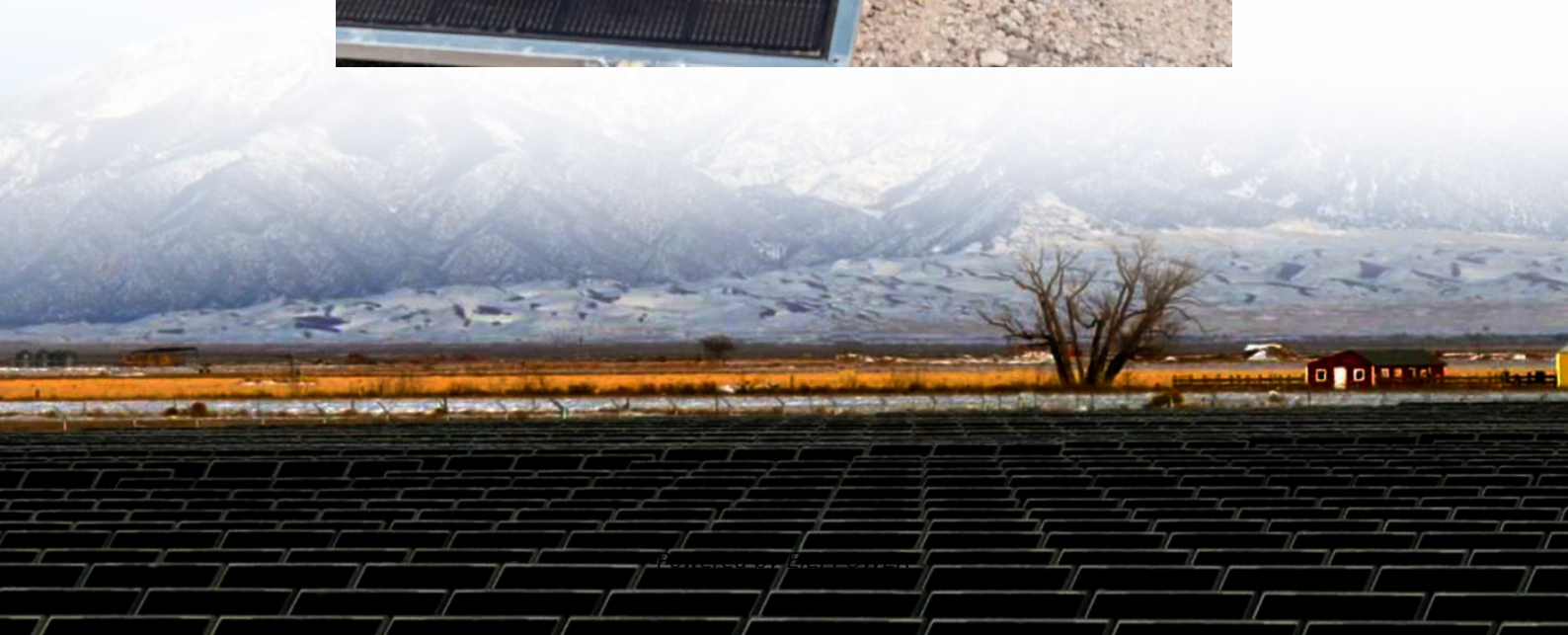


Cost of chemical battery energy storage





Overview

What is a battery used for?

The batteries, with their high energy density, are well-suited for large-scale energy storage applications, including grid energy storage and the storage of renewable energy .

How much does a 4 hour battery system cost?

Figure ES-2 shows the overall capital cost for a 4-hour battery system based on those projections, with storage costs of \$147/kWh, \$243/kWh, and \$339/kWh in 2035 and \$108/kWh, \$178/kWh, and \$307/kWh in 2050 (values in 2024\$).

Does battery storage cost reduce over time?

The projections are developed from an analysis of recent publications that include utility-scale storage costs. The suite of publications demonstrates wide variation in projected cost reductions for battery storage over time.

What happens when a battery dies?

When a battery's life ends, the electrolyte solution can be recycled, the cost of which accounts for more than 50% of the total cost of the energy storage system, so the residual value is extremely high after the energy storage system is scrapped.



Cost of chemical battery energy storage



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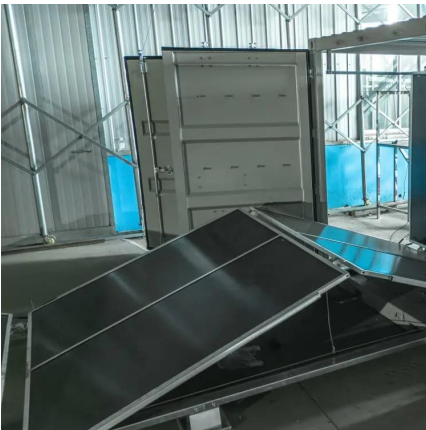
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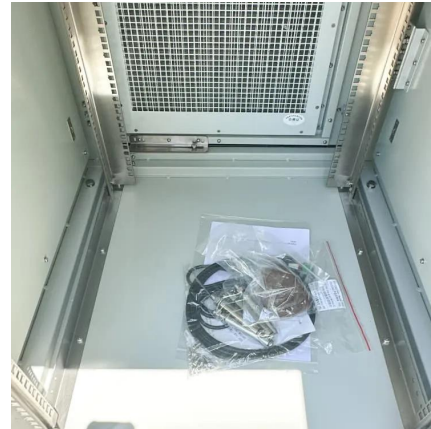
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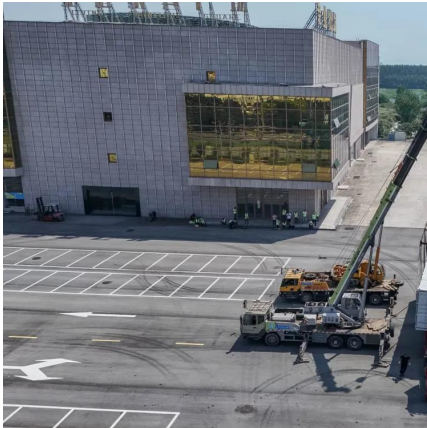
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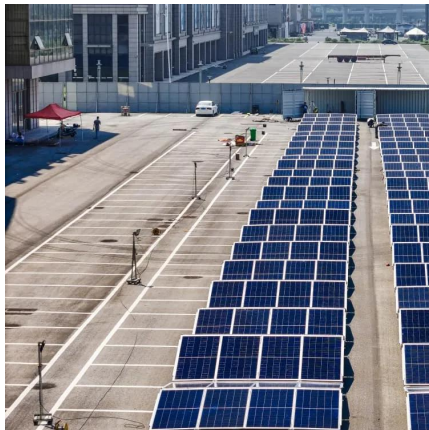
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