
Port of Spain High Power solar container battery BESS

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.

What is energy storage in Spain?

It targets large-scale energy storage projects in Spain. It focuses on technologies like standalone battery energy storage systems (BESS), pumped hydro energy storage (PHES), and thermal energy storage. The program supports hybrid projects, which combine storage with renewable energy, such as solar or wind farms.

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 will Spain increase its energy storage capacity?

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 includes pumped hydro, thermal energy storage, and battery systems.

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If European ports were complaining about their "energy headaches"--sky-high RTG crane bills, wasted regenerative power going up in heat, and peak surcharges that sting like a bad utility ...

A high-power, low-energy system might be used for short bursts (like frequency regulation), while a high-energy, lower-power ...

In April 2025, Spain's installed BESS capacity is only 60MW, whereas the UK and Italy already have 5.6GW and 1GW of online BESS capacity, respectively. In this article, we discuss the ...

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