Distributed Smart Photovoltaic Microgrid

This resource page looks at ways to ensure continuous electricity regardless of an unforeseen event are by using distributed energy resources.

In this manuscript, a priority-based cost optimization function is developed to show the relative significance of one cost component over another for the optimal operation of the Microgrid.

This paper takes a significant step toward improving energy management in smart microgrids by proposing a distributed control strategy based on Distributed Agent Controllers (DACs).

In this study, a fuzzy multi-objective framework is performed for optimization of a hybrid microgrid (HMG) including photovoltaic (PV) and wind energy sources linked with ...

Abstract: Driven by carbon neutrality and sustainable development policies, the adoption of photovoltaic (PV) sources has grown significantly in recent years. The integration of distributed PV ...

This study introduces a two-layer fuzzy control strategy for DC microgrids with multiple PV systems. The first layer governs DG operations, whereas the second layer dynamically adjusts ...

The model first uses a distributed photovoltaic array to control the current, and then introduces an improved GWO algorithm MPPT to control the real-time maximum power output of the ...

In this research article, a Distributed Energy Sharing Program (DESP) is proposed to share energy among PV prosumers in a smart hybrid microgrid (SHM), making the PV prosumer ...

As the world accelerates its transition toward clean energy, distributed energy storage and smart microgrids are emerging as transformative forces in the energy landscape.

In this study, a machine learning approach using a multilayer perceptron artificial neural network (MLP-ANN) has been used to forecast solar radiation, wind speed, temperature, and load data.

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