

SolarInvert Energy Solutions

Spain s power system energy storage capacity



Overview

Energy storage emerged as a notable component of Spain's renewable energy expansion in the second quarter of 2025, with seven energy storage plants receiving construction authorization totaling 29.3 MW, according to data from the Renewable Energy Observatory for the Digital Economy developed by Opina 360. How much energy storage capacity does Spain have?

When it comes to installed energy storage capacity in general, Spain is one of the leading countries within Europe (see figure 2). 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.

Why do we need battery energy storage systems in Spain?

Due to the large capacity of installed hydroelectric and thermal storage systems and the resilience of the Spanish power grid, the need for Battery Energy Storage Systems (BESS) in Spain has been relatively low. The lack of a clear regulatory framework for BESS has also hindered its development in Spain so far.

Why is energy storage important in Spain?

Spain surpassed its 2020 target set by the Renewable Energy Directive, achieving a RES share that was 1.2 percentage points higher than the 20% goal. Energy storage also reduces the need for fossil fuel power plants to operate as backup. This lowers greenhouse gas emissions and cuts fuel costs.

How much energy storage will Spain have by 2030?

In its National Energy and Climate Plan (NECP), the Spanish government aims to have 22.5GW of energy storage by 2030 (see table 1). This amount of storage capacity will be needed to integrate the growing capacity of intermittent generation.

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.

How many GW of hydro capacity does Spain have?

Spain operates 17 GW of hydro capacity plus 3.3 GW of pumped storage. These assets have historically provided: Seasonal energy storage in reservoirs. Asset owners optimise based on the water value, considering power prices months into the future. Pumped Hydro responds to wholesale market price signals.

Spain s power system energy storage capacity



Spain Launches EUR700 Million Energy Storage Scheme to ...

The scheme aims to deploy between 2.5 and 3.5 gigawatts (GW) of new storage capacity, enhancing the flexibility and resilience of the national power system while enabling ...

[Get Price](#)

The capacity market in Spain: regulatory update and outlook for storage

The capacity market is a mechanism designed to ensure the security of electricity supply, complementing revenues from generation, storage, and demand response.

[Get Price](#)



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

Spain has launched an ambitious EUR700 million (around \$796 million) program to increase its energy storage capacity. This plan will add 2.5 to 3.5 ...

[Get Price](#)



Installed capacity , System reports

There were no significant fluctuations in the mainland's non-renewable power capacity in 2023. In non-mainland systems, there was an increase of 3.2 % in installed power capacity by the end ...

[Get Price](#)



Spain authorizes 29.3 MW energy storage in Q2 2025, with 523.8 ...

Energy storage emerged as a notable component of Spain's renewable energy expansion in the second quarter of 2025, with seven energy storage plants receiving ...

[Get Price](#)

Spain allocates EUR150m for 2.82 GWh of grid-scale, ...

The 45 battery and thermal energy storage projects allocated European Union subsidies will add more than 779 MW/3.4 GWh of capacity to ...

[Get Price](#)



Spain approves legislation to encourage energy storage, flexibility

The Spanish government has approved legislation to strengthen its electricity system following the major power

outage the country experienced in April.

[Get Price](#)



Spain Launches EUR700 Million Energy Storage Program to Boost ...

Spain has announced a EUR700 million initiative to expand its energy storage capacity by 2.5 to 3.5 gigawatts (GW), aiming to improve renewable energy integration and grid stability.

[Get Price](#)



EU approves Spain's EUR700m energy storage subsidy ...

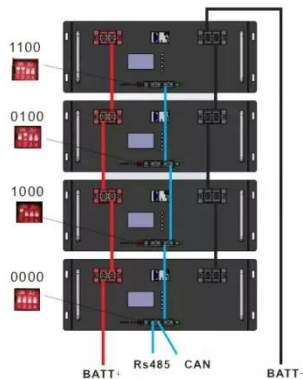
The European Commission on Monday approved a new aid scheme for the deployment of large-scale electricity storage in Spain. ...

[Get Price](#)



Spain Launches EUR700 Million Energy Storage ...

Spain has announced a EUR700 million initiative to expand its energy storage capacity by 2.5 to 3.5 gigawatts (GW), aiming to improve renewable ...

[Get Price](#)


Enlight adds PV, BESS to Spain's largest wind farm

Image: Typsa Independent power producer (IPP) Enlight Renewable Energy is expanding its Gecama Wind Project in Castilla-La ...

[Get Price](#)

Spain second country in world for stand-alone battery-based ...

Renewable generation is now joined by storage projects, and Spain occupies a prominent place as the country with the second largest projected capacity for stand-alone ...

[Get Price](#)


Backup power for Europe

Battery Energy Storage Systems (BESS) are key to integrating variable renewable energy sources like solar and wind. This report examines the factors influencing BESS ...

[Get Price](#)

EU power grid needs trillion-dollar upgrade to avert ...

Europe's ageing power grid and lack of energy storage capacity will require trillions of dollars in investments to cope with rising green energy ...

[Get Price](#)

Top five energy storage projects in Spain

Listed below are the five largest energy storage projects by capacity in Spain, according to GlobalData's power database. GlobalData uses proprietary data and analytics to ...

[Get Price](#)

How Spain's EUR700 Million Program Is Accelerating Battery Storage

10 hours ago · Espanha EUR700 million BESS Spain support scheme marks a major step for the country's energy

future. The program aims to boost battery storage by supporting over 100

...

[Get Price](#)



Spain's Energy Crisis: A Deep Dive into the April Blackout

A meeting between French and Spanish energy ministers to discuss increasing interconnection was on the agenda at the London IEA energy security conference last week. ...

[Get Price](#)

Spain authorizes 29.3 MW energy storage in Q2 ...

Energy storage emerged as a notable component of Spain's renewable energy expansion in the second quarter of 2025, with seven energy ...

[Get Price](#)



Aurora

In Spain, subsidies for storage will be granted through four calls under the PERTE ERHA1 scheme. The PERTE ERHA includes storage, renewables and hydrogen and it is funded by ...

[Get Price](#)


Solar becomes Spain's top power source in 2024

Spain's solar PV capacity reached 6 GW in 2024, making it the country's top power source with a 25.1% share, surpassing wind at 24.9%. ...


[Get Price](#)


Backup power for Europe

When it comes to installed energy storage capacity in general, Spain is one of the leading countries within Europe (see figure 2). Currently, Spain has 6.3GW of hydroelectric ...

[Get Price](#)

The Spanish Electricity System

On the other hand, installed non-renewable power capacity in the peninsular system decreased by 4.3%, as a result of the 35.9% reduction in installed coal-fired power capacity due to

the ...

[Get Price](#)



How Spain's EUR700 Million Program Is Accelerating Battery Storage

10 hours ago · ISpain EUR700 million BESS Spain support scheme marks a major step for the country's energy future. The program aims to boost battery storage by supporting over 100 ...

[Get Price](#)

eMobility report: Is Spain positioning itself as a ...

What is the reason for Spain's commitment to storage development? In Europe, a capacity of 35 gigawatt-hours is expected by ...

[Get Price](#)



Iberia: Why are there no batteries in Spain?

Spain's battery energy storage market is at a critical point. Despite being a leader



in renewable energy deployment in Europe, the country has only 18 MW of standalone batteries installed, ...

[Get Price](#)

Spain's EUR700 Million Plan to Boost Energy Storage and Renewable Power

Spain has launched an ambitious EUR700 million (around \$796 million) program to increase its energy storage capacity. This plan will add 2.5 to 3.5 gigawatts (GW) of storage. It ...



[Get Price](#)



Strategy for energy storage in Spain for 2050

To do that, it is necessary to study the different storage technologies and make a comparison between them, to analyse which storage systems are more useful for large-scale energy ...

[Get Price](#)

Contact Us

For catalog requests, pricing, or partnerships, please visit:
<https://www.barkingbubbles.co.za>