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Capacity configuration of wind solar and energy storage microgrid

Overview

How to solve the capacity optimization problem of wind–solar–storage microgrids?

A two-layer optimization model and an improved snake optimization algorithm (ISOA) are proposed to solve the capacity optimization problem of wind–solar–storage multi-power microgrids in the whole life cycle. In the upper optimization model, the wind–solar–storage capacity optimization model is established.

How to optimize wind-solar storage microgrid energy storage system?

Based on the above research, an improved energy management strategy considering real-time electricity price combined with state of charge is proposed for the optimal configuration of wind-solar storage microgrid energy storage system, and solved by linear programming .

What is a wind-solar-storage microgrid system?

Wind-Solar Storage Microgrid System Structure The wind-solar-storage microgrid system is mainly composed of wind power system, PV system, energy storage system, energy management system and energy conversion device , as shown in Fig. 1. Figure 1.

What is the optimal scheduling model for wind–solar–storage systems?

The lower layer features an optimal scheduling model, with the outputs of each power source in the microgrid as the decision variables. Additionally, this paper examines capacity optimization for wind–solar–storage systems across various scenarios, exploring optimal capacity configurations and operational strategies.

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