

According to Red Eléctrica's estimates

## Renewable energy breaks records and accounts for more than 50% of electricity generation in Spain in 2023

Renewable energy could close the year reaching a share of 50% in the annual national generation mix, an all-time high that is almost nine percentage points higher than the 2022 value.

Wind and solar photovoltaic completed an exceptional year, with record production levels and share in the generation mix.

According to estimates, 2023 is on track to be the year with the lowest CO<sub>2</sub> equivalent emissions associated with electricity generation.

Madrid, 19 December 2023

Renewable energy could close in 2023 with a contribution to the annual national generation mix of over 50% (50.8%), thus registering an all-time high in production (over 135,000 GWh). This is based on Red Eléctrica's estimates, which, as it does every year, provides a preview of the main magnitudes of the Spanish electricity system based on preliminary data as at 14 December.

For Beatriz Corredor, Chairwoman of Redeia, Red Eléctrica's parent company, "these figures are irrefutable proof that the green transition is advancing steadily in Spain. We have become a true European benchmark in the integration of renewables: we are ranked as the second European country that generates the most wind and solar energy. But we must continue working to meet the targets set for 2030."

In terms of renewables, the contribution of wind and solar photovoltaic has been particularly significant in 2023. According to estimates, both technologies will close another exceptional year, as they are expected to exceed their maximum values in terms of both production and share in the national energy mix.

Wind energy would lead the generation mix, with a share of nearly 24% and could register a record annual generation of around 63,700 GWh. For its part, solar photovoltaic energy would come in fourth place in the mix with 14%, registering a production that is expected to exceed 37,000 GWh, representing a value that is almost 34% more than in the whole of 2022.

The top positions in the generation mix would correspond to nuclear - in second position with 20% - and combined cycle - third in the ranking with 17% - technologies that will (are both expected to) experience a decrease in their production in 2023. In fifth position would be hydro (9.5% of the mix) which, thanks to increased rainfall, would reach 25,500 GWh. This is a higher figure than in 2022, which was a particularly dry year; a circumstance that brought with it the fact that hydro registered in 2022 its lowest production since records began.

Thanks to the contribution of renewables, this year will be the year with the lowest CO<sub>2</sub> equivalent emissions from electricity generation. Forecasts point to a figure of less than 32 million tCO<sub>2</sub> equivalent, which would represent a drop of over 28% compared to 2022. This would mean that production using zero-carbon energy technologies could reach a share of 72% of total generation in 2023.

### **A record-breaking year**

In 2023, the concept of 'record' has been permanently linked to renewable energy, because this year renewables have broken all their previous records. In this regard, and taking into account the data managed by Red Eléctrica, January was the most renewable month in history; a month in which the most GWh of renewable energy was produced with a total of 13,542 GWh. The recent month of November was the one with the highest share of these technologies in the generation mix (59.6%). Lastly, 3 November set a new record high for the daily share of renewables in the mix (73.5%).

Other significant daily records have also been set this year: on 11 November, the overall share of electricity production using zero-carbon energy technologies reached 87.9%; on 26 October, wind power accounted for a total share of 53.8% of the daily generation; and on 10 June, the share of solar photovoltaic production registered a value of 22.4%.

### **Other magnitudes: demand and cross-border exchanges**

Regarding overall electricity demand, and after factoring in the influence of seasonal and working patterns, it is foreseen that demand will experience a fall of 2.1% in 2023 compared to the previous year. In gross terms, demand could be around 244,000 GWh, 2.6% less than in 2022, according to preliminary data from Red Eléctrica.

By electricity system, in gross terms, electricity demand in the mainland electricity system is expected to show a drop of 2.8%, while the Balearic Islands could fall by 0.9%. On the other hand, demand in the Canary Islands is expected to increase by 2.8% compared to 2022.

The moment of highest demand in the peninsular electricity system was recorded this year in winter, specifically on 24 January at 8:43 pm with a peak of 39,101 MW. This is slightly higher than the figure for the previous year, reached on 14 July 2022 at 2:19 pm (38,284 MW).

On the other hand, for the second consecutive year, the Spanish electricity system is expected to close the year with an export balance of close to 15,000 GWh, as a result of its cross-border exchanges, mainly with France and Portugal.