

In order to reduce the economic costs, enhance the efficiency, and improve the structural stability of microgrids, this paper proposes a novel AC/DC hybrid microgrid structure.

The purpose of this chapter is to review the advantages and disadvantages of AC/DC hybrid grids and analyze potential applications that would benefit from such infrastructures.

This paper describes the topology and functional units of the grid in detail, and simulates the work of the microgrid in each operating state through simulation, which verifies that the proposed grid has high ...

Abstract-- This paper presents a distributed cooperative control-based power management algorithm for a hybrid AC/DC microgrid. The proposed algorithm for a hybrid microgrid system controls the power ...

A multimode adaptive droop-based distributed energy management strategy is proposed for a hybrid AC/DC microgrid, incorporating a congregated energy storage system (CESS) to overcome issues ...

Using a combined operation of both AC and DC microgrids through an interfacing converter, hybrid AC-DC microgrids are advanced and benefitted with the use of both AC and DC ...

In this study, an optimal power management strategy is considered for the sharing of power among the sources. To implement the optimal power management, a robust optimization ...

Microgrids are required to integrate distributed energy sources (DES) into the utility power grid. They support renewable and nonrenewable distributed generation technologies and provide ...

NREL is a national laboratory of the U. S. Department of Energy, Office of Energy Efficiency and Renewable Energy, operated by the Alliance for Sustainable Energy, LLC. This paper presents a ...

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