



Wind power was Spain's top source of electricity in 2013

Surge in wind power and hydropower drives emissions down by more than 23%, [reports BusinessGreen](#)

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Wind turbines at La Muela near Zaragoza. Wind power was the top generator of electricity in Spain in 2013. Photograph: Tor Eigeland/Alamy

Remarkable new figures from Spain's grid operator have revealed that greenhouse gas emissions from the country's power sector are likely to have fallen 23.1% last year, as power generation from wind farms and hydroelectric plants soared.

[Red Eléctrica de España](#) (REE) released a [preliminary report](#) on the country's power system late last month, revealing that for "the first time ever, [wind power] contributed most to the annual electricity demand coverage". According to the figures, wind turbines met 21.1% of electricity demand on the Spanish peninsular, narrowly beating the region's fleet of nuclear reactors, which provided 21% of power.

In total, wind farms are estimated to have generated 53,926 gigawatt hours of electricity, up 12% on 2012, while high levels of rainfall meant hydroelectric power output was 16% higher than the historical average,

climbing to 32,205GWh.

"Throughout 2013, the all-time highs of wind power production were exceeded," the report stated. "On 6 February, wind power recorded a new maximum of instantaneous power with 17,056MW at 3:49 pm (2.5 per cent up on the previous record registered in April 2012), and that same day the all-time maximum for hourly energy was also exceeded reaching 16,918MWh. Similarly, in January, February, March and November wind power generation was the technology that made the largest contribution towards the total energy production of the system."

An increase in wind power capacity of 173MW coupled with an increase in solar PV capacity of 140MW and solar thermal capacity of 300MW meant that by the end of the year renewables represented 49.1% of total installed power capacity on the Spanish peninsula.

In contrast, the preliminary figures show that power output from combined cycle gas plants fell 34.2% year-on-year, coal-fired plants saw generation fall 27.3%, and nuclear power output fell 8.3%.

The dramatic shift towards renewable generation coupled with a fall in overall power demand of 2.1% led to a similarly drastic reductions in emissions from the peninsular's power sector. "The increased weight of renewable energy in the generation mix structure of 2013 compared to the previous year has reduced CO2 emissions of the electricity sector on the Spanish peninsula to 61.4 million tonnes, 23.1% lower than in 2012," the report stated.

The study follows news last year that [Portugal had successfully generated over 70%](#) of its power from renewables during the first quarter of the year, driven by a surge in wind and hydro power output.

The latest figures are likely to be seized upon by renewable energy firms as further evidence that the sector can provide a high proportion of power to a modern economy without risk of blackouts.