

# Average BESS price per 250MW in Spain





## Overview

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Key updates from the Spanish BESS price forecast for S1 2025, including CAPEX trends, revenue changes, and market developments.

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Clean Horizon's latest Spanish price forecast report for Semester 1, 2025, released in March, delivers essential updates reflecting the evolving energy market landscape and its implications for Battery Energy Storage Systems (BESS) in Spain. Thanks to advances in technology, BESS systems now offer.

In this report, we delve into the developments in the regulatory framework of the Spanish electricity system and explore the potential of Spain's battery energy storage systems (BESS) market. The significant increase in both wind and solar generation capacity is creating the need for storage.

However, there's a crucial difference: while negative hours are increasing, prices remain close to €0/MWh rather than plunging deeply negative. Two structural factors limit how negative Spanish prices can go: Limited interconnection: Spain's 3 GW link with France is isolating it from the negative.

During most of the years, this difference is between €40 and €50 per MWh. Two configurations analysed: 100 MW BESS with 2 hours and 4 hours of storage capacity. For the BESS 2h, market net revenues begin with around 9 M€ in 2024 and decrease to 3.4 M€ in 2038. Due to the revamping of the batteries.

We estimate the number of these days per year in 2030 to be around 250 days in GB but over 300 days in Spain. In addition to high renewable targets, Spain is relatively isolated from other markets and only has limited import and export capacity to France, Portugal and Morocco. An additional 2.2GW.

In addition to limitations in access to subsidies, the bureaucracy The cost associated with obtaining aid can be an additional hurdle. Complex



administrative processes and detailed requirements can discourage many potential investors from taking the plunge into energy storage. Simplifying these. Does Spain need a Bess energy system?

Currently, Spain has 6.3GW of hydroelectric and 1GW of thermal storage capacity installed. In fact, the non-BESS storage capacity in Spain is higher than in any other European country. As a result, the need for BESS to integrate renewable energy sources into the electricity system is less immediate than in the UK, for example.

What is the current situation of the Spanish Bess market?

The current situation of the Spanish BESS market confirms that both of these factors are required to gain market attraction: Despite a high penetration of renewable energy, the Spanish regulatory framework has been lagging and the first BESS projects of significant size have yet to be built.

How does Spain's pumped hydro energy storage compete with Bess?

Spain's pumped hydro energy storage competes directly against BESS, limiting the battery storage opportunity in wholesale markets. 3. Missing ancillary markets Unlike Great Britain or Texas, Spain never created ancillary service markets that net-zero systems need:.

What is the market energy storage in Spain?

The market energy storage in Spain, particularly in relation to the BESS systems (Battery Energy Storage Systems), is undergoing a dynamic and accelerated evolution. This transformation is driven by the growing need to integrate renewable energy sources into the electricity grid, improve supply stability and optimize energy use.

How much does Bess cost?

The cost of BESS has fallen significantly over the past decade, with more precipitous drops in recent years: This is nearly a 70% reduction in three years, owing to falling battery pack prices (now as low as \$60-70/kWh in China), increased deployment, and improved efficiency.

How many Bess projects are there in Spain?

In March 2025, UK companies Renewco and Atlantica announced the development of up to 2.2GW of BESS projects across Spain. Other projects in



the pipeline primarily involve storage co-located with solar or wind generation. According to BloombergNEF, the total capacity currently in the BESS pipeline is around 3GW.



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### Technical and economic study of two energy storage ...

(generation) prices evolve along the time horizon according the pool price. As expected, the higher the pool price, the higher the difference between buying and selling price. During most ...

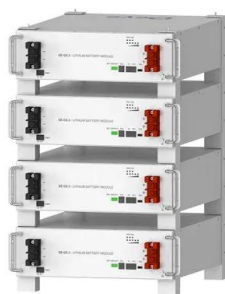
### Iberia: Why are there no batteries in Spain?

As installed capacity has soared from under 10 GW in 2018 to 33 GW in 2025, the average capture price for solar generators has collapsed. Annual capture rates for solar have fallen ...



### BESS market in the Netherlands

BESS unit prices in China, USA & Europe \*DNV Capex prices of utility scale BESS projects with 4-hour duration. BESS unit prices include battery cells, racks, enclosure & PCS. This is ...

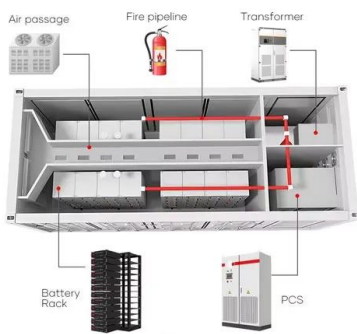


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10 years warranty

### Cost of battery-based energy storage, INR 10.18/kWh, expected ...

Currently, the cost of battery-based energy storage in India is INR 10.18/kWh, as discovered in a SECI auction for 500 MW/1000 MWh BESS. The government has launched ...



### Residential Battery Storage , Electricity , 2024 , ATB

As with utility-scale BESS, the cost of a residential BESS is a function of both the power capacity and the energy storage capacity of the system, and both must be considered when estimating system cost. Furthermore, the Distributed ...

### BESS in Spain: the situation of the energy storage ...

The market energy storage in Spain, particularly in relation to the BESS systems (Battery Energy Storage Systems), is undergoing a dynamic and accelerated evolution.



**Product Model**  
HJ-ESS-215A(100KW/215KWh)  
HJ-ESS-115A(50KW 115KWh)  
**Dimensions**  
1600\*1280\*2200mm  
1600\*1200\*2000mm  
**Rated Battery Capacity**  
215KWH/115KWH  
**Battery Cooling Method**  
Air Cooled/Liquid Cooled



### [Iberia: Why are there no batteries in Spain?](#)

5. Extreme negative prices are rare Until 2024, Spain had never experienced negative wholesale electricity prices. However, that is changing, and the number of negative price hours is growing ...



### part 4: Spain's BESS market is heating up

In this report, we delve into the developments in the regulatory framework of the Spanish electricity system and explore the potential of Spain's battery energy storage systems ...



### **Understanding MW and MWh in Battery Energy ...**

In the context of a Battery Energy Storage System (BESS), MW (megawatts) and MWh (megawatt-hours) are two crucial specifications that describe different aspects of the system's performance. Understanding the ...

### **Technical and economic study of two energy storage ...**

The frequency of very high prices (>100 EUR/MWh) is reduced dramatically between 2024 and 2029; however, it increases again as nuclear plants are decommissioned and the demand rises due ...



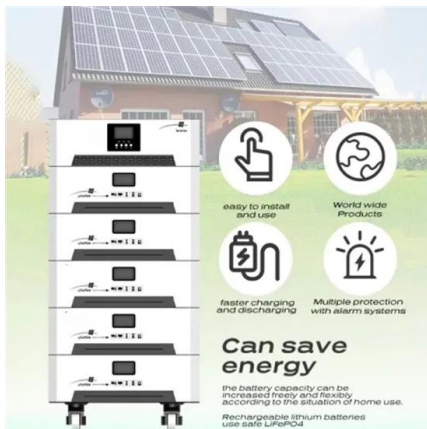
### **Plummeting Battery Prices Fuel Expansion of Energy Storage ...**

He added that the average battery cost in 2023 was approximately USD 140/kWh, leading to a capital cost estimate of USD 220-230/kWh for BESS projects. Despite ...



### Battery Energy Storage System Production Cost

The proposed facility of Battery Energy Storage System (BESS) is planned to have an installed capacity of 1 GWh per year. Manufacturing Process: Battery Energy Storage Systems (BESS) are manufactured by coating active materials ...



### Electricity Prices in Spain Today By Hour , Octopus Energy

2 ???· Source: Red Eléctrica de España. Average daily price: Arithmetic mean of the day's prices for the PVPC tariff. Price in euros per kilowatt-hour. Reference prices for mainland Spain ...

### BESS in Germany 2025 and Beyond:

BESS offer a reliable, efficient and flexible means to optimize energy systems, increasing the efficiency of electricity markets and contributing to smoother and more predictable electricity ...



### Spain's EUR700 Million Plan to Boost Energy Storage and ...

It also enhances Spain's energy independence, reducing vulnerability to global fuel price fluctuations. Spain is boosting its energy infrastructure with big storage solutions. ...



### [Cost of battery storage per mw Germany](#)

VPI, Quantitas create 500-MW BESS partnership in Germany VPI, a UK and Ireland-focused power company part of the Vitol Group, has agreed to partner with Oslo-based energy storage ...



### **Cost Projections for Utility-Scale Battery Storage: 2023 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 ...

### **Spain & Italy , BESS Premium Opportunities in Renewables**

Spain and Italy present a EUR45 million opportunity for BESS insurance premiums. Discover how NARDAC supports renewable energy projects in these regions.



### **Real Cost Behind Grid-Scale Battery Storage: 2024 ...**

The rapidly evolving landscape of utility-scale energy storage systems has reached a critical turning point, with costs plummeting by 89% over the past decade. This dramatic shift transforms the economics of grid-scale ...



### Potential utilization of battery energy storage systems (BESS) in ...

Section 3 summarizes the current situation for BESS in Europe, and reviews common BESS applications in the current literature. Section 4 presents the proposed BESS ...



### Cost of battery-based energy storage, INR 10.18/kWh, ...

Currently, the cost of battery-based energy storage in India is INR 10.18/kWh, as discovered in a SECI auction for 500 MW/1000 MWh BESS. The government has launched viability gap funding and Production-Linked ...

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

Base year costs for utility-scale battery energy storage systems (BESS) are based on a bottom-up cost model using the data and methodology for utility-scale BESS in (Ramasamy et al., 2022). The bottom-up BESS model accounts for ...



### Behind the numbers: BNEF finds 40% year-on-year ...

However, while the falling prices of materials significantly helped along the drop last year (also evident in a 20% fall in average battery pack prices), there are a myriad of other factors which have driven that reduction, ...



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

Base year costs for utility-scale battery energy storage systems (BESSs) are based on a bottom-up cost model using the data and methodology for utility-scale BESS in (Ramasamy et al., ...



## Europe grid-scale energy storage pricing 2024

This report analyses the cost of lithium-ion battery energy storage systems (BESS) within Europe's grid-scale energy storage segment, providing a 10-year price forecast ...

## How do the costs of battery energy storage systems ...

Battery Energy Storage Systems (BESS): Cost: The average cost of BESS ranges from \$400 to \$600 per kWh. Advantages: Li-ion batteries are widely used due to their efficiency and long lifespan, though they are more ...



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