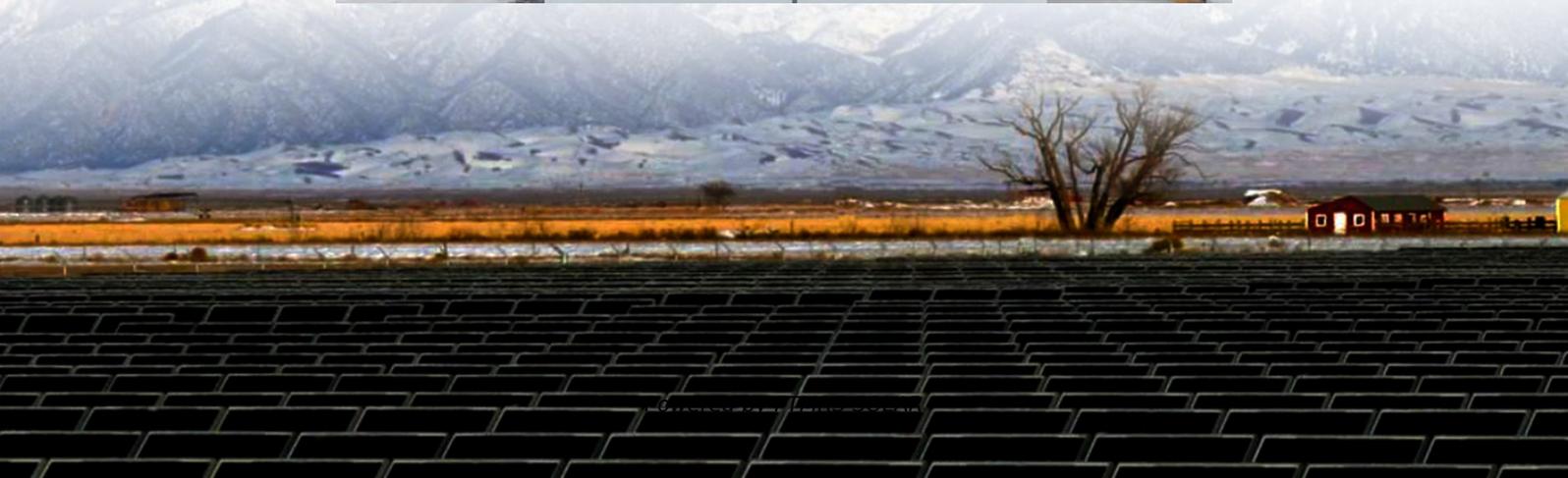


Gaborone Energy Storage Power Station Peak Shaving Revenue





Overview

Energy storage (ES) can mitigate the pressure of peak shaving and frequency regulation in power systems with high penetration of renewable energy (RE) caused by uncertainty and inflexibility. However.

How can coal-fired power units increase peak shaving revenue?

In order to increase the revenue in the peak shaving market, coal-fired power units can only blindly choose the highest price of each bidding stage to declare, rather than reasonably declare the peak-shaving compensation price according to its own peaking costs.

What happens if a power unit shaves a peak?

Opportunity loss for deep peak shaving The increasing peak depth of coal-fired power units will significantly reduce the power transmission, resulting in a loss of electricity revenue, which is called the peak-shaving additional revenue loss.

Do coal-fired power units provide peak shaving ancillary services?

With the integration of renewable power generation units such as wind and solar power into the grid, coal-fired power units not only need to provide peak shaving ancillary services, but also has a downward trend in its own annual power generation hours. It is urgent to measure and evaluate the peak shaving costs of coal power.

What is the power and capacity of Es peaking demand?

Taking the 49.5% RE penetration system as an example, the power and capacity of the ES peaking demand at a 90% confidence level are 1358 MW and 4122 MWh, respectively, while the power and capacity of the ES frequency regulation demand are 478 MW and 47 MWh, respectively.



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