

According to Data Presented by Red Eléctrica Today

Castilla and Leon reaffirms its leadership in renewable energy generation at a national level in 2023

These technologies accounted for 88.7% of the region's energy generation structure in 2023

Castilla and Leon achieved a new record in the production of CO₂ equivalent emissions-free electricity

Over half of the electricity produced in the community came from wind power

Valladolid, 21 March 2024

Renewable electricity generation in Castilla and Leon increased by 12.1% in 2023, reaching 23,271 GWh. Once again, it consolidated its position as the autonomous community with the most renewable GWh generated in our country, accounting for 17.3% of total Spanish energy from natural resources such as wind, sun, or water.

These are some of the findings derived from the [Spanish Electricity System Report 2023](#) and the [Renewable Energy Report 2023](#), documents by Red Eléctrica that compile last year's main industry figures for our country.

According to Beatriz Corredor, president of Redeia (Red Eléctrica's parent company), "the figures for 2023 prove that Spain has consolidated its renewable leadership. This has been made possible by efforts in system operation and our extraordinary transmission grid, which have allowed our country to safely reach a share of 50% renewables in the mix. The grid is and will continue to be ready to meet the objectives of the National Integrated Energy and Climate Plan (PNIEC)."

According to reports by Red Eléctrica, wind power was once again the leading technology in Castilla and Leon's generation structure in 2023, contributing 13,553 GWh of overall production, or 51.7% of the total. The prominence of wind power once again makes this region the top producer of electricity generated from wind.

Meanwhile, hydropower increased its production by 48.3% in 2023, mainly due to the particularly dry conditions in 2022. Thanks to this boost, hydropower becomes the second technology in the region's electricity mix, with a share of 25.1% of the total, equating to 6,574 GWh generated.

Solar photovoltaic power became the third technology with a 2,589 GWh (9.9%) share, thus surpassing cogeneration, which recorded 1,936 GWh (7.4%). Completing the region's generation structure are pumped storage with 3.9%, and all other renewables, which accounted for 2.1% of the total.

Installed power in the region at the end of 2023 reached 13,619 MW, representing a 3.5% increase due to the addition of an extra 454 MW from solar photovoltaic power and 10 MW from wind power. With these new additions, the presence of renewables in the region rose to 95.8% of its total, the highest share in the country.

Electricity demand in Castilla and Leon in 2023 stood at 12,998 GWh, accounting for 5.3% of the national total.

The Year 2023 in Spain: Renewables Break Records

In Spain in 2023, installed solar photovoltaic power increased by 28%, bringing an additional 5,594 MW to the Spanish generation pool, the highest figure since records began. As a result, this technology now has 25,549 MW in service, representing 20.3% of the Spanish generation pool. This year-on-year increase means that our nation is the second among ENTSO-E countries with the highest installed solar power output (both thermal and photovoltaic).

Spain ended 2023 with more than 125.6 GW of total installed power, with renewables constituting 61.3% of this total. Thus, in 2023, the renewable production pool grew by 8.8%, thanks not only to the new photovoltaic MW mentioned, but also to the addition of 661 MW of wind power and 4 MW from other renewable sources. In Spain's national ranking, wind power is still the technology that accounts for the largest proportion, 24.5% of power, followed by combined cycle (20.9%), photovoltaic power (20.3%), and hydropower (13.6%), which increased its contribution by 41.1% compared to the previous year, given that 2022 was exceptionally dry.

According to the documents presented today, 2023 will also be remembered as the year when all historical renewable generation records were shattered, as over half of the electricity mix (50.3%) came from natural resources such as wind, sun, or water.

In 2023, Spain produced 15.1% more renewable energy than the preceding year, totalling 134,321 GWh. Two technologies were the main contributors to this historic milestone: wind power, leading the mix with 23.5% of the total, and photovoltaic power, which produced 33.8% more than in 2022.

As a direct consequence of the rise in renewable energy production, 2023 also witnessed the lowest CO₂ equivalent emissions (greenhouse gases): 32,045,711 tCO₂ equivalent, nearly 28% less than the previous year.

In its Spanish Electricity System Report 2023, Red Eléctrica also analyses other metrics such as the evolution of demand, which in 2023 was 1.9% lower than in 2022 after adjusting for labour activity and temperatures. In gross terms, electrical demand in 2023 stood at 244,665 GWh, marking a 2.3% decrease, whereas across the ENTSO-E countries, electricity consumption experienced a 3.3% decrease compared to 2022.

On the other hand, the transmission grid availability index in the Spanish mainland system reached 97.62%, closely mirroring the values recorded in the electricity systems of the Balearic and Canary Islands, which stood at 97.84% and 98.93%, respectively.