

The Evolution and Impact of the EU Green Industrial Strategy and Green New Deal

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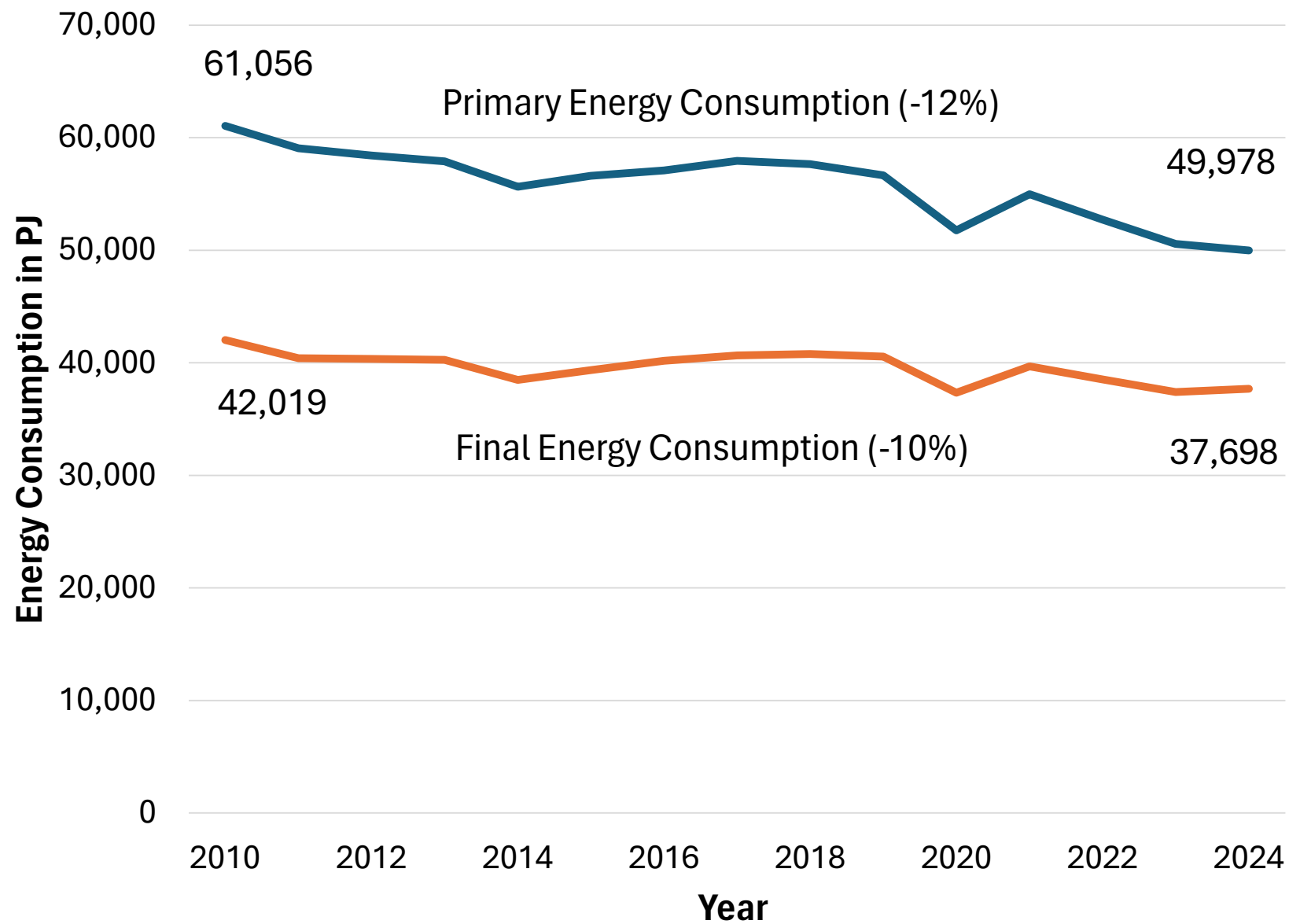
**"I WANT TO USE SOLAR
ENERGY, BUT I'M NOT SURE
WHERE TO PLUG IT IN!"**

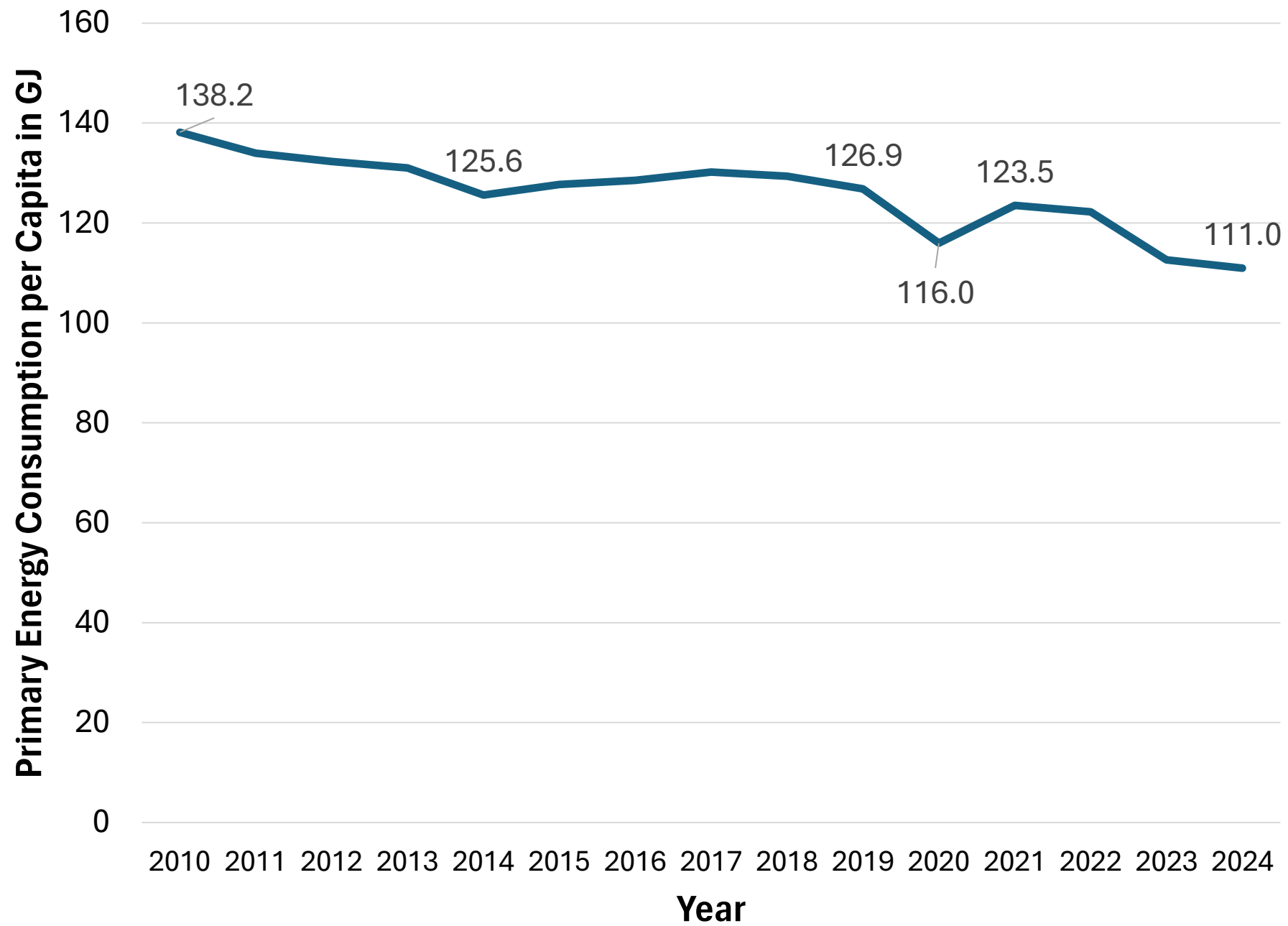
Content

- **Current EU Policy Framework**
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- **Power Generation in the EU**
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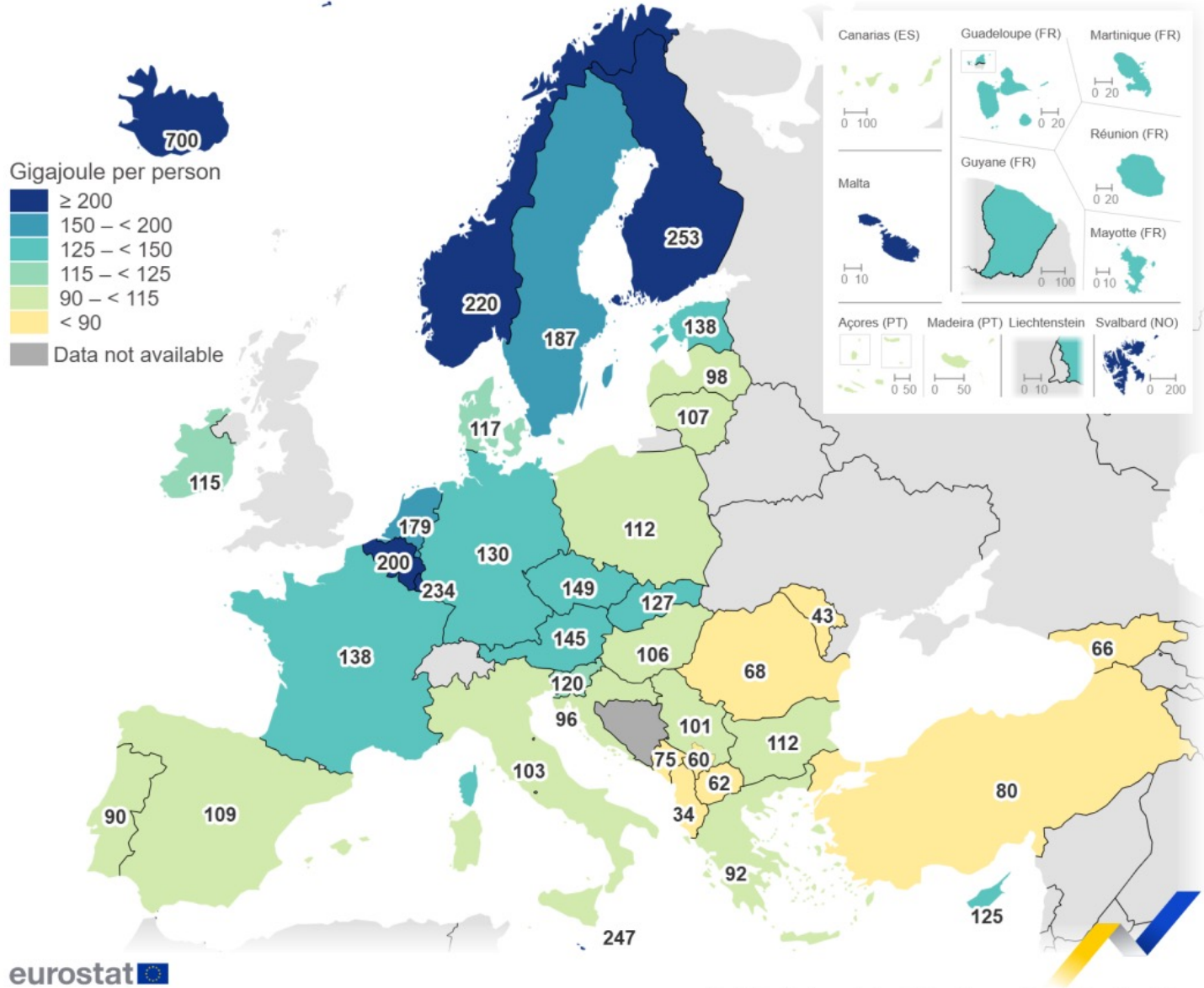
EU Policy Framework

- European Green Deal (12/2020)
- RES Directive [2018/2001/EU](#) and [EU/2023/2413](#)
- EU Solar Strategy (05/2022)
- Net Zero Industry Act (03/2023)
- COP28 pledge to triple renewable energy by 2030
- Critical Raw Materials Act (05/2024)





Energy consumption per capita, 2023



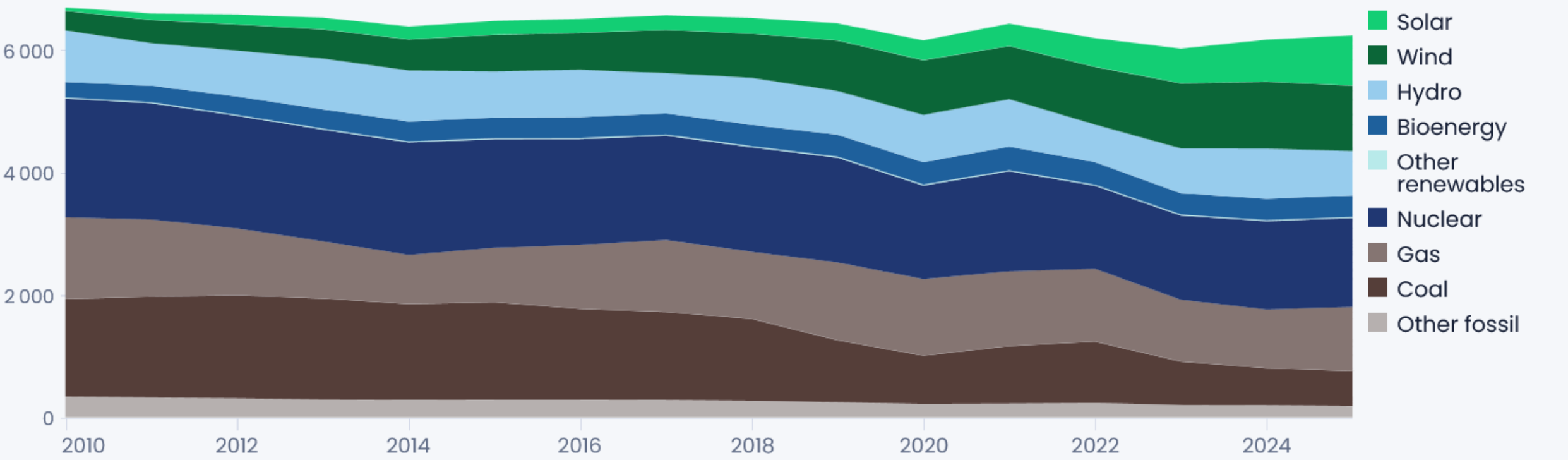
eurostat

Administrative boundaries: © EuroGeographics © OpenStreetMap
Cartography: Eurostat – IMAGE, 05/2025

Kosovo* - This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

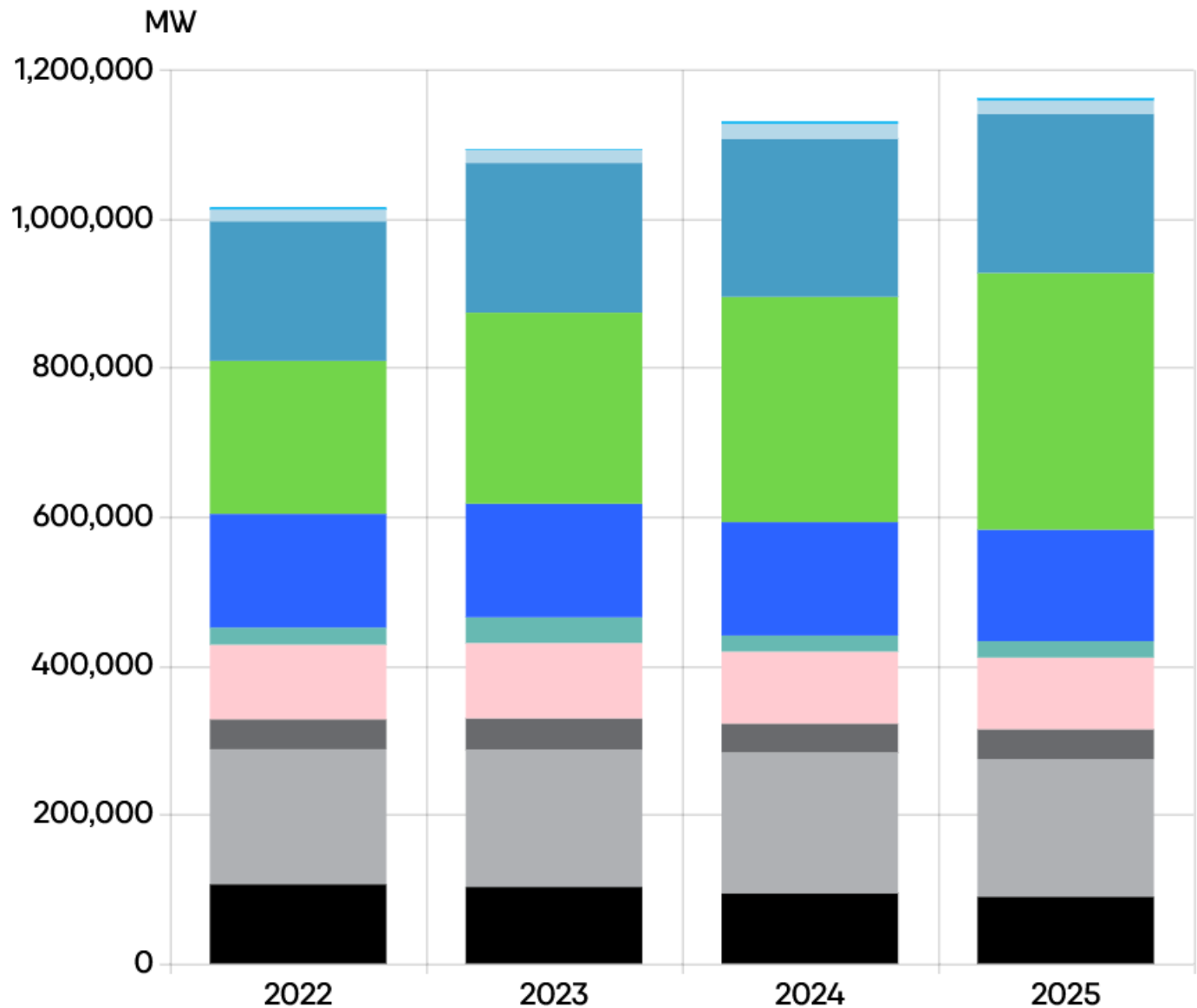
Electricity generation per capita in EU

Kilowatt-hours



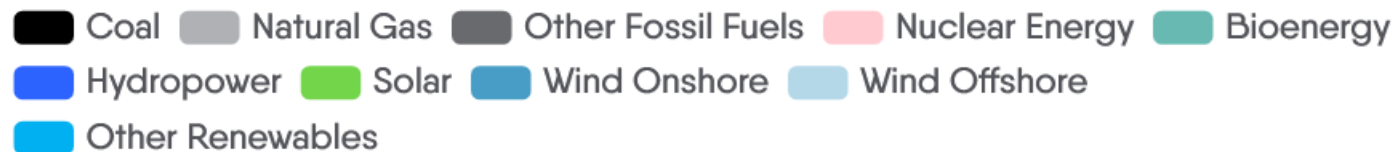
Data: Ember Electricity Data Explorer, ember-energy.org

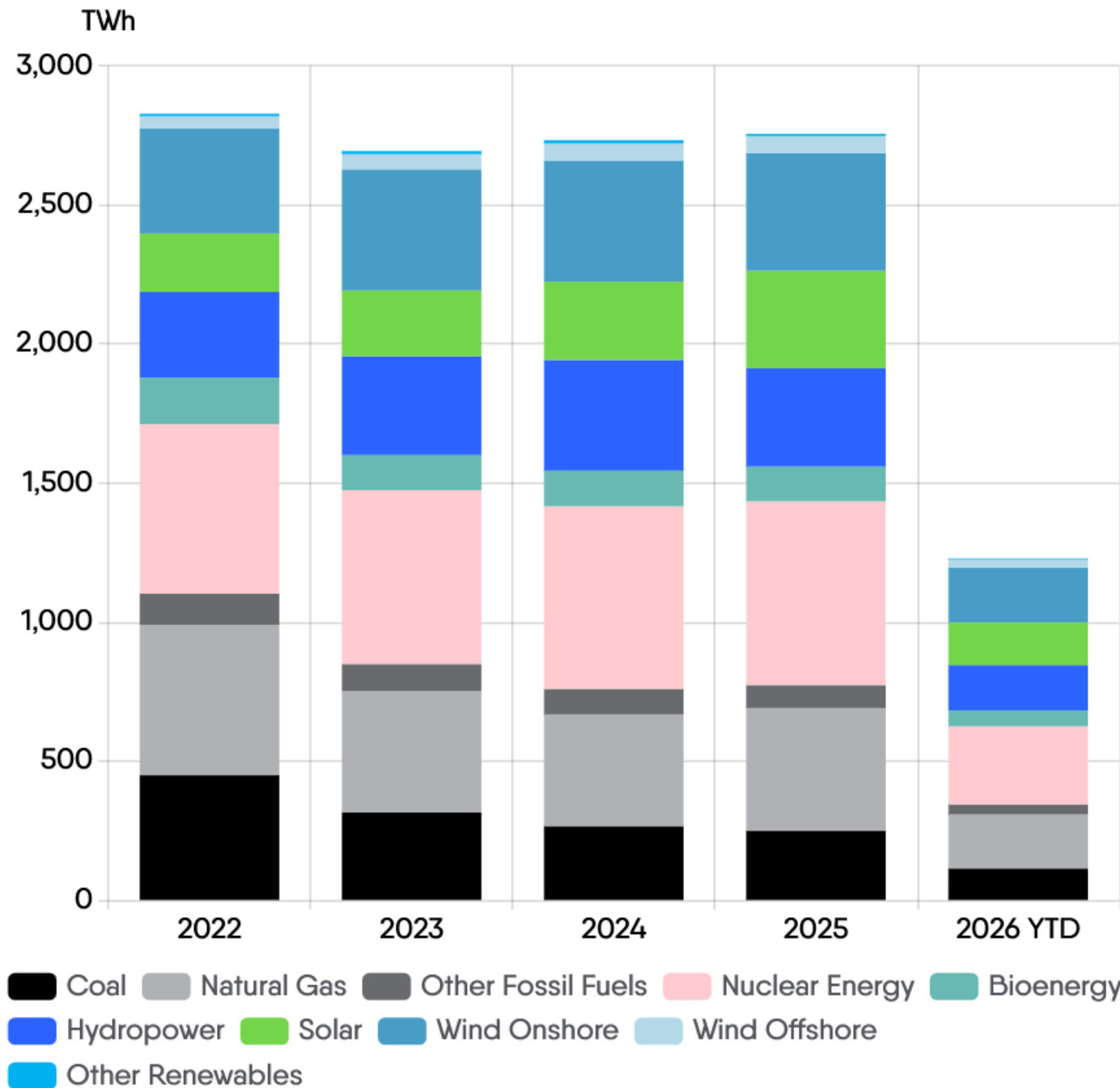




Electricity capacity mix EU

Source:
eurelectric – capacity
<https://electricity-data.eurelectric.org/capacity.html>



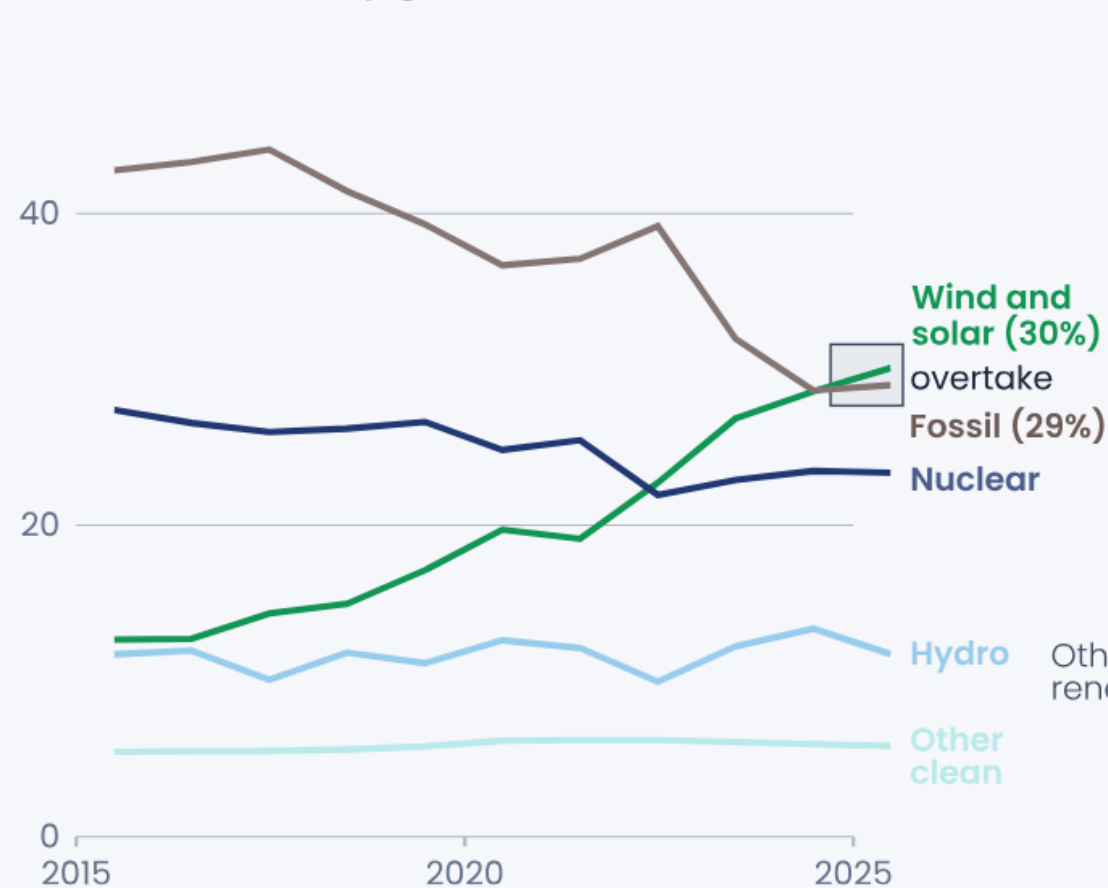


Electricity generation mix EU

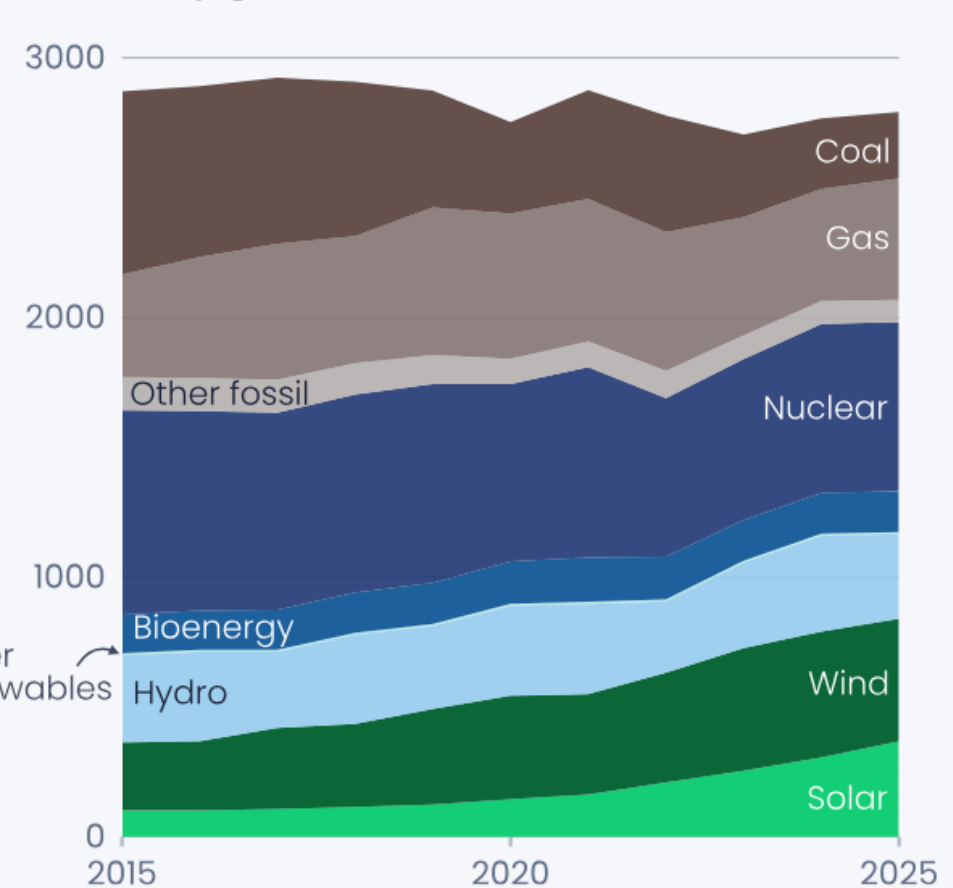
Source:
eurelectric –
Electricity Generation By Fuel

Wind and solar overtake fossil power in the EU for the first time in 2025

Share of electricity generation (%)



Electricity generation (TWh)

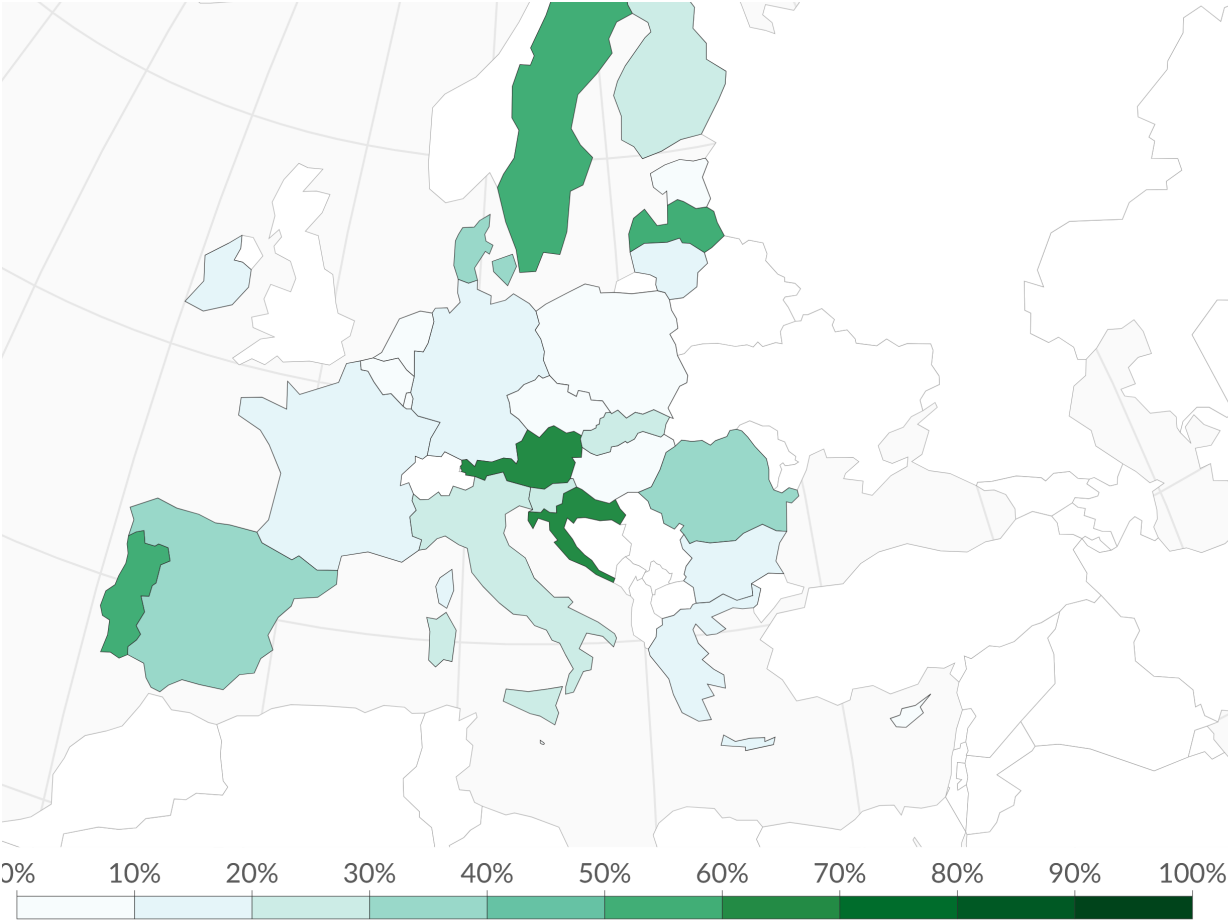


Source: Yearly electricity data, Ember

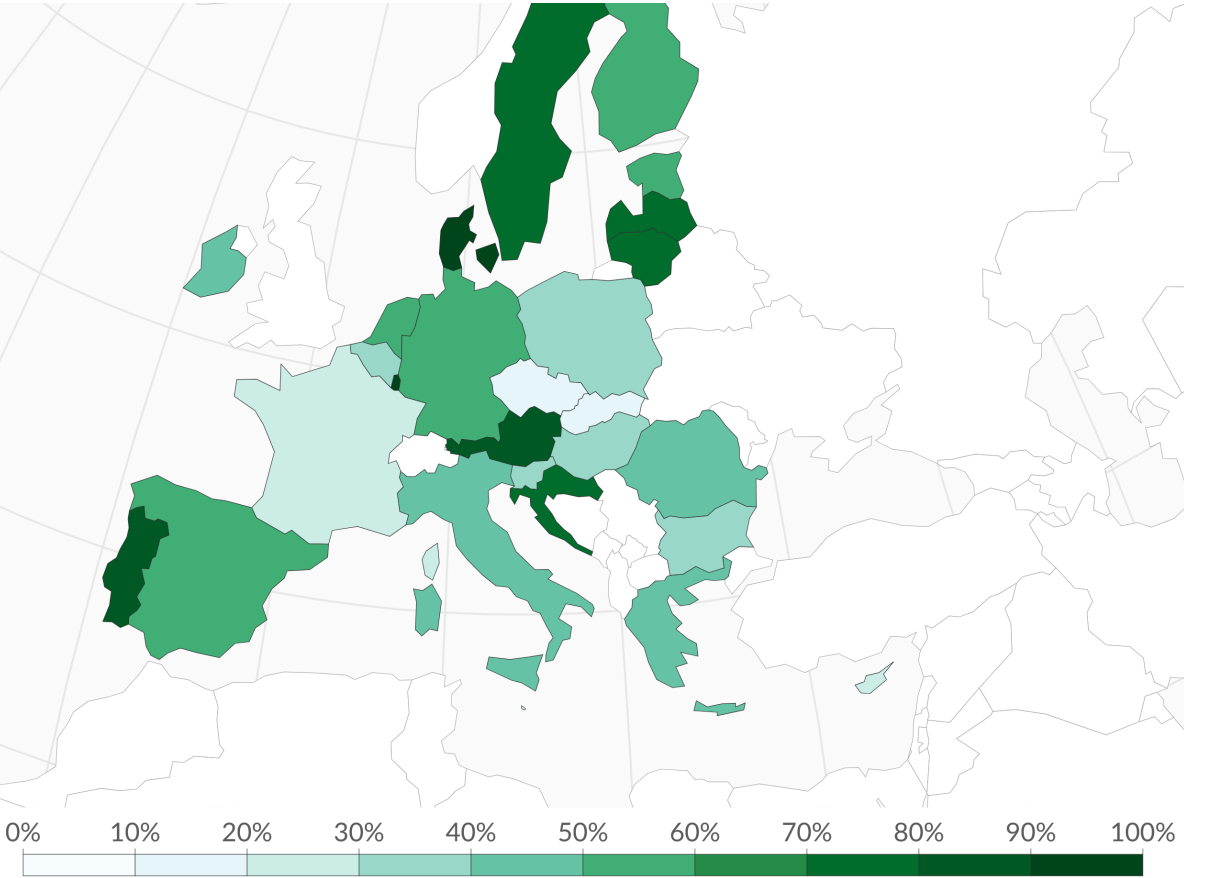
Other clean includes bioenergy and other renewables. Fossil includes coal, gas and other fossil.

EMBER

Share of renewable electricity in the EU



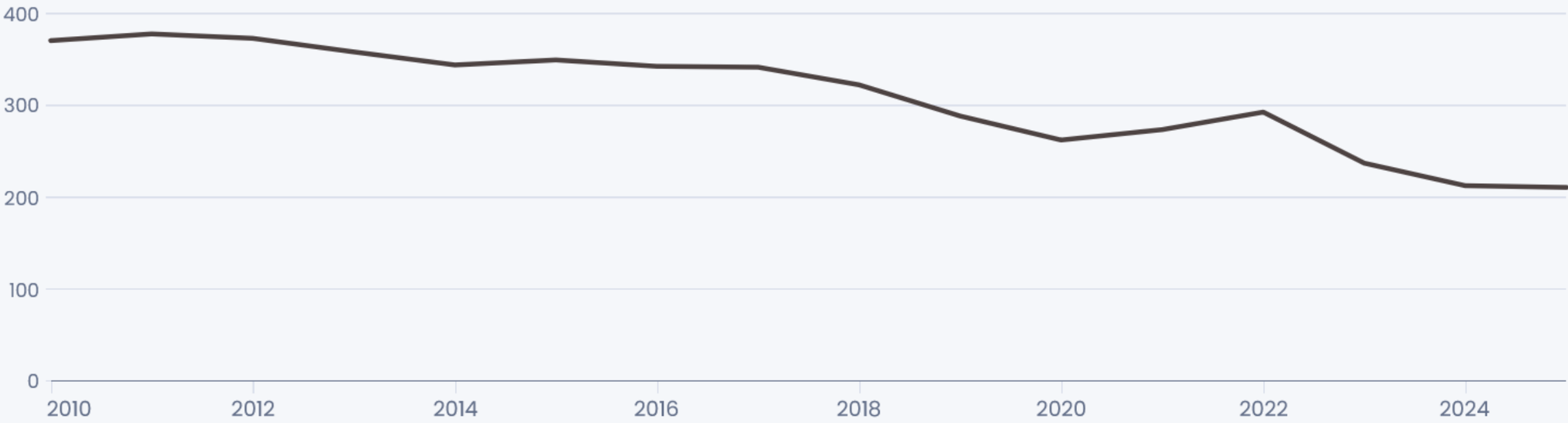
2010



2025

Carbon emissions intensity in EU

Grams of CO2e emitted per kWh

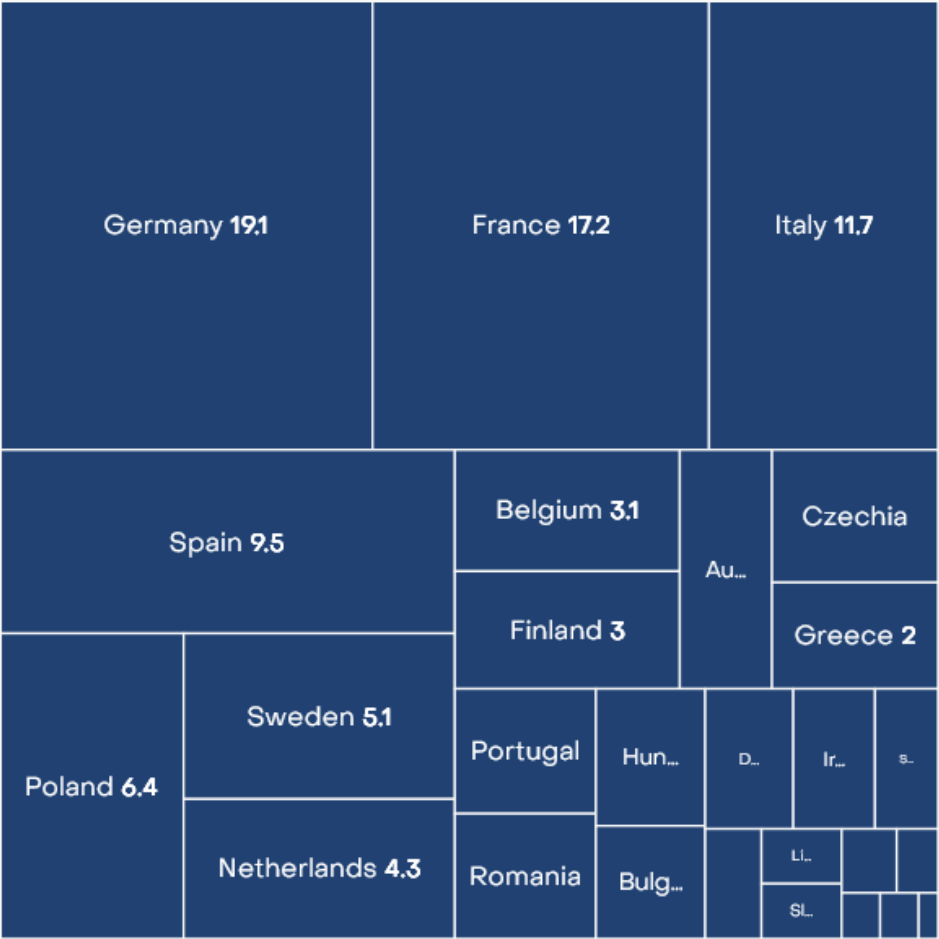


Data: Ember Electricity Data Explorer, ember-energy.org



A breakdown of EU electricity demand in 2023

Share of EU electricity demand (%)

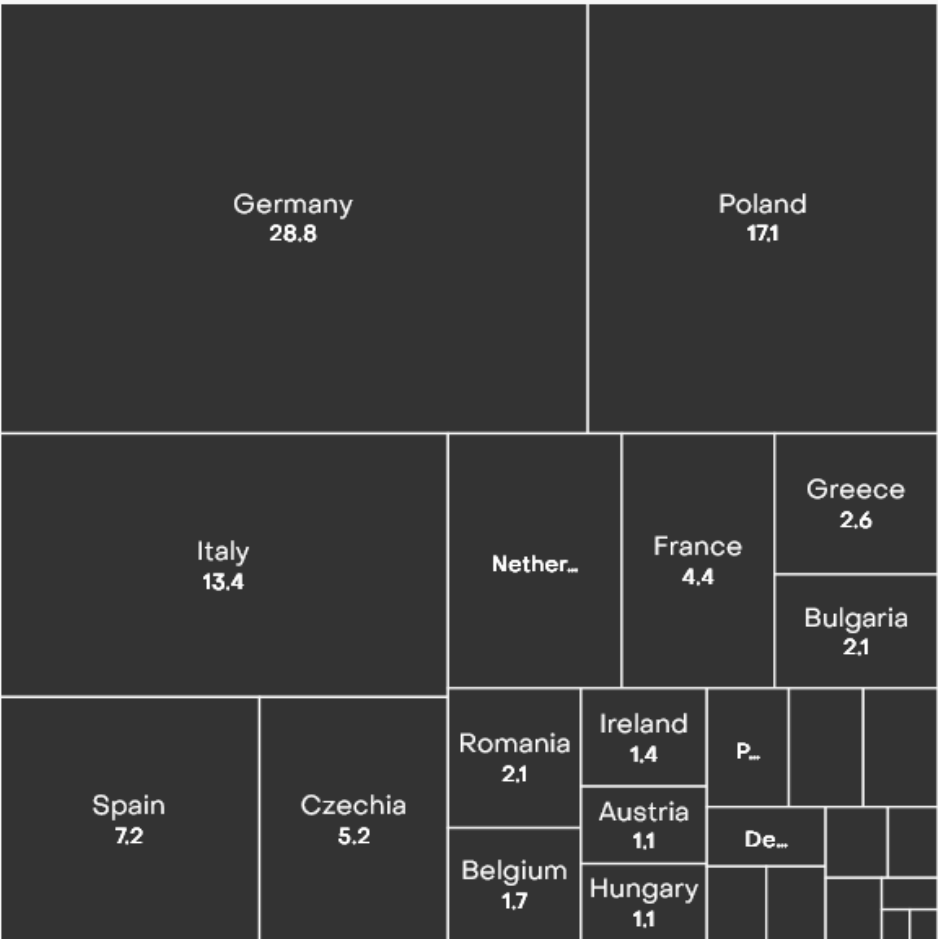


Source: Annual electricity data, Ember



A breakdown of EU power sector emissions in 2023

Share of EU power sector emissions in 2023 (%)

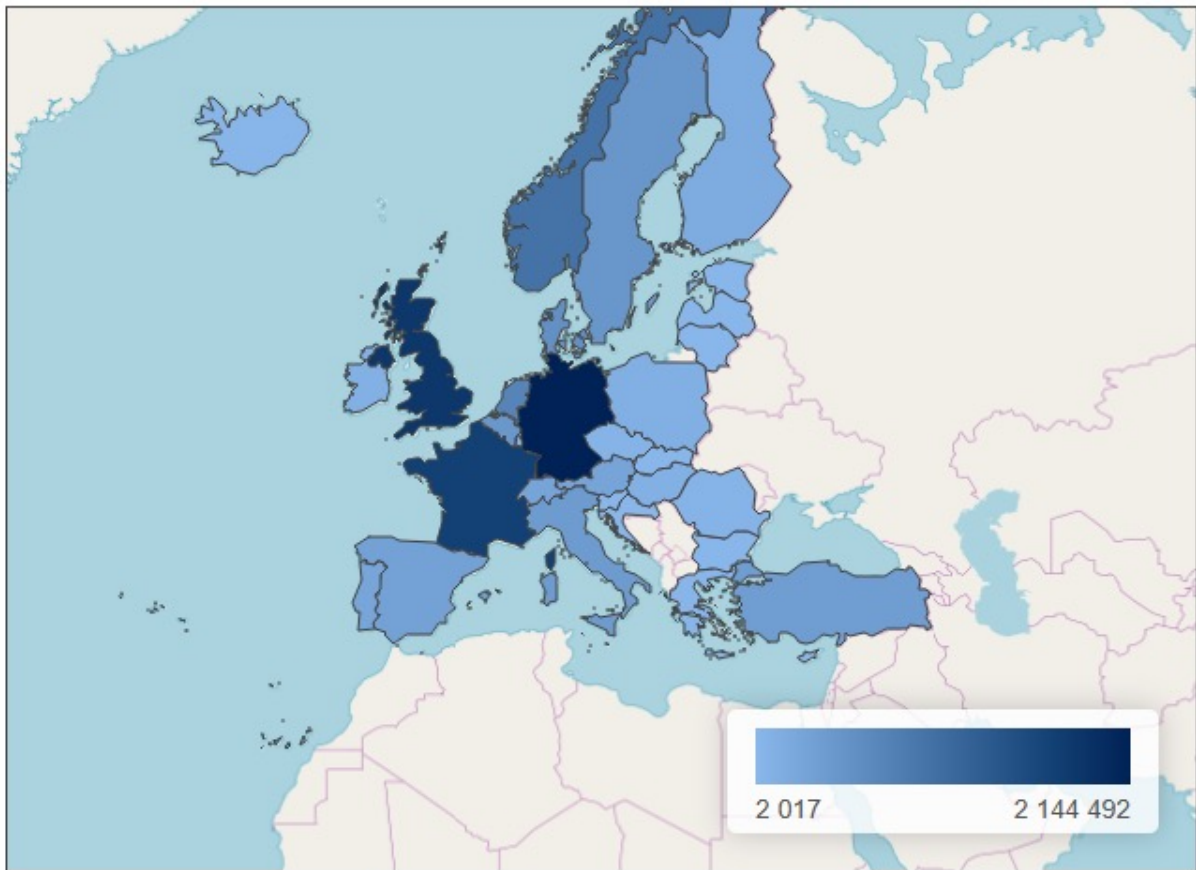


Source: Annual electricity data, Ember



BEV passenger cars and vans

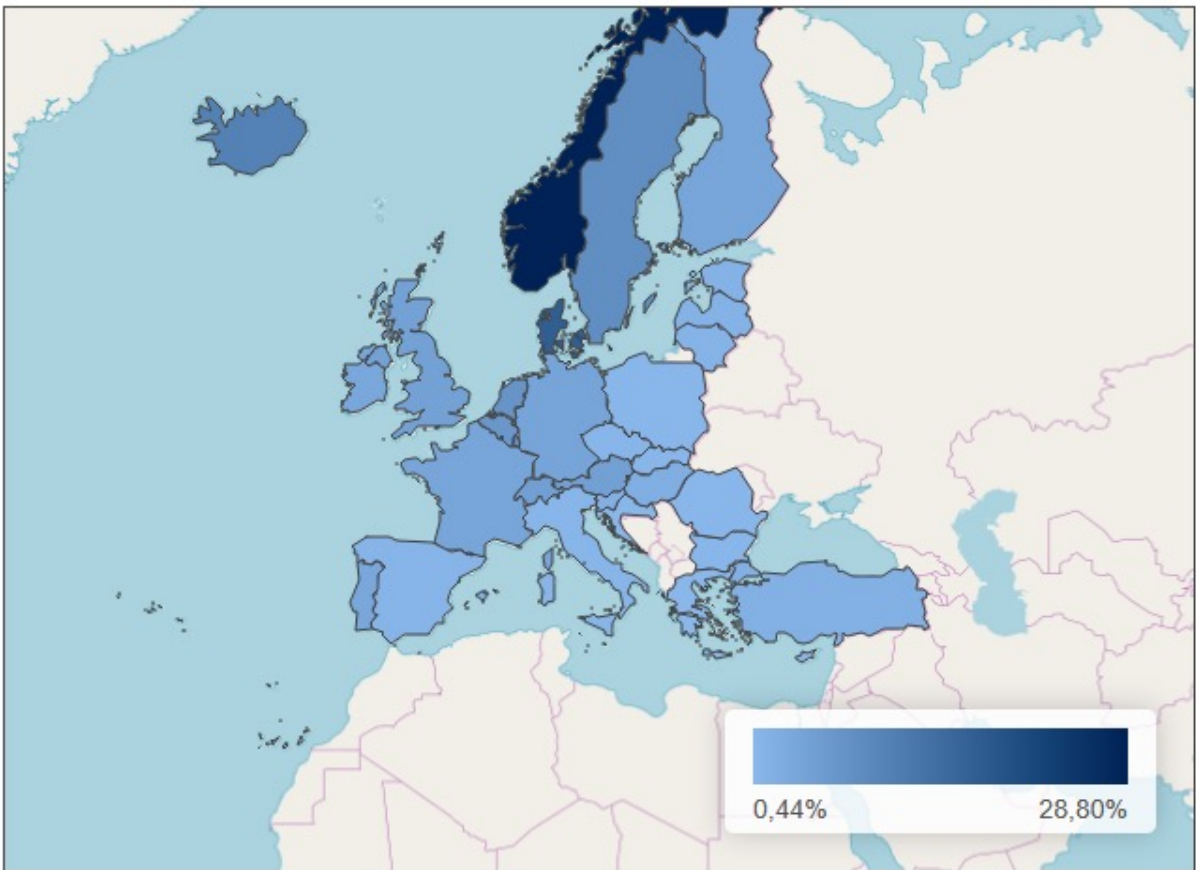
Fleet of battery-electric (BEV) passenger cars and vans (M1+N1)



Webtools + © EC-GISCO + Leaflet | © OpenStreetMap © EuroGeographics © UN-FAO for the administrative boundaries | [Disclaimer](#)

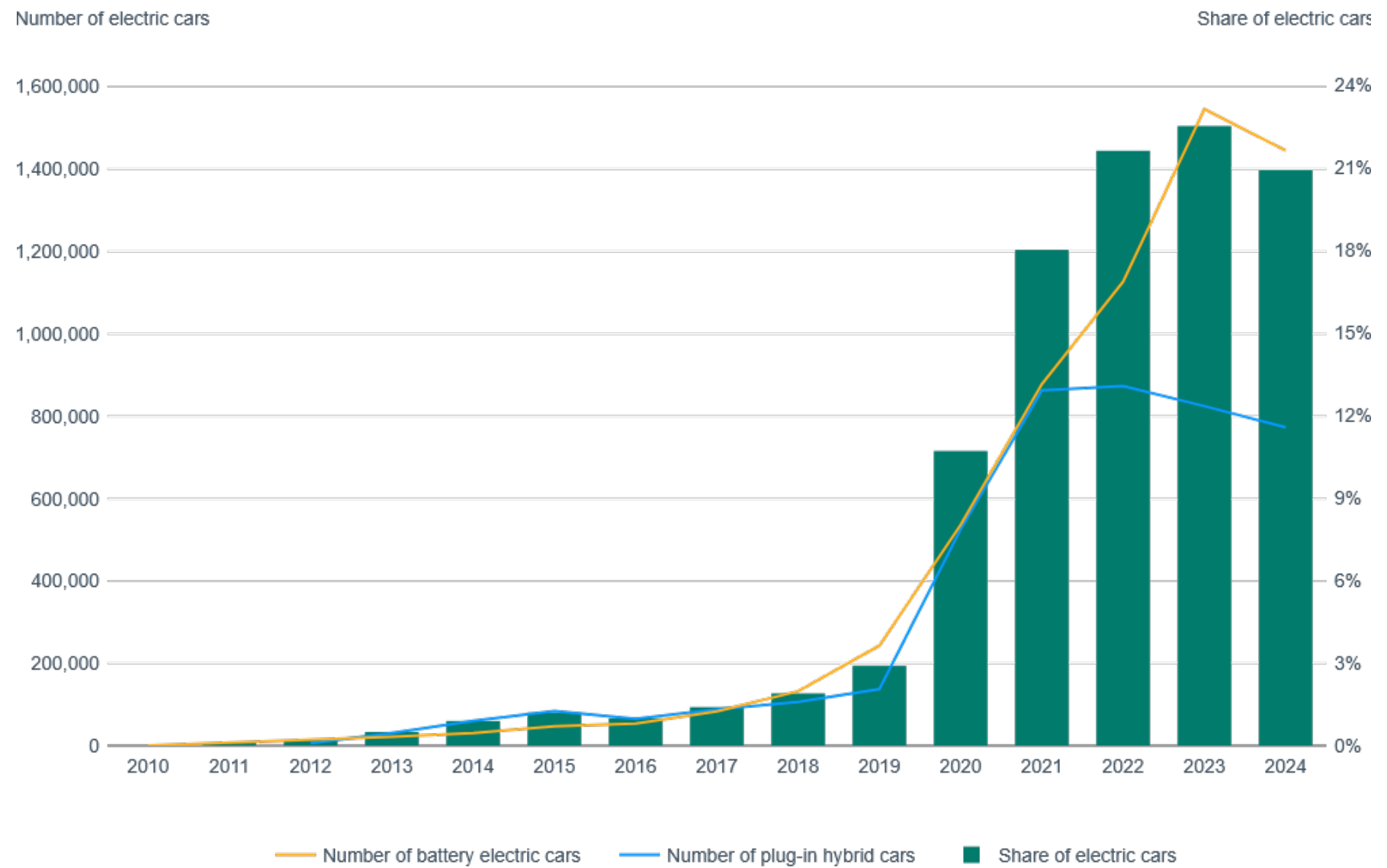
BEV% passenger cars and vans

Percentage of the total passenger cars and vans fleet (M1+N1) that is full battery-electric (BEV)



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Registration of Electric Cars in the EU

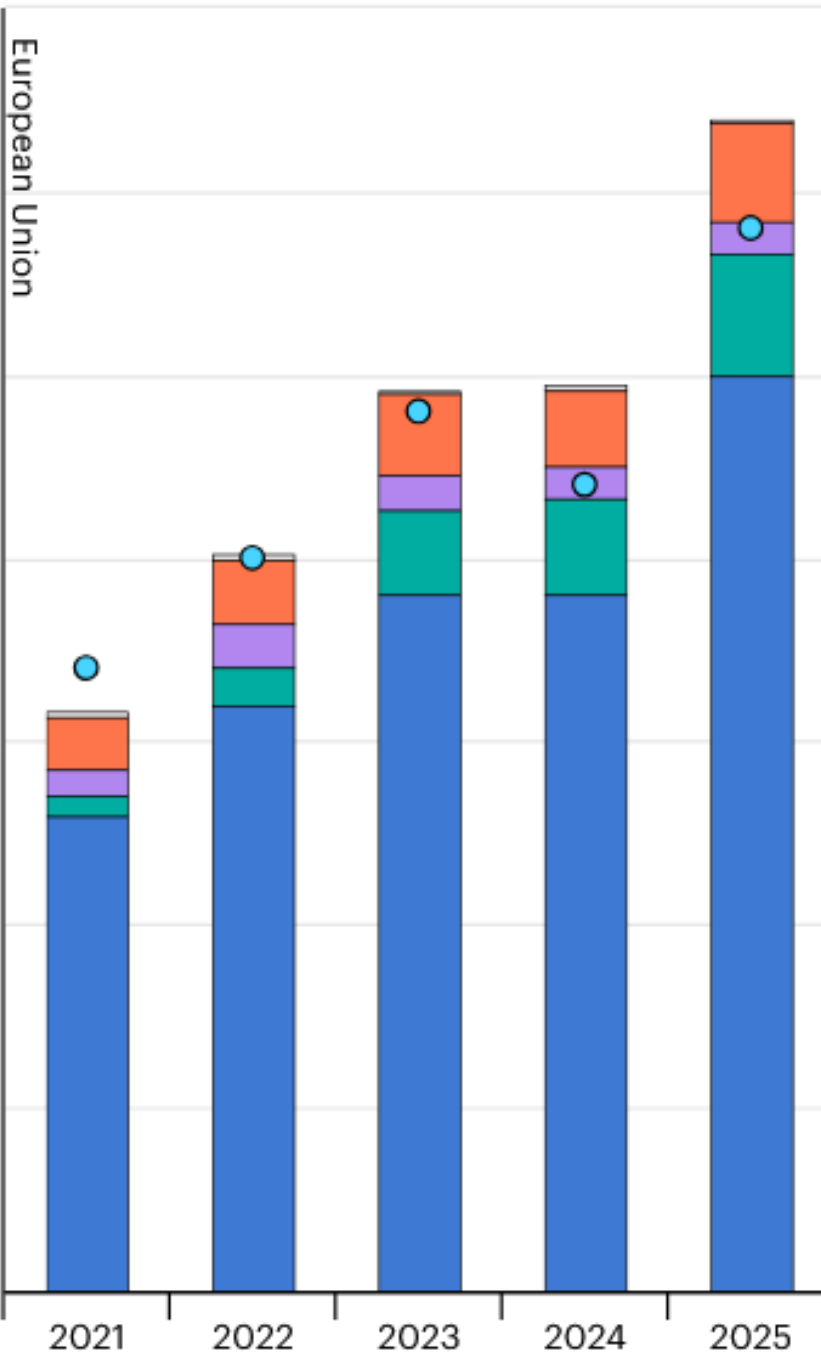


Production of electric cars in EU (BES and plug-in hybrids) 2021-2025

Headquarters

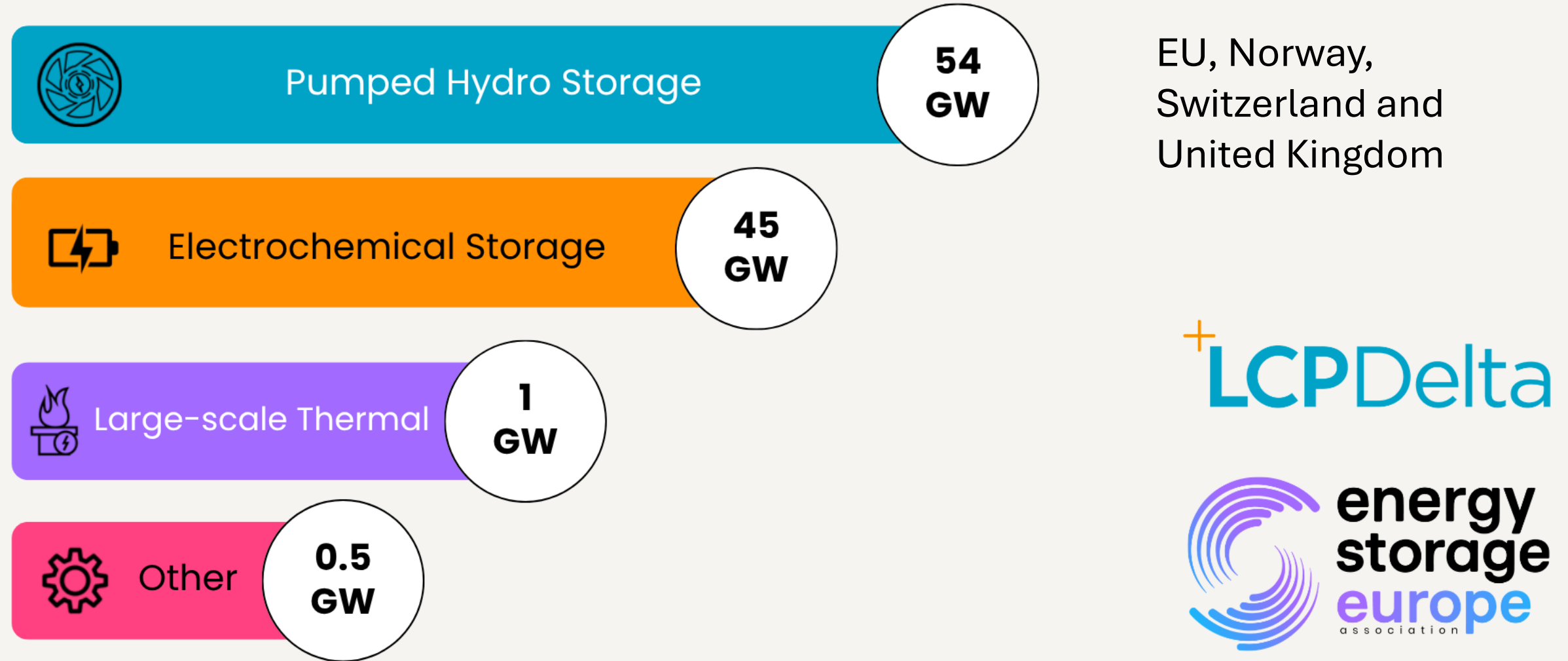
European Union United States Japan/Korea China Rest of World Domestic sales

Million cars



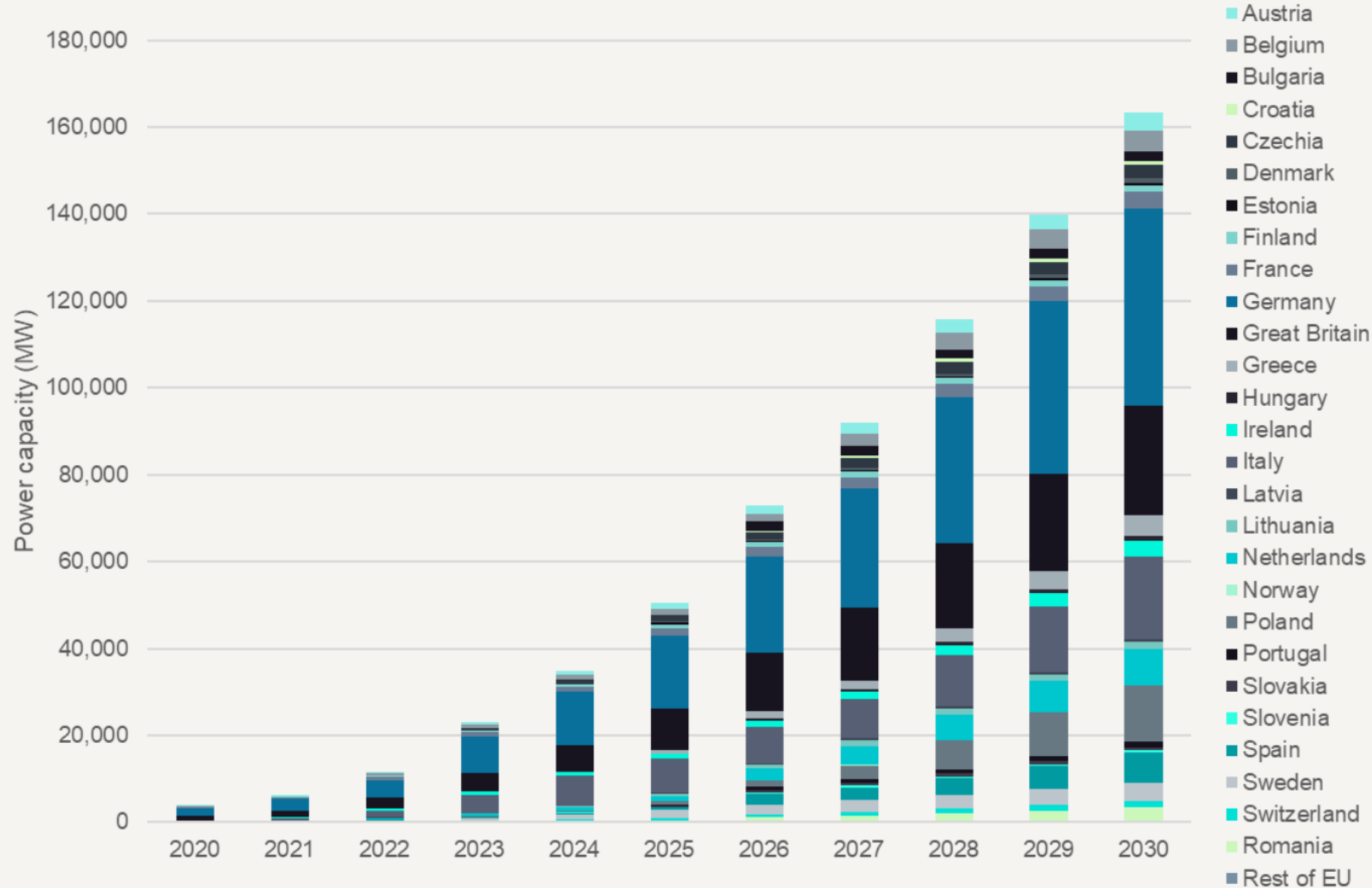
100 GW Installed Currently Across Different Technologies

As of 1 Dec 2025 **Cumulative installed capacity by technology**



Electrochemical Storage

Cumulative power capacity

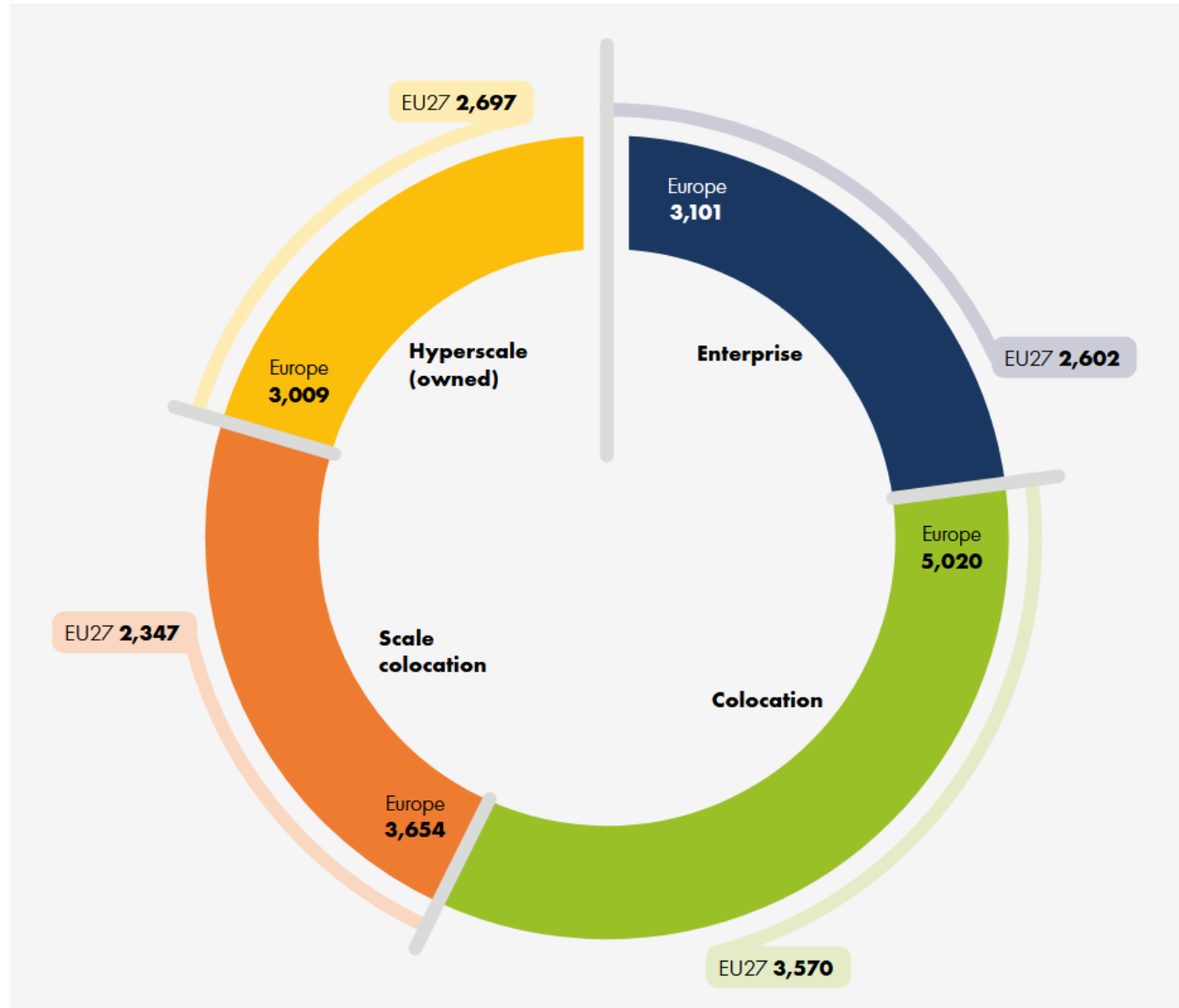


EU, Norway,
Switzerland and
United Kingdom

 LCPDelta

 energy
storage
europe
association

IT Power (MW) volume in Europe 2025



Capacity

Europe 14,784 MW

EU 11,216 MW

Consumption EU

2025 approx. 70 TWh

2024 approx. 60 TWh

of which 28 TWh from RES

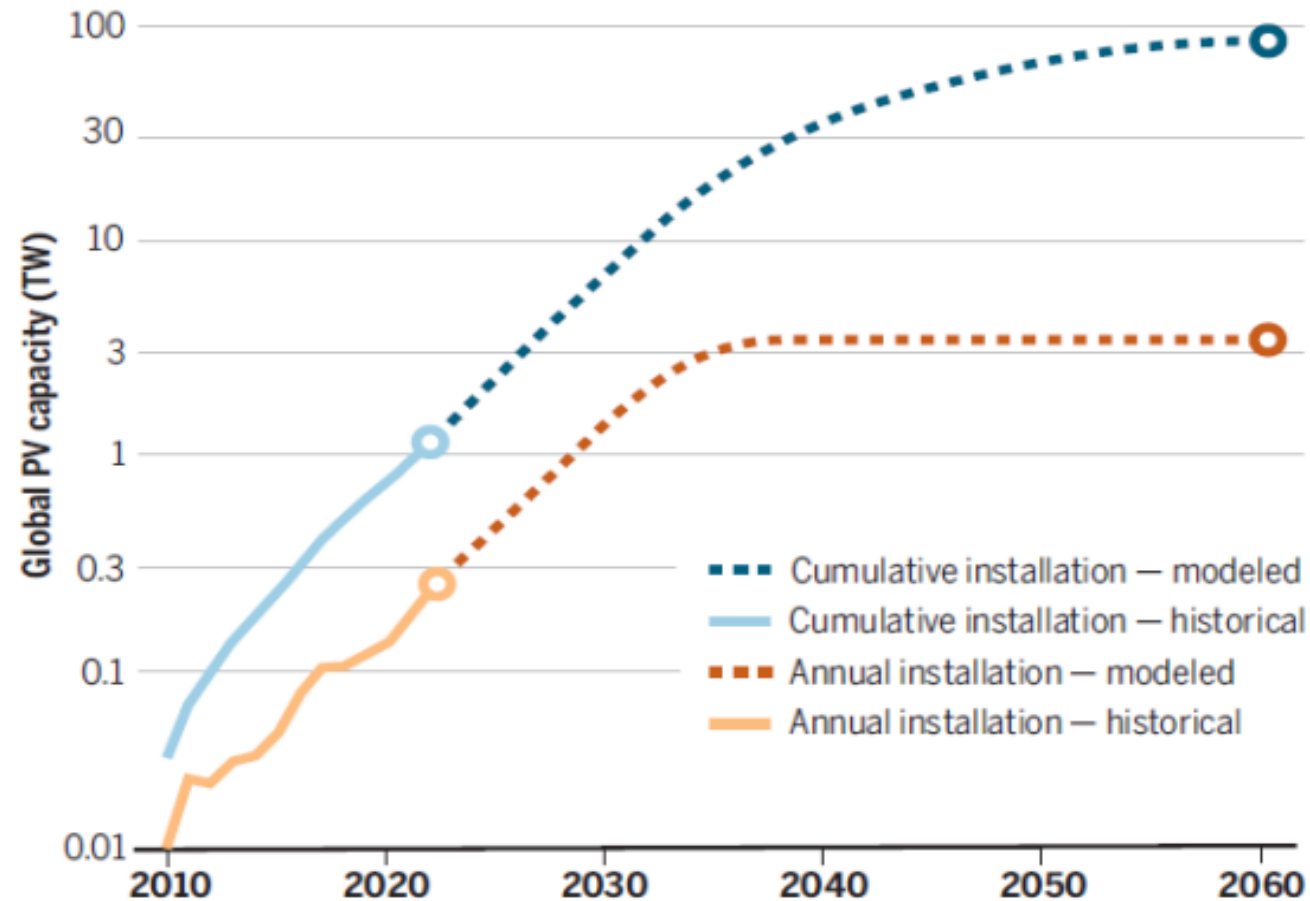
Source: EUDAC

Outlook



PV installations and growth toward 75 TW by 2050

Modeled cumulative capacity going forward is based on sustaining 25% production rate growth over the next 7 years and then reducing slowly to steady state. Replacement needs are included by simple subtraction of installations 25 years before the modeled date.



EU 2030

capacity: 1.5 TWp

capacity per capita: 3.3 kWp

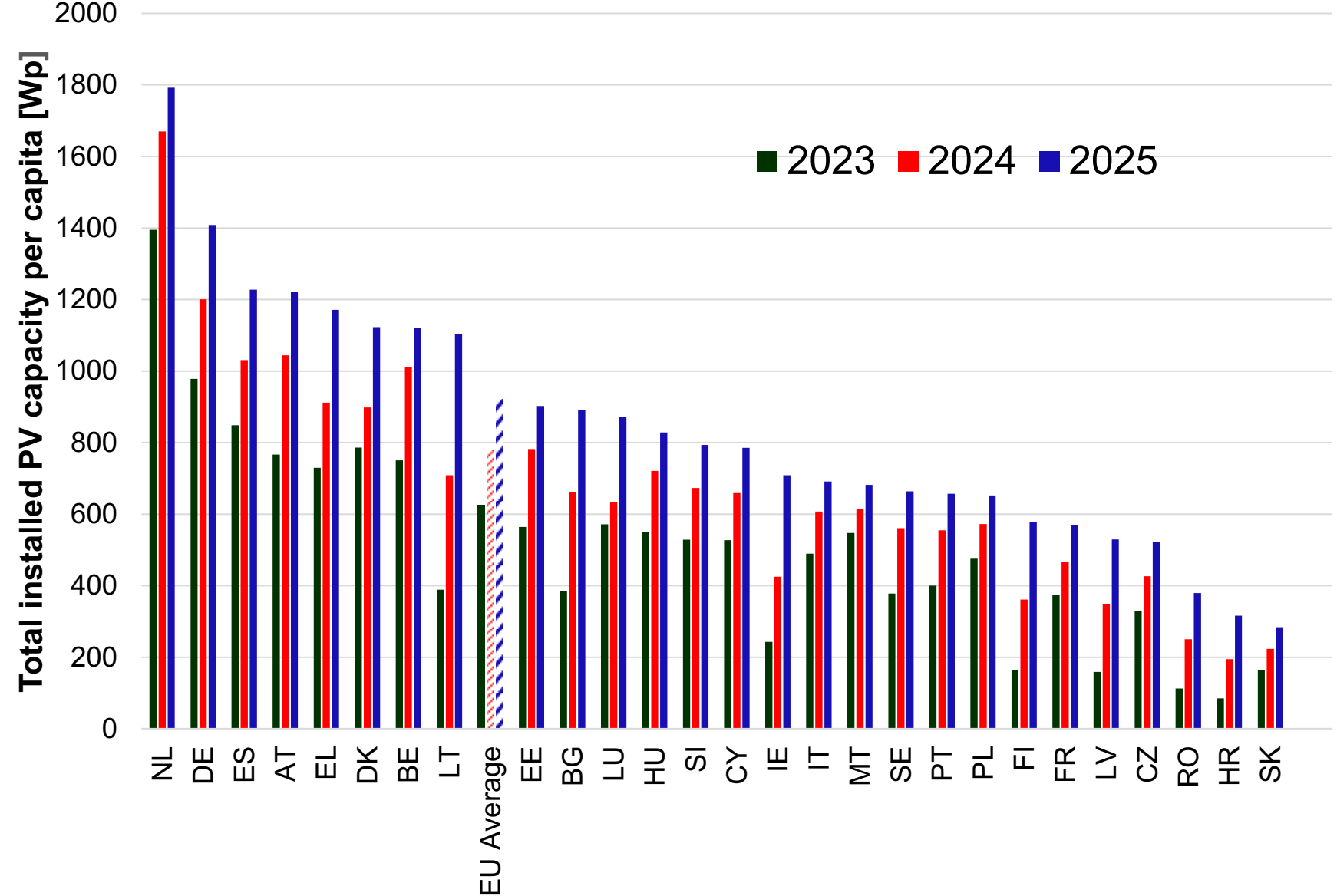
EU2050

capacity: 5.6 TWp

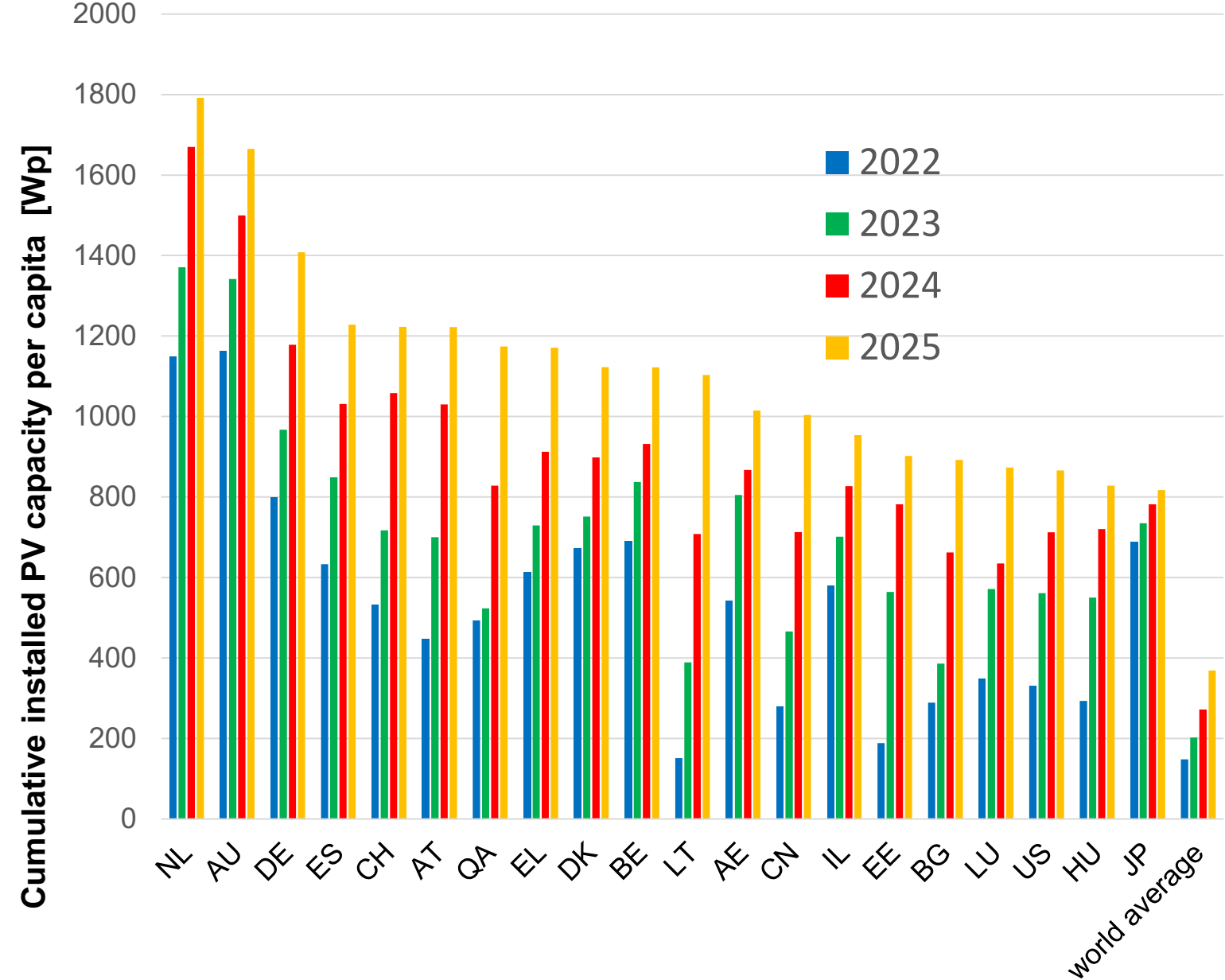
capacity per capita: 12.3 kWp

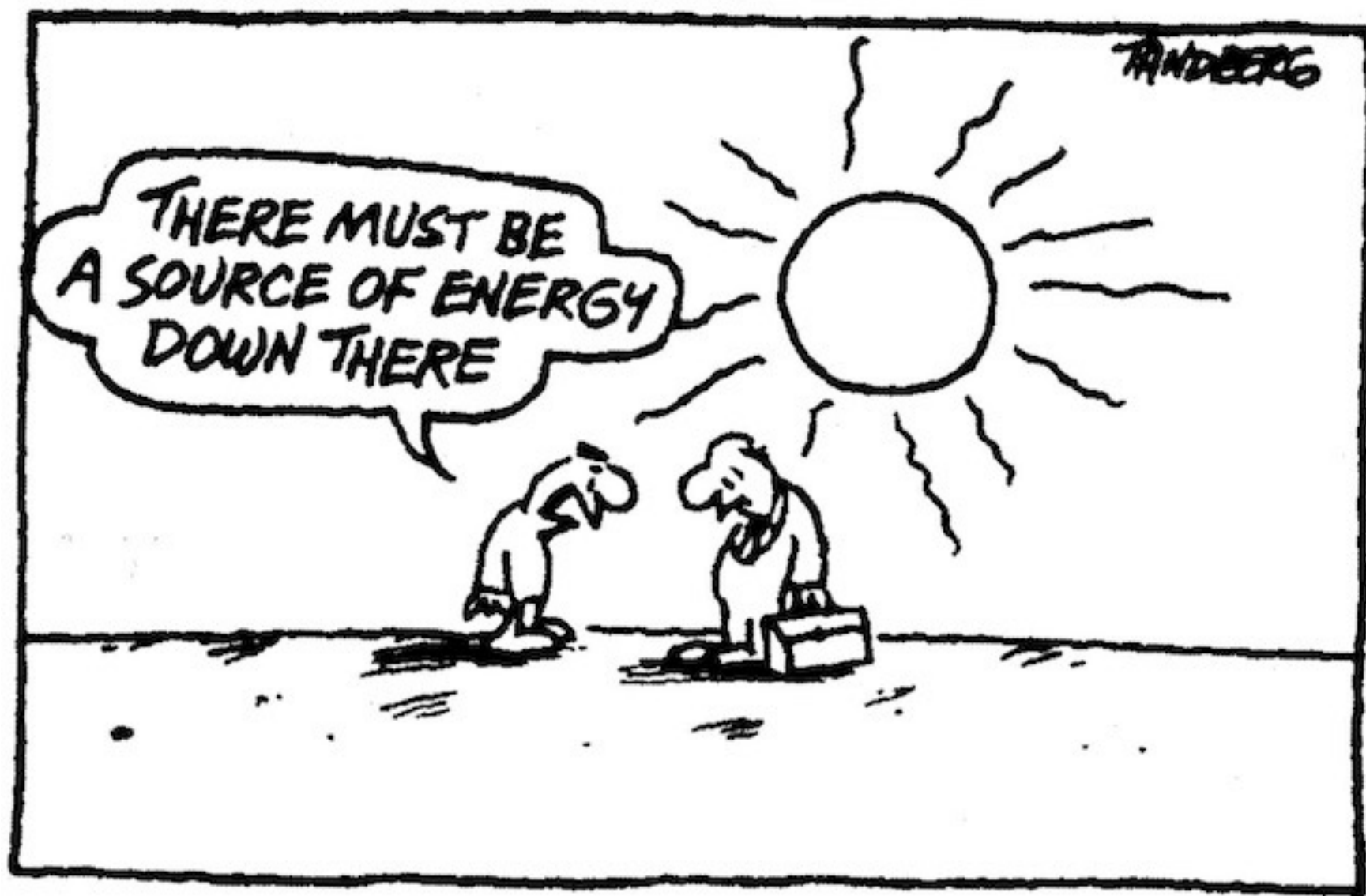
Nancy M. Haegel *et al.* Photovoltaics at multi-terawatt scale: Waiting is not an option, *Science* 380, 39 (2023)

Installed PV Capacity per Capita EU



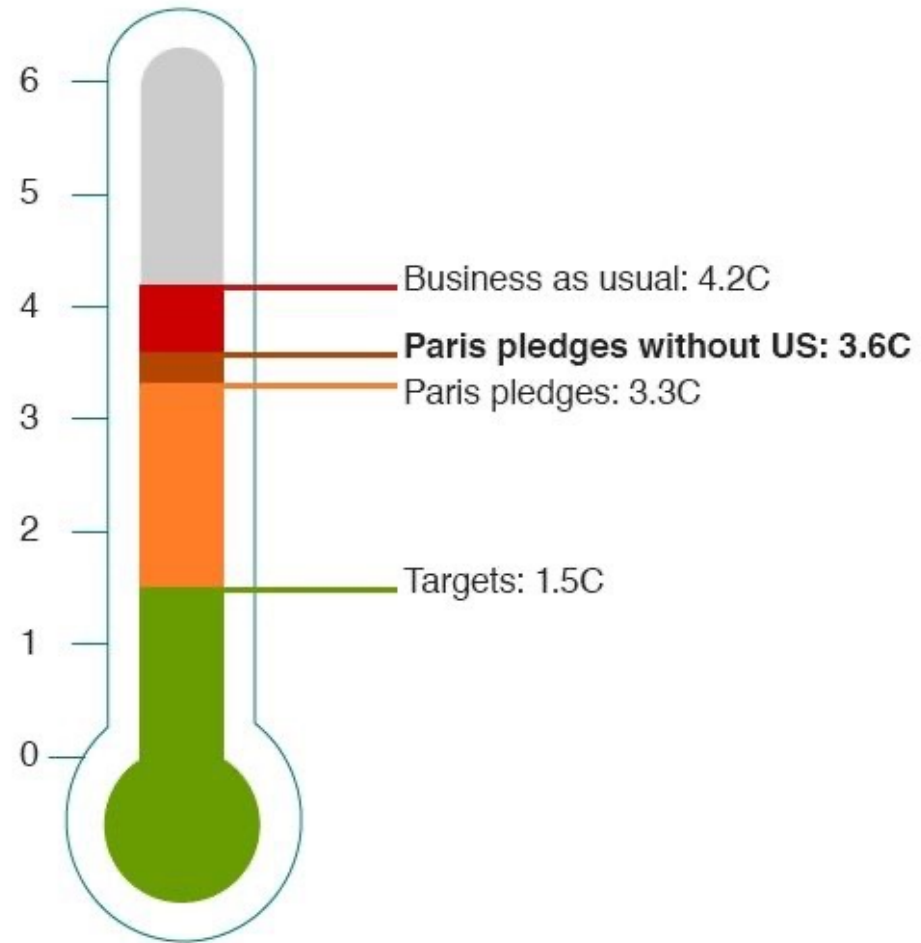
World Installed PV Capacity per Capita





Increase in global temperature by 2100

C°



Uncertainty range on US prediction is 2.1C to 4.7C

Source: Climate interactive

BBC

Thank you for your attention!

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