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Grid-side energy storage project operation model

Overview

What is a grid-side energy storage operator?

Regarding the operating model, the grid-side energy storage operator provides services to the grid, while the grid pays the energy storage plant operator for leasing the energy storage plant, which is the capacity tariff. The grid and energy storage operators often have conflicting interests as independent economic entities.

How much power does a grid-side energy storage plant use?

The planned value of the capacity of the energy storage plant was 427.60 kW h, and the maximum value of the charging and discharging power of the energy storage plant was 85.52 kW. Fig. 6. Output of each unit in the system after the integration of grid-side energy storage. Fig. 7.

What is the capacity Tariff of grid-side energy storage?

Based on the capacity tariff calculation model of the Stackelberg game proposed in this paper, the capacity tariff of grid-side energy storage is 415.58 CNY/kW.

How do energy storage operators make decisions?

Energy storage operators act as followers, making decisions regarding storage capacity and operational strategies based on the tariffs set by the grid. Their decision-making process incorporates historical capacity tariffs, operating costs, expected returns, and market dynamics.

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Frontiers , Optimal configuration of grid-side energy storage

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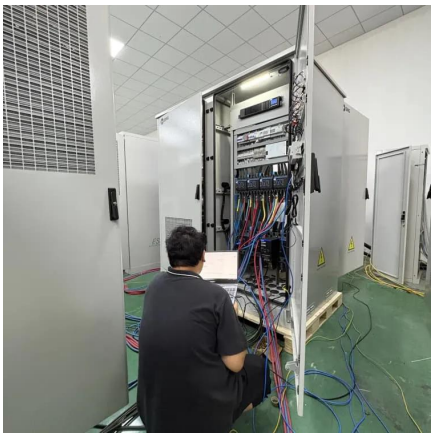

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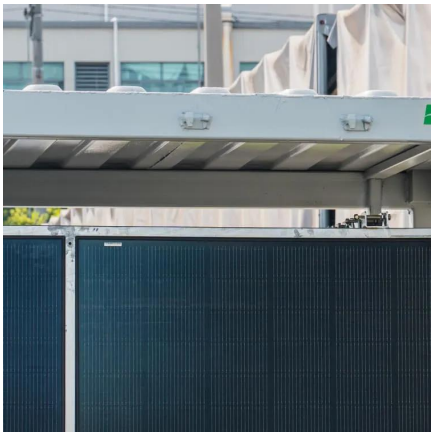

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