

In this paper, different models of electric components in a microgrid are presented. These models use complex system modeling techniques such as agent-based methods and system ...

Develop the next generation microgrids, smart grids, and electric vehicle charging infrastructure by modeling and simulating network architecture, performing system-level analysis, and developing ...

This research seeks to enhance energy management systems (EMS) within a microgrid by focusing on the importance of accurate renewable energy prediction and its strong correlation with ...

A simulation of coordinated control of a hybrid AC/DC microgrid is proposed in Ma et al. (2015), considering grid-connected and island microgrid operation. Power management is another aspect ...

This white paper focuses on tools that support design, planning and operation of microgrids (or aggregations of microgrids) for multiple needs and stakeholders (e.g., utilities, developers, ...

In this paper, a Microgrid (MG) test model based on the 14-busbar IEEE distribution system is proposed. This model can constitute an important research tool for the analysis of electrical grids in its transition ...

A standard microgrid power generation model and an inverter control model suitable for grid-connected and off-grid microgrids are built, and the voltage and frequency fluctuations in the two ...

In the near future, with the spread of renewable distributed energy generation and storage technology, microgrids will become increasingly relevant components of power systems.

Figure 1: A general design of a microgrid using software-in-the-loop simulation with the plants and controller exchanging data through communication interfaces.

This paper presents the modelling and simulation of an 80kW AC microgrid network in MATLAB/Simulink environment. The network comprises a 50 kW photovoltaic syst.

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