

**PIENAAR ENERGY (PTY) LTD**

# **4-hour energy storage capacity BESS price**



## Overview

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The capital cost for long-duration (4 hours or more) utility-scale battery energy storage systems (BESS) in markets outside China and the U. reached roughly \$125/kWh by October 2025, according to a recent report by Ember. This cost reflects a split of around \$75 for core equipment and about \$50. As of most recent estimates, the cost of a BESS by MW is between \$200,000 and \$420,000, varying by location, system size, and market conditions. This translates to around \$150 - \$420 per kWh, though in some markets, prices have dropped as low as \$120 - \$140 per kWh. 4-hour: Typically used for load shifting and managing evening peak demand. Commercial & Industrial systems: \$0.

## 4-hour energy storage capacity BESS price

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### Ember Report Reveals Utility-Scale Battery Storage Now Costs Just \$65

According to Ember's Decemreport "How cheap is battery storage?", the all-in capital expenditure for large, long-duration utility-scale Battery Energy Storage System (BESS) projects has ...

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### Long-Duration Utility-Scale BESS Project Cost Drops to \$125/kWh: Ember

BloombergNEF's 2024 global benchmark for core BESS equipment was around \$165/kWh, but this figure averages higher-cost markets such as the U.S. and a wider supplier base. The \$75/kWh cited for ...



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### Understanding BESS Price per MWh in 2025: Market Trends and Cost

Industry data reveals current BESS project costs range between \$280,000 to \$480,000 per MWh installed, depending on configuration and ancillary components.

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## Battery Energy Storage System (BESS) Costs and LCOS in 2024-2025: ...

Commercial & Industrial systems: \$0.319-\$0.506/kWh for 1MW/2-hour setups. In China, intense market competition, a mature supply chain, and favorable policies have driven LCOS for large-scale BESS to among ...



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## How cheap is battery storage? , Ember

Across global markets outside China and the United States, the total capex to build a long-duration (4 hours or more) utility-scale BESS project is around \$125/kWh, of which around \$75/kWh is for ...

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

We use the capacity factor for a 4-hour device as the default value for ATB because 4-hour durations are anticipated to be more typical in the utility-scale market.



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## Battery storage system prices continue to fall



In 2025, the global average price of a turnkey battery energy storage system (BESS) is US\$117/kWh, according to the Energy Storage Systems Cost Survey 2025 from BloombergNEF (BNEF), ...

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## The Cost of Battery Energy Storage Systems (BESS)

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



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## What is the Cost of BESS per MW? 2026 Update!

For example, a 1 MW / 4 MWh BESS has four hours of storage capacity. So, while the system might be \$200,000 per MW, the effective cost can be \$50,000 per MWh if it has four hours duration.

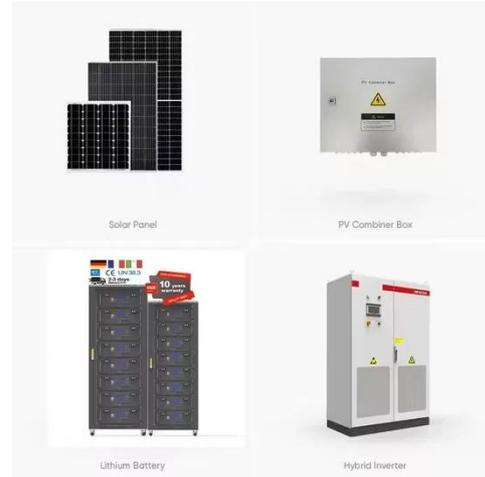
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## Battery Storage Fact Sheet October 2025

4-hour: Typically used for load shifting and managing evening peak demand.

8-hour: Provides extended support during prolonged periods of low renewable generation or system stress.  
10+ hour: Long duration BESS for ...

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