

## SolarTech Power Solutions

# Average price of energy storage cells



## Overview

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In 2025, you're looking at an average cost of about \$152 per kilowatt-hour (kWh) for lithium-ion battery packs, which represents a 7% increase since 2021. Energy storage systems (ESS) for four-hour durations exceed \$300/kWh, marking the first price hike since 2017, largely driven by escalating raw.

DOE's Energy Storage Grand Challenge supports detailed cost and performance analysis for a variety of energy storage technologies to accelerate their development and deployment. The U.S. Department of Energy's (DOE) Energy Storage Grand Challenge is a comprehensive program that seeks to accelerate.

Home and business buyers typically pay a wide range for Battery Energy Storage Systems (BESS), driven by capacity, inverter options, installation complexity, and local permitting. This guide presents cost and price ranges in USD to help plan a budget and compare quotes. The information focuses on: How much does energy storage cost?

Energy storage system costs for four-hour duration systems exceed \$300/kWh for the first time since 2017. Rising raw material prices, particularly for lithium and nickel, contribute to increased energy storage costs. Fixed operation and maintenance costs for battery systems are estimated at 2.5% of capital costs.

How much does energy storage cost in 2024?

As we look ahead to 2024, energy storage system (ESS) costs are expected to undergo significant changes. Currently, the average cost remains above \$300/kWh for four-hour duration systems, primarily due to rising raw material

prices since 2017.

How much does energy storage cost in 2025?

In 2025, they are about \$200–\$400 per kWh. This is because of new lithium battery chemistries. Different places have different energy storage costs. China's average is \$101 per kWh. The US average is \$236 per kWh. Knowing the price of energy storage systems helps people plan for steady power. It also helps them handle money risks.

How much does energy storage cost in 2022?

From 2022 to 2025, energy storage costs have gone down each year. In 2022, a home system cost about \$1,000 per kWh. In 2023, the price dropped to \$600 per kWh. By 2024, it was \$400 per kWh for many systems. In 2025, most people pay between \$200 and \$400 per kWh.

Why are energy storage systems so expensive?

Energy storage systems (ESS) for four-hour durations exceed \$300/kWh, marking the first price hike since 2017, largely driven by escalating raw material costs and supply chain disruptions. Geopolitical issues have intensified these trends, especially concerning lithium and nickel.

Are battery storage costs based on long-term planning models?

Battery storage costs have evolved rapidly over the past several years, necessitating an update to storage cost projections used in long-term planning models and other activities. This work documents the development of these projections, which are based on recent publications of storage costs.

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