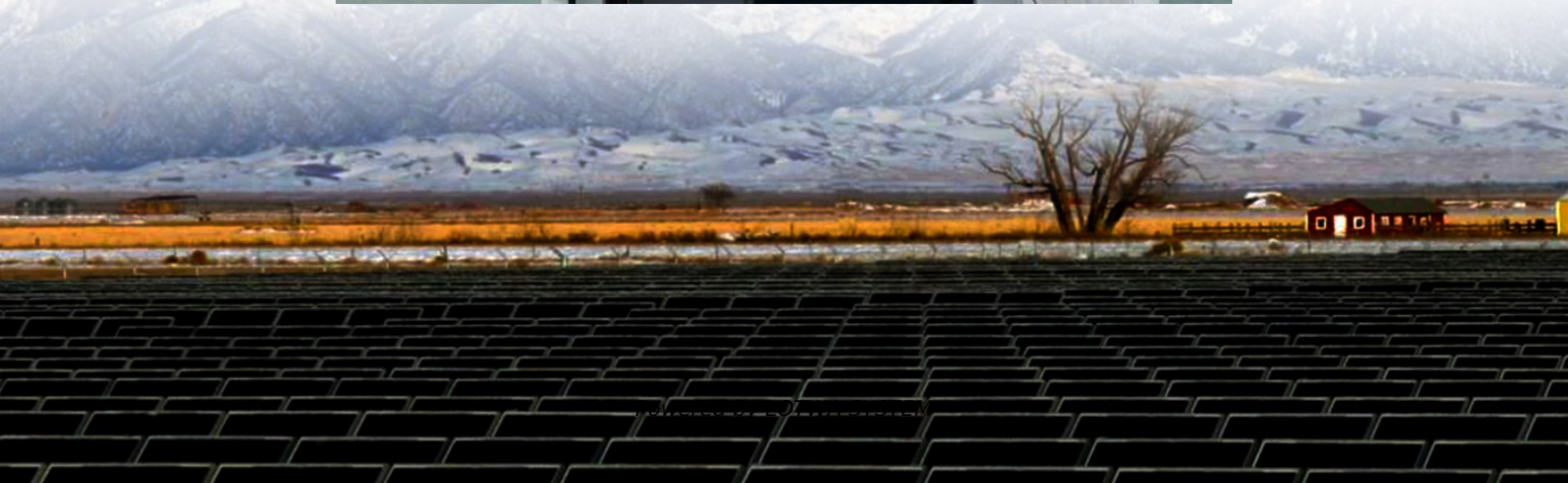


The price of wind and solar energy storage power generation





Overview

How much does solar power cost?

A recent study published in *Energy*, a peer-reviewed energy and engineering journal, found that—after accounting for backup, energy storage and associated indirect costs—solar power costs skyrocket from US\$36 per megawatt hour (MWh) to as high as US\$1,548 and wind generation costs increase from US\$40 to up to US\$504 per MWh.

How do I estimate the true cost of wind and solar energy?

To estimate the true cost of wind and solar energy when redundancy requirements are included, we must consider the following additional costs: Overbuild of Capacity: Since solar and wind have lower capacity factors, more generation capacity must be installed to match the output of coal or natural gas plants.

How do wind and solar power prices change?

Since wind and solar power have no fuel cost, they push the price down by replacing more expensive fuel-consuming power plants. As wind and solar gradually become the primary power supply sources, market prices will drop on average, but price variations are likely to increase.

How do wind and solar power plants affect electricity market prices?

Wind and solar plants have near-zero marginal costs since they are weather-driven without inherent energy storage. Due to this property, these plants will be dispatched first, and they push more expensive power plants out of the market. Consequently, electricity market prices fall. system, as illustrated in Figure 2. If the supply curve is



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