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Press Release

The Spanish Renewable Energy Report and the Spanish Electricity System Report

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Spain closed out the year consolidating its leadership in renewable energy generation, registering an all-time high of nearly 47% of the generation mix nationwide.

For the first time ever, these reports are published in digital format through a website designed to offer a more accessible and interactive browsing experience.

Madrid, 30 June 2022

In 2021, according to ENTSO-E[1] data, Spain was the European country that generated the second highest amount of electricity using wind and solar power (including photovoltaic and thermal), second only to Germany. Last year, solar and wind technologies produced more than 86 TWh in Spain, a third of the overall production nationwide. This data is reflected in the Spanish Renewable Energy Report, a publication presented today by Red Eléctrica for the sixth consecutive year, which covers the performance of these technologies in Spain.

"This data demonstrates Spain's great potential regarding renewables, a privileged position that allows the country to continue promoting a more sustainable electricity system and contribute to the autonomy and energy security of Europe", said Beatriz Corredor, Chairwoman of Redeia, Red Eléctrica's parent company.

For the first time, this Report is published in digital format through a website of the Company that is designed to offer a more accessible and interactive browsing experience. Now, users can browse, interact and download data quickly and easily by selecting the technology of interest and the desired magnitude (power capacity, generation). They can also find international comparisons for each energy technology selected.

This year's Renewable Energy Report showcases the fact that Spain is making firm progress in the ecological transformation process, consolidating its leadership in renewable energy in 2021. Renewable energy sources in Spain accounted for nearly a 47% share of the generation mix nationwide, an all-time high made possible by the increase in electricity production using wind and solar photovoltaic technologies. Both technologies set new all-time records: wind was the leading source of energy in the mix, with a share of more than 23%, an increase of 10% year-on-year while solar photovoltaic grew by 37% and reached a share of 8% of the overall generation mix.

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Weather conditions and the increase in installed renewable power capacity explain these figures. Renewables increased their generation capacity by 7.2% with the addition of 4.3 new GW of power capacity. As a result, Spain closed the year with more than 64 GW of these technologies, which as at 31 December represented almost 57% of the national power generation fleet. This positive evolution ranks Spain in second place - behind Germany and ahead of France and Italy - in the ranking of European countries with the most renewable power capacity, according to ENTSO-E data analysed by Red Eléctrica.

Leadership of Castilla y León

From a regional perspective, in 2021, Castilla y León reaffirmed its leadership in renewable energy. For yet another year, it was the region with the highest installed renewable power capacity in Spain, reaching a total of almost 12 GW, which represents more than 95% of its generation capacity, and is followed by Andalusia, Castilla-La Mancha and Galicia. Between the four of them, they account for almost 57% of the country's entire renewable power generation fleet. Castilla y León recorded the highest figures in Spain in terms of both generation and coverage of the mix: 24 GWh, which accounted for 89% of the region's total production.

By technology, Castilla y León also holds first place in wind power, which in 2021 reached 51% of the region's power generation fleet. As a result, in 2021, wind production accounted for 49% of Castilla y León's generation mix. Regarding solar photovoltaic, Extremadura is the number one region. It has the largest PV power generation fleet in Spain. Solar photovoltaic power stations now account for almost 43% of all installed power capacity in the region. Last year, Extremadura produced 20% of all its electricity generation using solar photovoltaic technology.

Other figures: Spanish Electricity System Report

In addition to its Renewable Energy Report, Red Eléctrica has also published its Electricity System Report today. The latter includes other data such as the evolution of electricity consumption, emissions, energy exchanges and the electricity markets, among other information.

Specifically, the Electricity System Report underlines the recovery of the Spanish energy environment in 2021 after the impact of the COVID-19 pandemic. The demand for electricity increased by 2.6% compared to the previous year, reaching a total demand of 256,482 GWh.

Similarly, the Report highlights new milestones such as the all-time minimum level of CO_2 equivalent emissions associated with national electricity generation: 35.9 million tonnes, 0.6% less than in 2020 and 67.7% below the emissions registered in 2007.

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[1] ENTSO-E Transparency Platform as at 26/1/2022. The data is governed by Regulation (EU) No 543/2013, and is obtained from real-time systems and therefore differs from the consolidated data used for the specific case of Spain at a national level, which is obtained using a power measurement system. ENTSO-E data for Spain only includes mainland Spain. On the other hand, the figures for installed power capacity only include existing production units with a capacity equal to or greater than 1 MW.

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