Title: DC Microgrid Disturbance
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This case study investigates the effectiveness of the proposed control approach in the DC microgrid configuration depicted in Fig. 2, which consists of two photovoltaic (PV) units, DC/DC ...

The phenomena such as wideband oscillations caused by the high penetration of renewable energy into the system are challenges for the stable operation of microgrids. This paper describes the microgrids ...

Consequently, the approach introduced in this paper can be utilized for assess-ing the large disturbance stability of DC microgrid systems, estimating the system"s power limit, and guiding the design of ...

In this paper, an enhanced grid-side current and DC-bus voltage regulation method is proposed for a three-level neutral point clamped (NPC) four-leg rectifier (3LNPC-4LR) interfaces DC...

This study advances resilient and reliable power systems by addressing the intricate challenges posed by constant and variable PPL in DC standalone microgrids, paving the way for ...

To address the stochastic stability problem of DC microgrids caused by internal parameters or external stochastic perturbations, this study proposes a stochastic stability analysis ...

To restore the DC bus voltage to its nominal value while maintaining accurate power sharing, a primary and secondary control scheme is proposed.

2.2 DC Power Systems Since their proposal in 2002, the concept of microgrids has grown to provide a foun-dation for the development and improvement of smart grids [28, 29, 30]. Compared to AC ...

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