

# **Economics of energy storage peak-shaving projects**





## Overview

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This research analyzes the economic viability of BESS deployment in renewable energy projects, comparing two primary applications: peak shaving for demand charge reduction and integration within decentralized microgrid architectures. Can energy storage be used for peak shaving?

Energy storage has bidirectional regulation ability, fast response speed, simple control, and flexible installation position, and it can be an effective method for system peak shaving .

Can new energy storage methods based on electrochemistry contribute to peak shaving?

New energy storage methods based on electrochemistry can not only participate in peak shaving of the power grid but also provide inertia and emergency power support. It is necessary to analyze the planning problem of energy storage from multiple application scenarios, such as peak shaving and emergency frequency regulation.

Is peak shaving a daily energy-clearing constraint?

On a time scale of one day, it is considered that the capacity released by BES peak shaving is equal to the capacity absorbed by valley shaving. This is the daily energy-clearing constraint for energy storage. (3) Peak shaving period constraints.

How does thermal power affect peak shaving?

The intermittency, volatility, and anti-peak characteristics of wind and solar power are obvious, expanding the peak valley difference and increasing the peak shaving burden of the power system [1, 2]. Thermal power still dominates the power system, and it is difficult to regulate the output of thermal power units during peak shaving.



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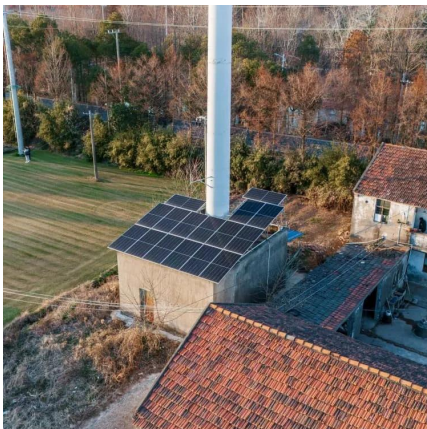
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## Optimized Economic Operation Strategy for Distributed Energy Storage

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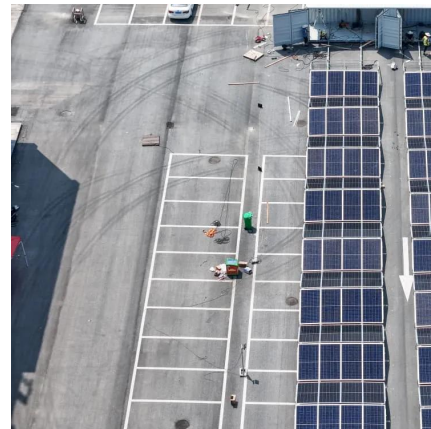


### [A review on peak load shaving strategies](#)

Nov 3, 2017 · In this study, a significant literature review on peak load shaving strategies has been presented. The impact of three major strategies for peak load shaving, namely demand ...

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