

# Peak regulation and energy storage in Praia power grid





## Overview

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To explore the application potential of energy storage and promote its integrated application promotion in the power grid, this paper studies the comprehensive application and configuration mode of battery energy storage systems (BESS) in grid peak and frequency regulation. What is peak-regulation capability of a power grid?

Principle of the evaluation method The peak-regulation capability of a power grid refers to the ability of power supply balancing with power load, especially in the peak load and valley load periods. Specifically, the adjustment range of power supply in one day should be high enough to reach the peak load and low enough to reach the valley load.

What is peak-regulation capability?

Also, the peak-regulation capability determines the renewable energy consumption and power loads of cities by mitigating power output fluctuation in the regulation process of power grid.

Do flexible resources support multi-timescale regulation of power systems?

Here, we focused on this subject while conducting our research. The multi-timescale regulation capability of the power system (peak and frequency regulation, etc.) is supported by flexible resources, whose capacity requirements depend on renewable energy sources and load power uncertainty characteristics.

Can energy storage capacity configuration planning be based on peak shaving and emergency frequency regulation?

It is necessary to analyze the planning problem of energy storage from multiple application scenarios, such as peak shaving and emergency frequency regulation. This article proposes an energy storage capacity configuration planning method that considers both peak shaving and emergency frequency regulation scenarios.



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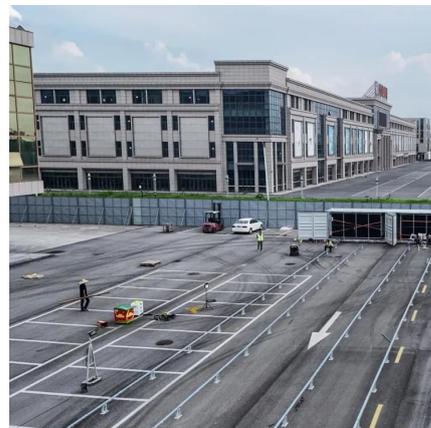


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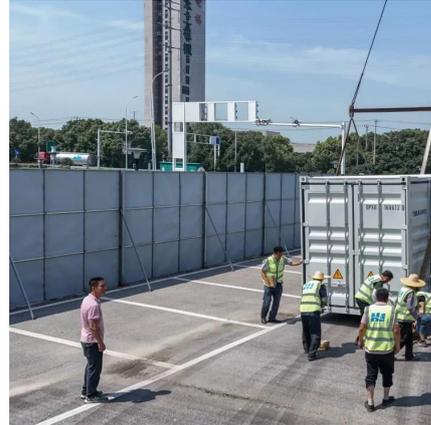
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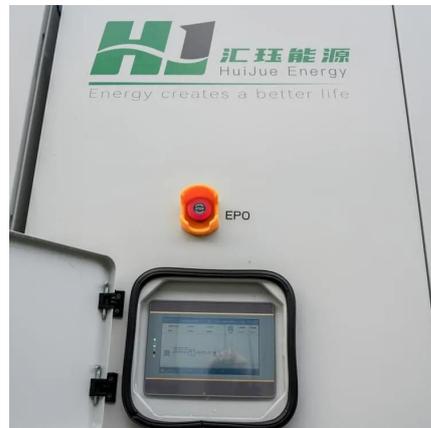


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