

## Kongres Container

# Energy storage peak-valley price difference



- ✓ **ALL IN ONE**
- ✓ **100Kw/174Kwh  
High Capacity**
- ✓ **Intelligent  
Integration**



## Overview

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In terms of economic optimization, the core economic indicators for energy storage configuration depend on three main variables: 1) Peak-valley price difference ( $\delta p$ ): the larger the difference, the greater the arbitrage potential for energy storage; 2) Limit electricity rate ( $\gamma$ ): for every 1% increase in limit rate, project revenue decreases by approximately 0.02 RMB/kWh; 3) The cost of the energy storage system itself. What is the difference between Peak-Valley electricity price and flat electricity price?

Among the four groups of electricity prices, the peak electricity price and flat electricity price are gradually reduced, the valley electricity price is the same, and the peak-valley electricity price difference is 0.1203 \$/kWh, 0.1188 \$/kWh, 0.1173 \$/kWh and 0.1158 \$/kWh respectively. Table 5. Four groups of peak-valley electricity prices.

How much does electricity cost in a valley?

Table 1 shows the peak-valley electricity price data of the region. The valley electricity price is 0.0399 \$/kWh, the flat electricity price is 0.1317 \$/kWh, and the peak electricity price is 0.1587 \$/kWh. The operation cycles (charging-discharging) of the Li-ion battery is about 5000–6000.

How do C&I energy storage projects benefit from Peak-Valley arbitrage?

C&I energy storage projects in China mainly profit from peak-valley arbitrage while reducing demand charges by monitoring the inverters' power output in real time to prevent transformers of industrial parks from exceeding their capacity limits.

What happens if the peak-valley electricity price difference decreases?

As the peak-valley electricity price difference, annual average irradiance and annual average wind speed decrease, the optimal allocation capacity and the annual net revenue of the BESS also decrease.

How does energy storage make money?

Energy storage can participate in peaking shaving and ancillary services. It generates revenue through electricity price arbitrage and reserve service. The BESS's optimization model and the charging-discharging operation control strategy are established to make maximum revenue.

How does a battery energy storage system work?

On the one hand, the battery energy storage system (BESS) is charged at the low electricity price and discharged at the peak electricity price, and the revenue is obtained through the peak-valley electricity price difference. On the other hand, extra revenue is obtained by providing reserve ancillary services to the power grid.

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