Spain energy storage policy

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The document identifies and analyses challenges, defines measures for their effective deployment, assesses opportunities and quantifies storage needs to contribute to the decarbonisation of the energy system.

Storage deployment provides opportunities for job creation, fair transition, economic recovery, and the creation of new business models across the value chain. These technologies are in place in sectors such as electric mobility, building or industry, and promote the development of new business models such as independent aggregators or renewable energy communities, which drive the active role of consumers.

In line with the National Integrated Energy and Climate Plan 2021-2030 where the Government has developed a new regulatory framework for renewables and a national strategy for self-consumption, among others, the Council of Ministers last week approved the Energy Storage Strategy. In this blog we will comment the fundamental aspects of this regulation and how it will impact the evolution of the markets.

As we already know, storage systems give the system flexibility and stability. Especially with increased renewable participation as expected where uncertainty and variability play an important role.

Storage systems are also key elements in ensuring the transition to a cleaner economy and optimising the use of renewables. Thus, avoiding the loss of energy that we stop using when capacity exceeds demand. Energy that we could use, for example, at times when the sun is not shining or the wind is not blowing, thus also reducing its price.

The Strategy, with a long-term perspective, analyses the energy system as a whole. It defines a series of measures to the correct deployment of energy storage and its full integration into the current system, and identifies the points on which research and development must focus in order to have the necessary technologies available. It also analyses the challenges faced and the opportunities presented by its development, especially in the value chain.

Firstly, the plan provides a total storage capacity of 20GW in 2030 and 30GW in 2050, building on the 8.3GW of capacity available today. In both cases, both large-scale storage (solar thermal power plants) and distributed storage, which refers to small generation facilities, are considered. It also considers the use of the energy available in the electric vehicle fleet.

The plan brings together a wide range of storage technologies. From the most mature, such as pumped-storage hydropower plants, which drive water to be stored in high-altitude reservoirs and release it to produce electricity when there is high demand.

Of course, it also considers batteries, which are especially relevant both for their application in the electric

mobility sector and in self-consumption systems. Also important is their application on a large scale through hybridization with renewable generation plants.

The plan has also considered thermal storage systems, used in solar thermal power plants, where heat is stored in molten salt tanks at high temperatures and then used to generate electricity. In this case, it is possible to adapt production to demand.

The increase of renewable energies, in particular wind and photovoltaics, will raise the need for flexibility in the energy system. Energy storage, in combination with other measures, is the ideal way to meet this challenge and ensure continuous security of energy supplies at any time. So, for now, the challenge we face is clear, the opportunities are clear and the framework for action is clear. It is a great step forward to have the framework in place, now we will have to see how it will be integrated and how it will be implemented.