

Spain added 10.1 GW of solar in 2025

- Spain installed 10.1 GW of new solar capacity in 2025, including 8.97 GW of ground-mounted PV and 1.14 GW of self-consumption systems, according to Spanish PV association UNEF. The trade body says falling captured prices are increasing pressure on new projects and underscoring the need for storage and...



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Spain's solar sector installed 10,105 MW of new capacity in 2025, according to the annual report of Spanish PV association UNEF.

Solar accounted for nearly 23% of the country's electricity mix, making it Spain's leading power-generation technology. Ground-mounted installations accounted for 8,966 MW of the new capacity, up 31% from 2024. The self-consumption segment added 1,139 MW, down 4% year on year.

By the end of 2025, Spain's cumulative PV capacity stood at 46,286 MW for ground-mounted systems and 9,276 MW for self-consumption, according to the report.

UNEF said strong daytime solar generation is lowering wholesale electricity prices while also reducing the revenue earned by PV assets. The average price captured by solar fell from €42.28 (\$48.82)/MWh in 2024 to €36.39/MWh in 2025 and €29.68/MWh in the first half of 2026.

The decline coincided with a rise in the number of zero- and negative-price periods. Spain recorded 797 hours with electricity prices at or below €0/MWh during periods of significant PV generation in 2025. The country had already matched that figure by July 7, 2026, and was approaching 900 hours by early September.

UNEF identified the electrification of end uses as one of the main challenges in the next phase of the energy transition. Spain has 71.5 GW of demand connection capacity that has either been granted or included in grid planning through 2030, alongside a further 24 GW of pending requests. Data centers,

industrial facilities, hydrogen production, storage and electric mobility account for a significant share of the expected demand.

Storage is also becoming increasingly important. Behind-the-meter storage installations rose 65% in 2025 to 540 MWh, bringing cumulative capacity installed since 2022 to 2,745 MWh.

Spain also has 261 MW of utility-scale storage in operation, comprising 241 MW of hybrid systems and 20 MW of standalone projects. A further 33,031 MW has secured permits, while 14,607 MW remains in the permitting process.

Solar contributed €9.84 billion to Spain's gross domestic product in 2025, equivalent to about 0.5% of national GDP, while the sector's total economic impact reached €14.12 billion. The industry supported 134,708 jobs and generated €3.21 billion in exports.

Investment in research, development and innovation reached €473 million. UNEF put the sector's innovation intensity at 3.6%, more than twice the 1.6% average for Spanish industry.

The association said the next stage of solar development will require the electricity system to accommodate higher volumes of renewable generation and storage. Its proposals include introducing more flexible grid-access and connection permits, streamlining administrative procedures, facilitating the hybridization of existing plants and accelerating demand electrification.

UNEF also called for changes to the wholesale price-setting mechanism to reflect growing renewable penetration, including measures aimed at limiting the frequency of zero-price periods.