

Comparison of DC microgrids in terms of voltage levels and the tested appliances. This article suggests a hybrid DC microgrid (HDCMG) with different levels of DC bus voltages to use for...

This study presents a comprehensive analysis of a hybrid solar and hydrogen-battery microgrid system, focusing on the performance of three power plant controllers--Constant Q, ...

Due to a lack of standardizations, various voltage levels have been offered in the literature varying from 12V to 800V. Standard voltage levels for DC distribution systems are introduced to reduce system ...

Voltage and frequency stability are paramount for MG operation, necessitating advanced control frameworks to regulate key parameters effectively. This research introduces a multilayer ...

Central grids push electricity from power plants over long distances via transmission and distribution lines. Delivering power from afar is inefficient because as much as 5% of the electricity dissipates in ...

DC microgrids are localized energy systems operating from a DC bus within a defined voltage range. These systems can vary greatly in size and power, from small islands with several motors on a ...

This article suggests a hybrid DC microgrid (HDCMG) with different levels of DC bus voltages to use for various types of loads. The available sources in the HDCMG are wind generating ...

An adaptive control approach is proposed in this work to improve the MG stability in the presence of PV and battery energy storage systems (BESSs).

In this paper, the simulation verification is carried out on MATLAB/SIMULINK, the simulation results show that the optimized strategy can effectively suppress the DC bus voltage ...

Technical issues related to the voltage control and power management of grid-connected and islanded DC microgrids are discussed. Key research gaps are identified, which could be filled by ...

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