

CHART OF THE WEEK

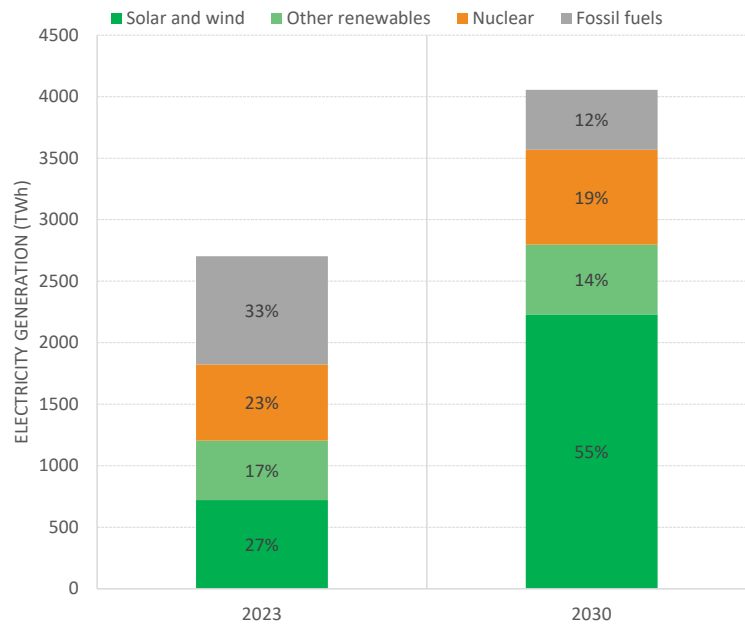


4 September 2024

THE “GREEN” ELECTRICITY REVOLUTION IS WELL ON ITS WAY, BUT THE EUROPEAN UNION STILL NEEDS TO PICK UP THE PACE

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EU, ELECTRICITY GENERATION PROJECTIONS, BY SOURCE



Source: EMBER, BNP Paribas

In 2019, the European Union (EU) adopted a very ambitious Green Deal, setting a 2050 climate neutrality target for the 27 member states. Since then, the Fit for 55 legislative package (in 2021) has been introduced, followed by the series of REPowerEU directives (in 2023) detailing the process to speed up reducing greenhouse-gas emissions (to at least twice the current pace). The main focus has been on developing renewable energies, whose share is set to double within six years, accounting for 42.5% of end-energy use by 2030.

We are seeing a revolution with electricity at its heart. In order to drive the transformation of usages (such as the gradual phasing out of internal combustion engine vehicles and the replacement of oil and gas boilers with heat pumps), the sector will have to significantly increase its production (by around 50%) by 2030, based on demand projections from the EMBER institute¹. At the same time, the very nature of this production will have to change, so that EU’s electricity generation will mainly rely on solar and wind power (at 55% in 2030, compared to the current level of 27%, see chart).

Recent trends are encouraging. Since the outbreak of the war in Ukraine, “green” investments have accelerated, with solar and wind power largely (and probably permanently) replacing gas in EU electricity generation². This breakthrough has been achieved with a stable or even slightly reduced production volume (around 2,800 terawatt hours per year for a decade) and will now need to be entrenched with the increasing electricity demand, which will involve considerable investments. Under the (low or high) scenarios used, wind and photovoltaic production capacities should be increased by a factor of 2.5 to 3 by 2030 if the EU wants to achieve its roadmap.

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With the assistance of Aurane VERNIERE, intern

¹ EMBER (2024), Europe’s electricity transition takes crucial strides forward, European Electricity Review 2024, January. The institute states that electricity consumption would increase by 60% by 2030 if the EU were to hit its decarbonisation targets; assuming the efficiency gains resulting from network improvements (such as switching to very high voltage in order to transport the offshore wind energy generated), this would result in increased production of around 50%.
² Ibid, pp 21-23.

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Published by BNP PARIBAS Economic Research

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Internet: group.bnpparibas - www.economic-research.bnpparibas.com

Head of publication : Jean Lemierre / Chief editor: Isabelle Mateos y Lago



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