

Storage – Reshaping the Energy Sector

Electricity system requires instantaneous balance between power generation and demand. In Portugal, the main energy storage mechanism responsible for ensuring such balance is hydroelectric pumping, which requires water availability. Therefore, it is mandatory to move towards other fast start and stop solutions that allow an efficient management of the electrical system.

On this matter, storage can play a key role in changing the paradigm – mainly focused on new production capacity – perpetrated so far. After all, grid capacity is limited, and it should be considered that in a near future, Portugal's renewable energy generation can reach high-capacity levels – especially solar. Suspensions or power reductions to current production power plants are likely to be frequent, as it already happens in many countries where sun is also the main source for renewables. Their penetration is certainly positive, but it brings too many fluctuations.

Storage brings predictability and immediate availability, characteristics that are necessary for a safe and proper management of the whole energy system. Ultimately, in a society that is becoming more and more electrified, storage can even be seen as a protective mechanism for consumers against the volatility of energy costs.

Storing energy (grid scale behind the meter) creates flexibility and endless opportunities. It not only allows an upscaling of generation assets but also leads to an inevitable valorisation of the trading business once it opens the possibility of selling energy in periods of low price to periods of high price (shifting).

Hydrogen produced from the electrolysis of water is an example of this potential, since its producers will need energy 24/7 for the production process, including in hours when there is no sun. Storage also significantly reduces the costs with deviations.

Investments will have to be adapted to ensure the stability of the electricity system and reduce losses, and energy storage can act as a buffer between much variable production and consumption.

In this regard, the draft update of the National Energy and Climate Plan 2030, the final version of which will be submitted to the European Commission by 30 June 2024, recognises that "increasing storage



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capacity and integrating system services makes it possible to maximise the use of public service electricity grid infrastructures, reducing their idleness, and contributes to greater integration of renewables into the national energy system and greater flexibility, allowing for a reduction in greenhouse gas emissions". The document concludes that investing in the development of energy storage solutions will help reduce energy dependence on foreign sources.

The Portuguese government, who has already expressed its commitment towards boosting battery storage systems and the flexibility of the electricity grid, announced the launching of financial support by the end of March 2024 through *Fundo Ambiental* (Environmental Fund), aiming to promote the installation of at least 500 MW of storage power. The goal is ambitious, but the purpose is in line with energy transition and carbon neutrality goals imposed by national and European contexts.

We shall keep up with upcoming developments towards storage. It will undoubtedly reshape the energy sector.





Practice Area News

Voluntary Carbon Market. On January 5, 2024 the Decree-Law n.º 4/2024 establishing the Portuguese Voluntary Carbon Market was published on the "Diário da República" (Portuguese official legal journal).

The Voluntary Carbon Market establishes a framework for emission offset actions and financial contributions to climate action by organisations wishing to carry out these actions under their emission mitigation commitments or climate action strategies, through the generation and consequent transaction of certified carbon credits.

National Long-Term Strategy to Combat Energy Poverty. This Strategy, approved by the Resolution of the Council of Ministers no. 11/2024 of January 8, aims at eradicating energy poverty in Portugal by 2050, while protecting vulnerable consumers and actively integrating them into the energy and climate transition, and is structured around four lines of action, namely, promoting:

- (i) energy and environmental sustainability of housing;
- (ii) universal access to essential energy services;
- (iii) integrated territorial action;
- (iv) knowledge and informed action.

Low Voltage Electricity Distribution. Recently, new guidelines have been established regarding the national regime for low voltage electricity distribution concessions, namely by:

- (i) Ministerial Order no. 397/2023, of November 28, which regulates the standard documents for the public tender procedure for awarding low voltage electricity distribution concessions; and
- (ii) Council of Ministers Resolution no. 27/2024, of February 23, which establishes the principles and timetable for awarding municipal low voltage electricity distribution concessions.

Biometane Action Plan. On January 10, the first version of the Biomethane Action Plan was published by National Laboratory for Energy and Geology.

The aim of this plan is to prepare Portugal for the use of biomethane and to promote the creation of a biomethane market, as a sustainable way of reducing greenhouse gas emissions, decarbonising the national economy, reducing imports of natural gas and making full use of the endogenous resources.

In the Firm

• Best Lawyers 2024.

Ivone Rocha, partner in the Energy and Natural Resources practice area, was nominated in the Best Lawyers 2024 Ranking in Energy.

• First Renewable Energy Community with Waste Recovery.

The Energy and Natural Resources practice area is advising in the establishment of the first Renewable Energy Community using Energy Recovery from Waste in Portugal.