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# Profit model of energy storage peak-filling on the grid side in Auckland New Zealand





## Overview

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Rapid growth of intermittent renewable power generation makes the identification of investment opportunities in energy storage and the establishment of their profitability indispensable. Here we first present.

Does energy storage configuration maximize total profits?

On this basis, an optimal energy storage configuration model that maximizes total profits was established, and financial evaluation methods were used to analyze the corresponding business models.

Do Peak-Valley power prices affect energy storage projects?

(1) Analysis of Peak-Valley Electricity Price Policy This section sets five kinds of peak-valley price difference changes: 0.1 decreased, 0.05 decreased, 0.05 increased, 0.1 increased, investigating the economic influence of altering peak-valley power prices on energy storage projects, as shown in Fig. 8.

What is the difference between power grid and energy storage?

The power grid side connects the source and load ends to play the role of power transmission and distribution; The energy storage side obtains benefits by providing services such as peak cutting and valley filling, frequency, and amplitude modulation, etc.

Is energy storage a profitable business model?

Although academic analysis finds that business models for energy storage are largely unprofitable, annual deployment of storage capacity is globally on the rise (IEA, 2020). One reason may be generous subsidy support and non-financial drivers like a first-mover advantage (Wood Mackenzie, 2019).



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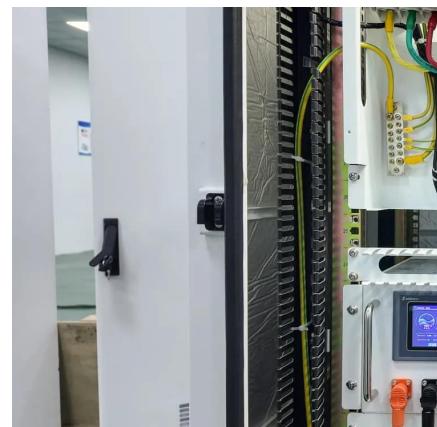
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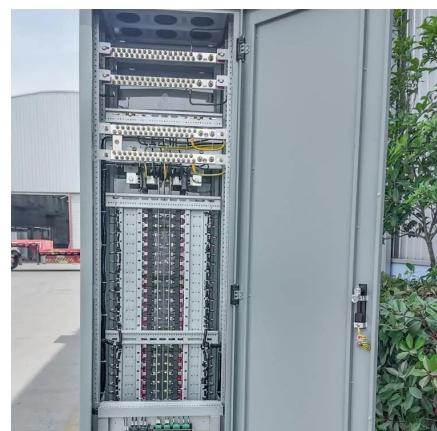
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