

Aiming at the problem of the grid-connected DC microgrid modeling, a grid-connected DC microgrid equivalent modeling method based on the optimized Broad Learning System (BLS) is ...

Abstract: Since the high penetration of distributed energy sources complicates the dynamics of electrical power systems, accurate dynamic models are indispensable for study on the ...

In order to simplify the grid-connect model of microgrid in power system stability study, a data-driven equivalent modeling method for microgrid based on Long Short-Term Memory(LSTM) recurrent ...

Inspired by the equivalence between differential-algebraic equation and RNN, we plan to use gate recurrent unit (GRU) based RNN to build the dynamic equivalent model of microgrid which ...

Abstract--The goal of this paper is the experimental validation of a gray-box equivalent modeling approach applied to microgrids. The main objective of the equivalent modeling is to represent the ...

Therefore, this study proposes a method to construct the equivalent model of a microgrid system and identify the parameters directly online. First, the equivalent model of the grid is ...

Results show that the proposed equivalent model is able to accurately reproduce the dynamic response of the microgrid to external disturbances, and that it can be adapted without difficulties to different ...

This paper presented a DNN-based dynamic equivalent model (DEM) for frequency stability analysis of high-pen-etration IBR microgrids. Our model advances prior work in three key areas.

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