stabilizer proposed in this paper.

In this work, the ASC regulates the DC/DC converter within a DC microgrid without relying on a physical load current sensor. This is achieved by combining the synergetic control framework ...

To tackle this, a hardware-based active voltage stabilizer solution is proposed to stabilize the DC MG. The active stabilizer and its associated control configuration involve only local voltage sensing and ...

This paper examines the control strategy of DC microgrids in islanding mode, applying the parameter adaptive VDCM control strategy to a bidirectional DC/DC converter linking a hybrid ES ...

The proposed DCMG can maintain stable DC bus voltage under various dynamic conditions by balancing the power on either side of the DC bus. The presence of a grid is considered to maintain ...

This paper analyzes the low-frequency stability challenges that exist in a complex DC microgrid (MG) system and proposes a hardware-based active voltage stabilizer solution that involves only local ...

Abstract: In this paper, a DC microgrid will be considered to optimize the operation of this microgrid under a combination of Fuzzy and metaheuristic algorithms.

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