



MODERNIZATION SOLAR

Energy storage solar wind power cost calculation





Overview

Does energy storage improve wind power capacity credit?

Energy storage substantially improves the capacity credit of wind power from 4% to 26%. Levelized cost of hybrid systems assessed across different supply modes and scales. Optimal choice for a hybrid system depends on the scale rather than supply strategy. Levelized cost of utility PV & Li-ion battery systems could reduce by 30% by 2030.

How much money does a simulated wind-storage system make?

When the energy storage system lifetime is of 10 years, and the cost is equal to or more than 375 \$/kWh, the optimization configuration capacity is 0 MWh, which means no energy storage installation. The annual revenue of the simulated wind-storage system is 12.78 million dollars, which is purely from the sale of wind generation.

Can integrated energy storage system generate more revenue than wind-only generation?

The integrated system can produce additional revenue compared with wind-only generation. The challenge is how much the optimal capacity of energy storage system should be installed for a renewable generation. Electricity price arbitrage was considered as an effective way to generate benefits when connecting to wind generation and grid.

What is the revenue of wind-storage system?

The revenue of wind-storage system is composed of wind generation revenue, energy storage income and its cost. With the TOU price, the revenue of the wind-storage system is determined by the total generated electricity and energy storage performance.



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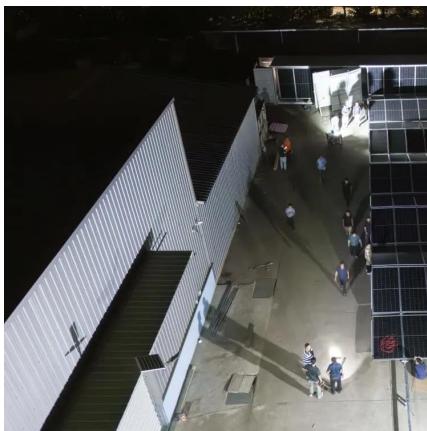
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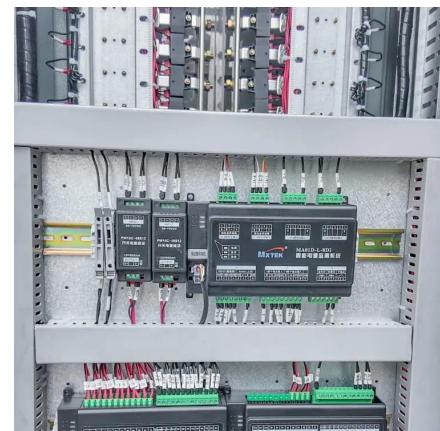
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