Particle Swarm Optimization Microgrid

This study investigates the optimization of the size of a solar-wind hybrid microgrid using Particle Swarm Optimization (PSO) to improve energy production efficiency, economic feasibility, and overall ...

In this paper, the improved particle swarm optimization algorithm is applied to solve the optimal dispatching model of island microgrid, and the simulation is carried out by MATLAB.

In this study, we propose a multi-objective particle swarm algorithm-based optimal scheduling method for household microgrids. A household microgrid optimization model is ...

A multi-strategy Improved Multi-Objective Particle Swarm Algorithm (IMOPSO) method for microgrid operation optimization is proposed for the coordinated optimization problem of microgrid ...

Simulation results demonstrate that this model can effectively reduce electricity costs for users and environmental pollution, promoting the optimized operation of microgrids and verifying the superior ...

Safety, stability and efficiency, flexible energy flow, and both economic and environmental benefits are the basis for the low-carbon economic operation of the microgrid. However, with the multi-type ...

These findings highlight the significant advantages of the proposed optimization framework in enhancing both economic and environmental performance, making it a highly effective ...

This study proposes a novel multi-objective optimization framework for grid-connected microgrids using quantum particle swarm optimization (QPSO) to address the dual challenges of minimizing ...

This study introduces a quantum particle swarm optimization (QPSO)-based framework to address the dual challenges of operational cost minimization and emission reduction in grid ...

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