

# How much does a photovoltaic energy storage facility cost per kilowatt-hour



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### [2026 Cost of Energy Storage in California , EnergySage](#)

As of April 2026, the average storage system cost in California is \$1031/kWh. Given a storage system size of 13 kWh, an average storage installation in California ranges in cost from \$11,392 to \$15,412,

### [Utility-Scale Battery Storage , Electricity , 2024 , ATB , NLR](#)

Base year installed capital costs for BESSs decrease with duration (for direct storage, measured in \$/kWh) whereas system costs (in \$/kW) increase. This inverse behavior is observed for all energy



### [How much does photovoltaic kilowatt-hour energy storage cost?](#)

The cost of photovoltaic kilowatt-hour energy storage varies widely based on several factors, including technology type, scale of installation, geographical location, and market trends.

### [Solar Photovoltaic System Cost Benchmarks](#)

The variable cost is given in dollars per intrinsic unit, with the unit chosen that most directly scales with the size for that category. The PVSCM system cost is the price paid by the system owner to the





## Solar Installed System Cost Analysis

NLR analyzes the total costs associated with installing photovoltaic (PV) systems for residential rooftop, commercial rooftop, and utility-scale ground-mount systems.

## [The Cost of Battery Energy Storage Systems \(BESS\)](#)

As of 2024, the average price for a utility-scale BESS is approximately \$148/kWh <sup>1</sup>. For a 1 GWh system, this translates to \$148 million. It's important to note that this cost includes not just the



## [Energy Storage Cost and Performance Database](#)

Additional storage technologies will be added as representative cost and performance metrics are verified. The interactive figure below presents results on the total installed ESS cost ranges by

## [Understanding the Price of Photovoltaic Energy Storage Stations: A](#)

As of 2025, prices range from \$0.48 to \$1.86 per watt-hour (Wh) for utility-scale projects, while residential systems hover around \$1,000-\$1,500 per kWh .



## [Photovoltaic Energy Storage System Price and Working Price: A](#)

Summary: This article explores the cost dynamics of photovoltaic energy storage



systems, including installation expenses, operational pricing models, and industry trends.

## Energy Storage System Cost per kWh 2025

In the United States, utility-scale energy storage projects can achieve costs below \$150 per kWh, whereas small residential systems typically exceed \$300 per kWh.



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