Microgrid configuration decision model

To enhance the scheduling capabilities of microgrids in uncertain environments, many scholars have proposed various uncertainty optimization methods, such as robust optimization, ...

Even with an existing combination of microgrid components, our findings demonstrate the potential to modify and optimize this combination to achieve the optimal configuration.

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, ...

To achieve these objectives, we developed a data-driven model that combines Homer-Pro with a custom Python tool integrating extreme gradient boosting (XGBoost) machine learning algorithm and thirteen ...

A decision-making model for RE generation investment portfolio selection is developed by integrating the CFSE and FITradeoff methods. This model addresses the uncertainty of input data ...

Abstract--The increasing integration of renewable energy sources (RESs) is transforming traditional power grid networks, which require new approaches for managing decentralized en-ergy production ...

multi-criteria decision analysis (MCDA) provides a systematic approach. In this study, six distinct DC microgrid configurations are defined as potential alternatives: unipolar, bipolar, mul.

With the large-scale integration of renewable energy, the uncertainty of source-load balance and the startup characteristics of power sources impose higher requirements on the economic and reliability ...

This study proposes a multi-criteria decision-making model for technology selection for renewable-based residential microgrids, which is one of the most important decisions in the planning ...

Collaborative planning of renewable energy generation in microgrid clusters enables resource

complementarity. However, limited information leads to inconsistent investment evaluation results for ...

Web: https://swbsports.co.za