

Spain – solar's success becomes its economic challenge

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pv Europe

September 16, 2026



UNEF Director General José Donoso
presents the 2025 report in Madrid

UNEF's annual report shows the solar sector employed over 134,000 people and contributed €9.84 billion to Spanish GDP last year. But today, falling captured prices and near-900 zero-price hours are straining plant profitability.

The Unión Española Fotovoltaica (UNEF) has published its annual report for 2025, titled "Challenges of the Second Phase of the Energy Transition (2025–2030)" and produced in collaboration with the University of Castilla-La Mancha. The report analyses how the Spanish solar industry developed in 2025 and identifies the central challenges facing the sector through 2030.

[Spain – draft decree ties data centre growth to new renewables](#)

Spain was Europe's second-largest solar market in 2025, with 67.2 GW newly installed across Europe as a whole. Globally, photovoltaics was once again the energy source with the largest newly installed capacity, 698 GW added, for the first time taking cumulative global capacity past three terawatts (TW).

Almost nine GW freshly installed

Accordingly, Spain added just under nine gigawatts of new ground-mounted solar capacity in 2025, bringing cumulative ground-mounted capacity to just over 46 GW. In the self-consumption segment, 1.14 GW were added, taking the cumulative installed base to 9.28 GW. Photovoltaics now covers almost 23 percent of the Spanish electricity mix, making it the single most important technology in the generation mix.

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The economic weight of the sector is considerable. In 2025, the industry contributed around €9.84 billion to Spanish gross domestic product, corresponding to roughly 0.5 percent, with its total economic footprint reaching €14.12 billion once indirect effects are included. Moreover, the sector employed 134,708 people, generated exports worth €3.21 billion and invested €473 million in research and development, giving it an innovation intensity of 3.6 percent, more than double the Spanish industrial average of 1.6 percent.

Falling revenues and a growing number of zero-price hours

High solar feed-in is pushing electricity prices down, particularly during sunlight hours. This eases the burden on consumers and businesses but weighs on the economics of the plants themselves. The average captured market price fell from €42.28 per megawatt hour (MWh) in 2024 to €36.39/MWh in 2025. In the first half of 2026 it had already dropped to just €29.68/MWh.

[BW ESS buys into Spain's storage boom with 126 MW deal](#)

At the same time, the number of hours with prices at or below zero is rising. Spain recorded 797 such hours in 2025 coinciding with significant solar feed-in, and by early September 2026 the figure had already reached around 900, a level passed as early as 7 July that year.

Against this backdrop, UNEF is calling for a medium-term adjustment of the market price system to the conditions of a predominantly renewable system, with price ceilings and floors designed to limit the spread of zero and negative-price hours. In the short term, the association is calling for remuneration for technical congestion management measures, state-backed loans for project financing, and adequate remuneration for voltage regulation services, among other things.

Storage growing, potential greater still

The rollout of battery storage advanced in 2025. Behind-the-meter systems, those installed alongside self-consumption plants, added 540 megawatt hours (MWh) of new capacity, 65 percent more than the previous year, taking the cumulative installed base since 2022 to 2,745 MWh. In the utility-scale segment, 261 MW of storage is currently installed, of which 241 MW are hybrid systems and 20 MW stand-alone plants, with a further 33 GW already approved and another 14.6 GW currently going through the permitting process.

[Spanish home storage expands on lower costs and rising demand](#)

On the demand side, UNEF reports that 71.5 GW of grid connection points for new consumers have been approved or planned through 2030, with a further 24 GW requested but not yet decided. Data centres, industry, hydrogen, storage and electric mobility account for the bulk of this new demand.

In the words of Rafael Benjumea, President of UNEF: "A second, more complex phase is now beginning, in which we must harness these advantages, by electrifying our economy, scaling up storage and self-consumption, adapting the electricity market to the new reality and strengthening public acceptance of the projects." (nhp)