

## Global PV Storage Insights

# Average bid cost for commercial energy storage project 2025



## Overview

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In March 2025, data from GaoGong Industry Research indicated that the bid prices for energy storage EPC projects ranged from 0.566 yuan/Wh to 1.433 yuan/Wh, with an average of 1.027 yuan/Wh.

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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\$). Battery variable operations and maintenance costs, lifetimes, and.

In 2025, the typical cost of a commercial lithium battery energy storage system, which includes the battery, battery management system (BMS), inverter (PCS), and installation, is in the following range: \$280 - \$580 per kWh (installed cost), though of course this will vary from region to region.

In today's market, the installed cost of a commercial lithium battery energy storage system — including the battery pack, Battery Management System (BMS), Power Conversion System (PCS), and installation — typically ranges from: \$280 to \$580 per kWh for small to medium-sized commercial projects. For.

According to recent data from GaoGong Industry Research, in March 2025, the bidding scale for energy storage systems dropped by 55%, with bid prices entering the “0.3 yuan era.” The bid prices for energy storage system procurement ranged between 0.368 yuan/Wh and 1.050 yuan/Wh, with an average.

The bids were opened on December 4. The tender attracted 76 bidders, with quoted prices ranging from \$60.5/kWh to \$82/kWh, averaging \$66.3/kWh. Notably, 60 of the bids were below \$68.4/kWh, signaling competitive pricing trends in China's energy storage market. According to the previously announced.

The average energy storage cost in 2025 is different in many places. It depends on how big the system is and what technology it uses. Most homes and small businesses pay between \$6,000 and \$23,000 for everything. This covers the battery, inverter, labor, and other parts. A normal 11.4 kWh battery. How much does energy storage cost?

Let's analyze the numbers, the factors influencing them, and why now is the best time to invest in energy storage. \$280 - \$580 per kWh (installed cost), though of course this will vary from region to region depending on economic levels. For large containerized systems (e.g., 100 kWh or more), the cost can drop to \$180 - \$300 per kWh.

How much does commercial battery storage cost?

For large containerized systems (e.g., 100 kWh or more), the cost can drop to \$180 - \$300 per kWh. A standard 100 kWh system can cost between \$25,000 and \$50,000, depending on the components and complexity. What are the costs of commercial battery storage?

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When are battery cost projections updated?

In 2019, battery cost projections were updated based on publications that focused on utility-scale battery systems (Cole and Frazier 2019), with updates published in 2020 (Cole and Frazier 2020), 2021 (Cole, Frazier, and Augustine 2021), and 2023 (Cole and Karmakar 2023).

How much does storage cost in 2035?

By definition, the projections follow the same trajectories as the normalized cost values. Storage costs are \$147/kWh, \$234/kWh, and \$339/kWh in 2035 and \$108/kWh, \$178/kWh, and \$307/kWh in 2050. Costs for each year and each trajectory are included in the Appendix, including costs for years after 2050. Figure 4.

Do projected cost reductions for battery storage vary over time?

The suite of publications demonstrates wide variation in projected cost reductions for battery storage over time. Figure ES-1 shows the suite of projected cost reductions (on a normalized basis) collected from the literature (shown in gray) as well as the low, mid, and high cost projections developed in this work (shown in black).

Why do storage costs persist through 2050?

The lower costs persist through 2050 because of that lower starting point. Table 2. Values from Figure 3 and Figure 4, which show the normalized and absolute storage costs over time. Storage costs are overnight capital costs for a complete 4-hour battery system. Figure 9.

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### Utility-Scale Battery Storage , Electricity , 2024 , ATB , NREL

The battery storage technologies do not calculate levelized cost of energy (LCOE) or levelized cost of storage (LCOS) and so do not use financial assumptions. Therefore, all parameters are ...

### 2022 Grid Energy Storage Technology Cost and ...

Recycling and decommissioning are included as additional costs for Li-ion, redox flow, and lead-acid technologies. The 2020 Cost and Performance Assessment analyzed energy storage systems from 2 to 10 hours. The 2022 Cost and ...



### US states tendering for 550 MW of energy storage

A request for proposals (RfP) has been drawn up for around 450 MW of storage capacity in Michigan and Tennessee Valley Authority (TVA) wants a 100 MW battery energy storage system (BESS) for its new 1.55 GW gas and ...

### What is the Cost of BESS per MW? Trends and 2025 Forecast

The cost per MW of a BESS is set by a number of factors, including battery chemistry, installation

complexity, balance of system (BOS) materials, and government ...



## The Real Cost of Commercial Battery Energy Storage in 2025

Discover the true cost of commercial battery energy storage systems (ESS) in 2025. GSL Energy breaks down average prices, key cost factors, and why now is the best time ...

## 2025 Energy Predictions: Battery Costs Fall, Energy Storage ...

Experts predict what 2025 holds for U.S. energy policy: EV battery costs fall, energy storage demand surges, carbon removal hits scale, permitting reform in D.C.



## Grid-Scale Battery Storage: Costs, Value, and

Grid-Scale Battery Storage: Costs, Value, and Regulatory Framework in India Webinar jointly hosted by Lawrence Berkeley National Laboratory and Prayas Energy Group

## 2026

As commercial energy buyers navigate an increasingly volatile market, understanding where electricity prices are headed in 2025 and 2026 is more important than ever. With energy costs being one of the top three ...



## With Federal Support Uncertain, New York Executes Plan for Six

After years of regulatory proceedings and planning, and following the New York Public Service Commission's June 2024 Order Establishing Updated Energy Storage Goal and ...

## Solar Installed System Cost Analysis

Solar Installed System Cost Analysis NREL analyzes the total costs associated with installing photovoltaic (PV) systems for residential rooftop, commercial rooftop, and utility ...



## The Real Cost of Commercial Battery Energy Storage ...

With fluctuating energy prices and the growing urgency of sustainability goals, commercial battery energy storage has become an increasingly attractive energy storage solution for businesses. But what will the ...

## What Is The Current Average Cost Of Energy Storage Systems In 2025

In 2025, the average energy storage cost ranges from \$200 to \$400 per kWh, with total system prices varying by technology, region, and installation factors.



## PowerChina receives bids for 16 GWh BESS tender ...

According to the previously announced plan by PowerChina, this tender aims to select qualified suppliers for energy storage system equipment for 2025-2026. After the selection, a framework agreement will be signed.

## REPORT: Energy Storage's Meteoric Rise Breaks ...

Grid-scale storage installations are forecasted to reach 13.3 GW in 2025. "After another year of record deployment, energy storage is solidifying its place as a leading solution for strengthening American energy security and ...



## Solar Installed System Cost Analysis

Solar Installed System Cost Analysis NREL analyzes the total costs associated with installing photovoltaic (PV) systems for residential rooftop, commercial rooftop, and utility-scale ground-mount systems. This work has ...

## Solar Photovoltaic System Cost Benchmarks

The U.S. Department of Energy's solar office and its national laboratory partners analyze cost data for U.S. solar photovoltaic systems to develop cost benchmarks to measure progress towards goals and guide research and development ...



## Energy Storage Costs: Trends and Projections

As the global community increasingly transitions toward renewable energy sources, understanding the dynamics of energy storage costs has become imperative. This ...

## A 2025 Update on Utility-Scale Energy Storage ...

While the energy storage market continues to rapidly expand, fueled by record-low battery costs and robust policy support, challenges still loom on the horizon--tariffs, shifting tax incentives, and supply chain uncertainties ...



## Global Energy Storage to Hit 94 GW in 2025, Says BNEF

The global energy storage sector is on track for another record year in 2025 as utility-scale projects expand into new regions. BloombergNEF (BNEF) forecasts that ...



## PowerChina receives bids for 16 GWh BESS tender ...

Notably, 60 of the bids were below \$68.4/kWh, signaling competitive pricing trends in China's energy storage market. According to the previously announced plan by PowerChina, this tender aims to select qualified ...



## Summary of Global Energy Storage Market Tracking (Q2 2023)

Figure 3: Installed capacity of new energy storage projects newly commissioned in China (2023.H1) In the first half of the year, the capacity of domestic energy storage system ...

## Solar, battery storage to lead new U.S. generating capacity ...

Battery storage. In 2025, capacity growth from battery storage could set a record as we expect 18.2 GW of utility-scale battery storage to be added to the grid. U.S. battery storage already ...



## Utility-Scale Battery Storage , Electricity , 2023 , ATB

Projected Utility-Scale BESS Costs: Future cost projections for utility-scale BESS are based on a synthesis of cost projections for 4-hour duration systems as described by (Cole and Karmakar, 2023). The share of energy and power ...

## ENERGY STORAGE

The Department has launched the third bid round under the Battery Energy Storage Independent Power Producers Procurement Programme (BESIPPPP), calling for 616 MW of new generation capacity will be procured ...



### China's Huadian announces winners in 6 GWh BESS ...

In December, PowerChina's 2025-2026 energy storage system procurement, which sought 16 GWh of BESS, saw bids ranging from \$60.5/kWh to \$82/kWh, averaging \$66.3/kWh. In January, CGN New Energy procured 4.5 ...

### BESS in North America\_Whitepaper\_Final Draft

Introduction Battery energy storage presents a USD 24 billion investment opportunity in the United States and Canada through 2025. More than half of US states have adopted renewable energy ...



### New York PSC Approves NYSERDA's Billion-Dollar ...

On March 21, 2025, the New York Public Service Commission (PSC) approved the draft implementation plan for the New York State Energy Research and Development Authority's (NYSERDA) bulk energy storage program--with a ...

## Battery energy storage in the NEM: Key trends in 2025

The Energy Storage Summit Australia took place on 18th and 19th March 2025 in Sydney. On day one, Modo Energy's Country Director Wendel discussed the key trends for battery energy ...

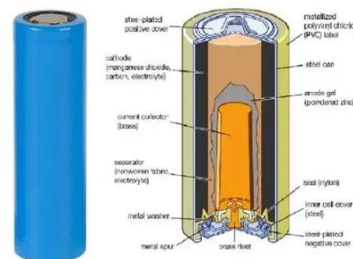


## Cost Projections for Utility-Scale Battery Storage: 2025 Update

Executive Summary In this work we describe the development of cost and performance projections for utility-scale lithium-ion battery systems, with a focus on 4-hour duration ...

## How much does it cost to build a battery energy ...

How much does it cost to build a battery in 2024? Modo Energy's industry survey reveals key Capex, O& M, and connection cost benchmarks for BESS projects.



## Figure 1. Recent & projected costs of key grid

Meanwhile, the costs of pumped hydro storage are expected to remain relatively stable in the coming years, maintaining its position as the cheapest form - in terms of \$/kWh - ...

## ERCOT battery energy storage buildout: Record ...

Which battery energy storage systems reached commercial operations in June 2024? June wasn't only the largest-ever increase in rated power and energy capacity in ERCOT. It also saw the commissioning of the largest-ever battery ...



## Declining battery costs to boost adoption of battery energy ...

Commenting on the competitiveness of BESS projects vis-à-vis PSP hydro, Kadam said: "Based on prevailing battery costs, the storage cost using BESS is estimated to ...

## STATE OF STORAGE IN NEW YORK

of New York. The total amount of energy storage projects in New York State at the end of March 2025 equaled 1,403.2 MW in capacity, consisting of 509.2 MW of deployed ...



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