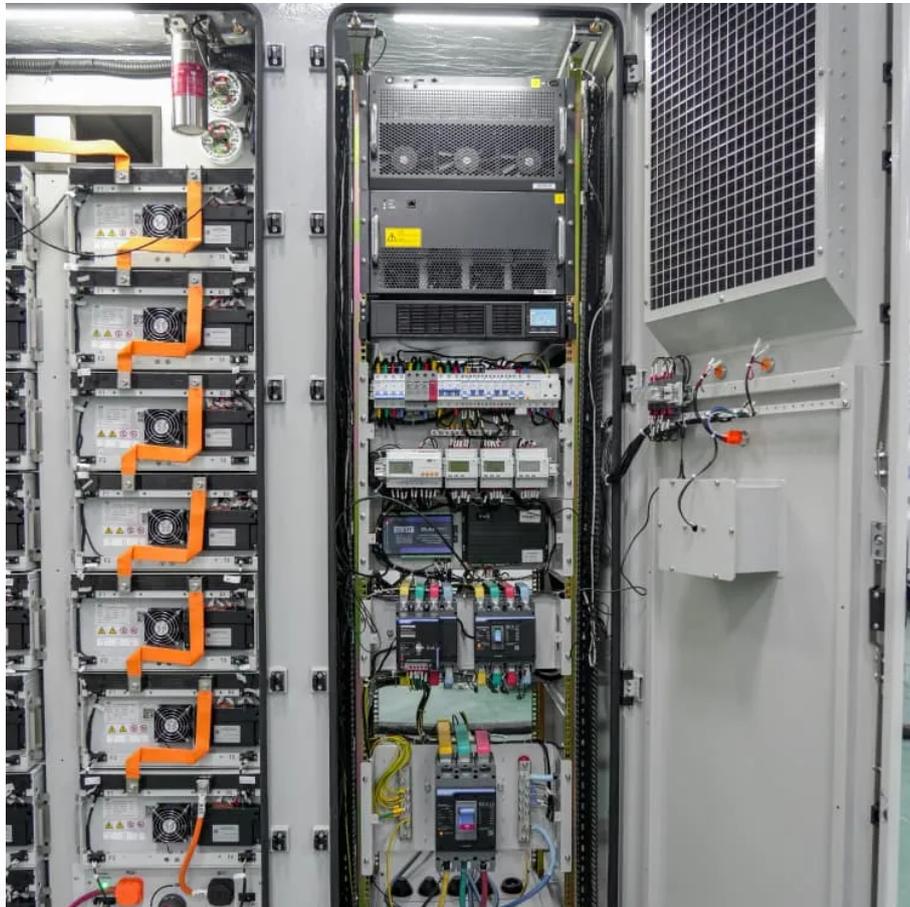


Energy storage ratio on the power generation side





Overview

Why is energy storage configuration important?

In the context of increasing renewable energy penetration, energy storage configuration plays a critical role in mitigating output volatility, enhancing absorption rates, and ensuring the stable operation of power systems.

How much storage capacity should a new energy project have?

For instance, in Guangdong Province, new energy projects must configure energy storage with a capacity of at least 10% of the installed capacity, with a storage duration of 1 h . However, the selection of the appropriate storage capacity and commercial model is closely tied to the actual benefits of renewable energy power plants.

What is energy storage based on?

In this study energy storage is mainly used to balance the output of wind and PV, so it is assumed that energy storage is only deployed on the supply side of renewable power, only electrochemical energy storage based on lithium batteries is considered.

What are the operational characteristics of energy storage?

The operational characteristics of energy storage in each scenario largely correspond to the PV generation schedule, with storage utilized to capture excess PV generation during peak times and release it in the afternoon or evening. Utilization rates for energy storage are higher from Feb to May, when PV generation potential is higher.



Energy storage ratio on the power generation side

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