

SolarTech Power Solutions

Peak-valley electricity prices and energy storage



✓ 50KW/100KWH

✓ HIGHER POWER OUTPUT
IN OFF-GRID MODE

✓ CONVENIENT OPERATION
& MAINTENANCE

✓ PRE-WIRED



Overview

Since July, as the country experienced peak electricity demand, more and more provinces have varied electricity charges for different seasons, expanding the peak-to-valley spread and fostering growth in the C&I energy storage sector. 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.

What is the value of energy storage?

The value of energy storage is that the prosumer will store part of the surplus generation and use it for their own use when the electricity price is high.

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.

Does peak-valley spread affect peak-shaving of the power grid?

Although wider peak-valley spread promotes cost-savings for LEM participants, the effects on peak-shaving of the power grid is marginal. This is because the peak-valley mechanism is still insufficient to identify all potential spikes in power supply, so the storage and reserve capacity resources cannot reach the efficient allocation.

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.

What is energy storage for prosumers?

Due to the differences between residential and industrial & commercial users (both in terms of prices and load characteristics like voltage classes), energy storage for prosumers is only considered to be traded with similar users and the price is set according to the peak of the grid sales price.

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