

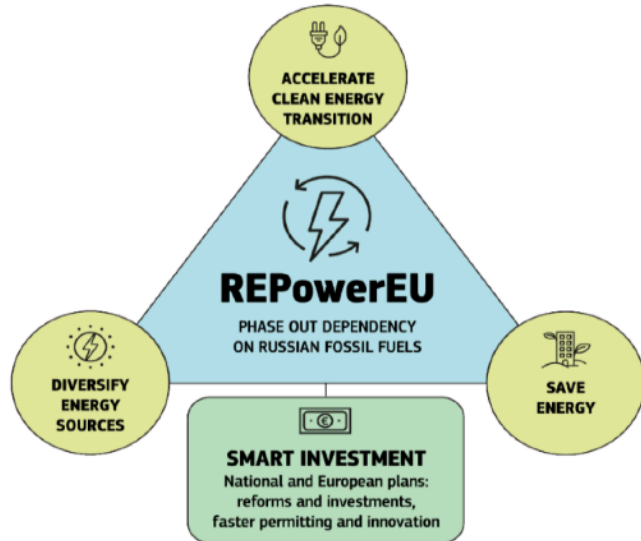
Offshore wind power as a long term decarbonisation option



COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

REPowerEU Plan

{SWD(2022) 230 final}



- “A massive speed-up and scale-up in renewable energy in power generation, industry, buildings and transport.
- “The Commission is proposing to increase the target in the Renewable Energy Directive to 45% by 2030, up from 40% in last year’s proposal. This would bring the total renewable energy generation capacities to 1,236 GW by 2030, in comparison to 1,067 GW by 2030 envisaged under Fit for 55 for 2030.
- “Solar photovoltaics (PV) is one of the fastest technologies to roll out. That is why the Commission sets the REPowerEU target of over 320 GW of solar photovoltaic newly installed by 2025, over twice today’s level, and almost 600 GW by 2030.
- “Wind energy, **in particular offshore wind** represents a significant future opportunity: resources are stable, abundant and public acceptance is higher. Europe is the global leader in offshore wind. To further strengthen the EU wind sector’s global competitiveness, and achieve the REPowerEU ambition with fast wind energy deployment, supply chains need to be strengthened and permitting drastically accelerated.”



Four EU countries set a massive offshore wind target of 65 GW by 2030

Michelle Lewis - May. 19th 2022 2:39 pm PT [@michelle0728](#)



26 Comments



Four EU countries – Belgium, Denmark, Germany, and the Netherlands – jointly announced yesterday that they have set an offshore wind target of at least 65 gigawatts (GW) by 2030 and then intend to more than double that combined total to 150 GW by 2050.

For perspective, according to the Global Wind Energy Council, as of September 2021, there were [35.3 GW](#) of global offshore wind capacity.





DAILY WIND ENERGY



YESTERDAY'S TOP 20 COUNTRIES



HOURLY ELECTRICITY MIX



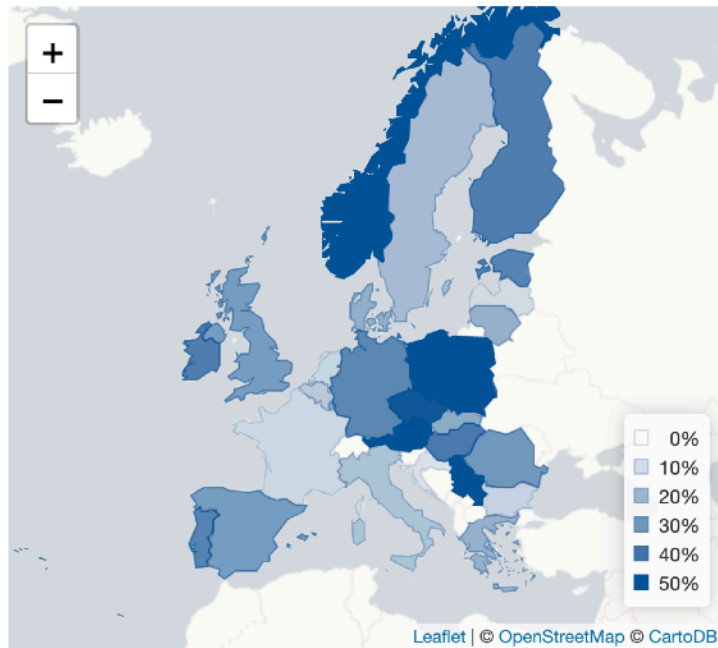
HOURLY WIND ENERGY GENERATION



CAPACITY FACTORS

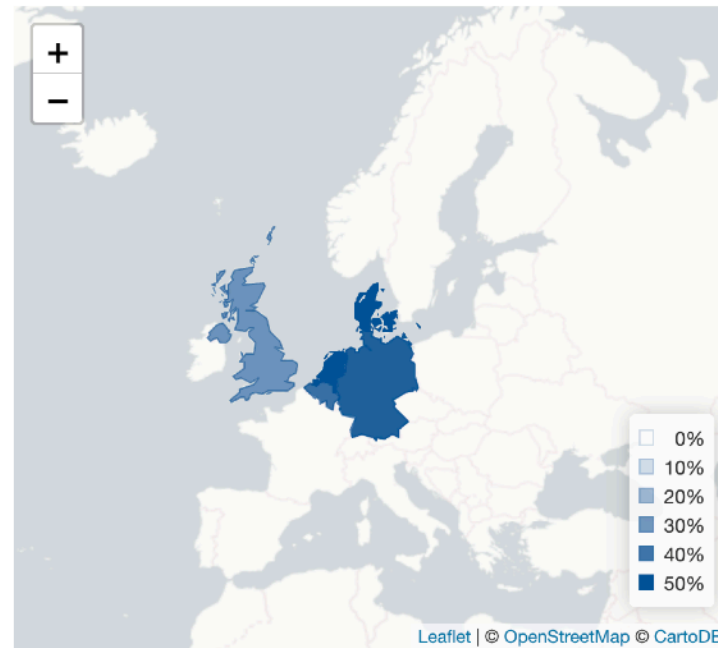
Onshore wind

29.7%



Offshore wind

42.2%



The capacity factor is the average power generated by wind divided by its peak capacity.

Source: WindEurope



Offshore wind farm and turbine size

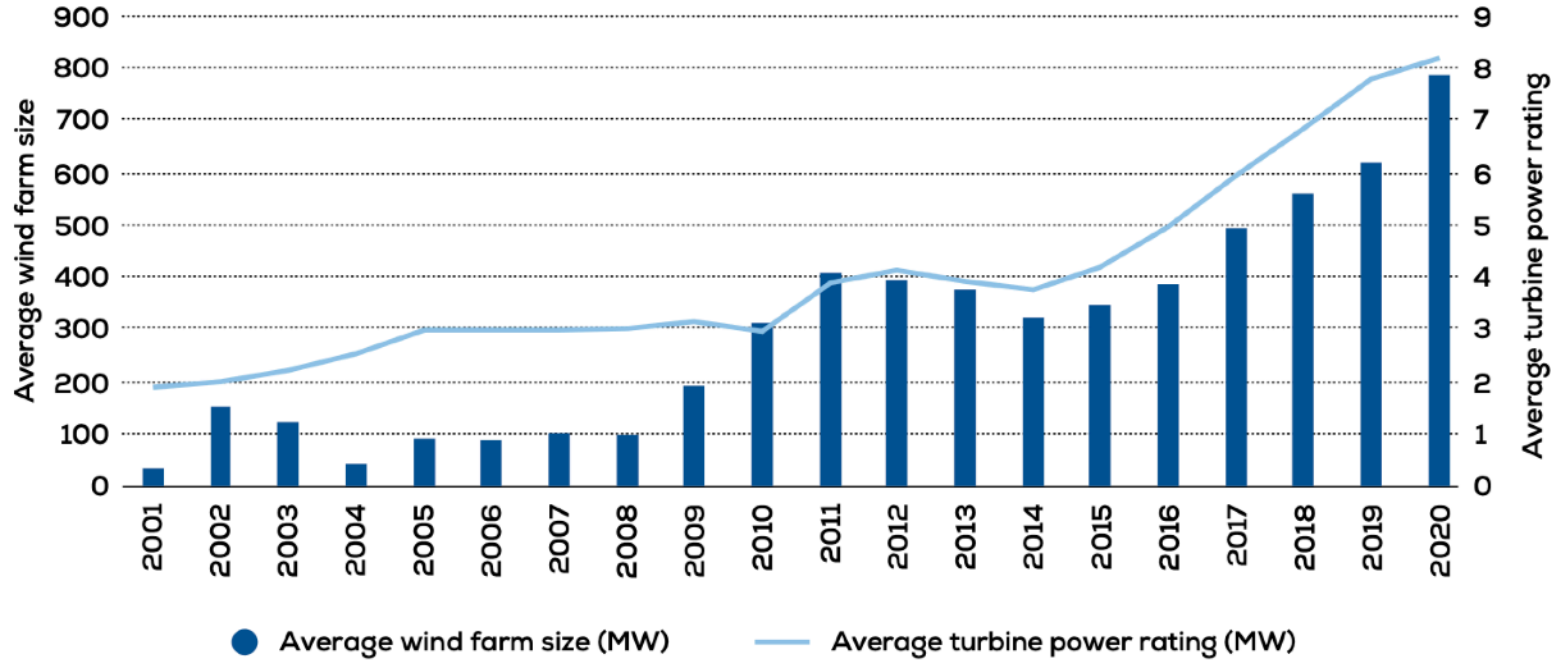
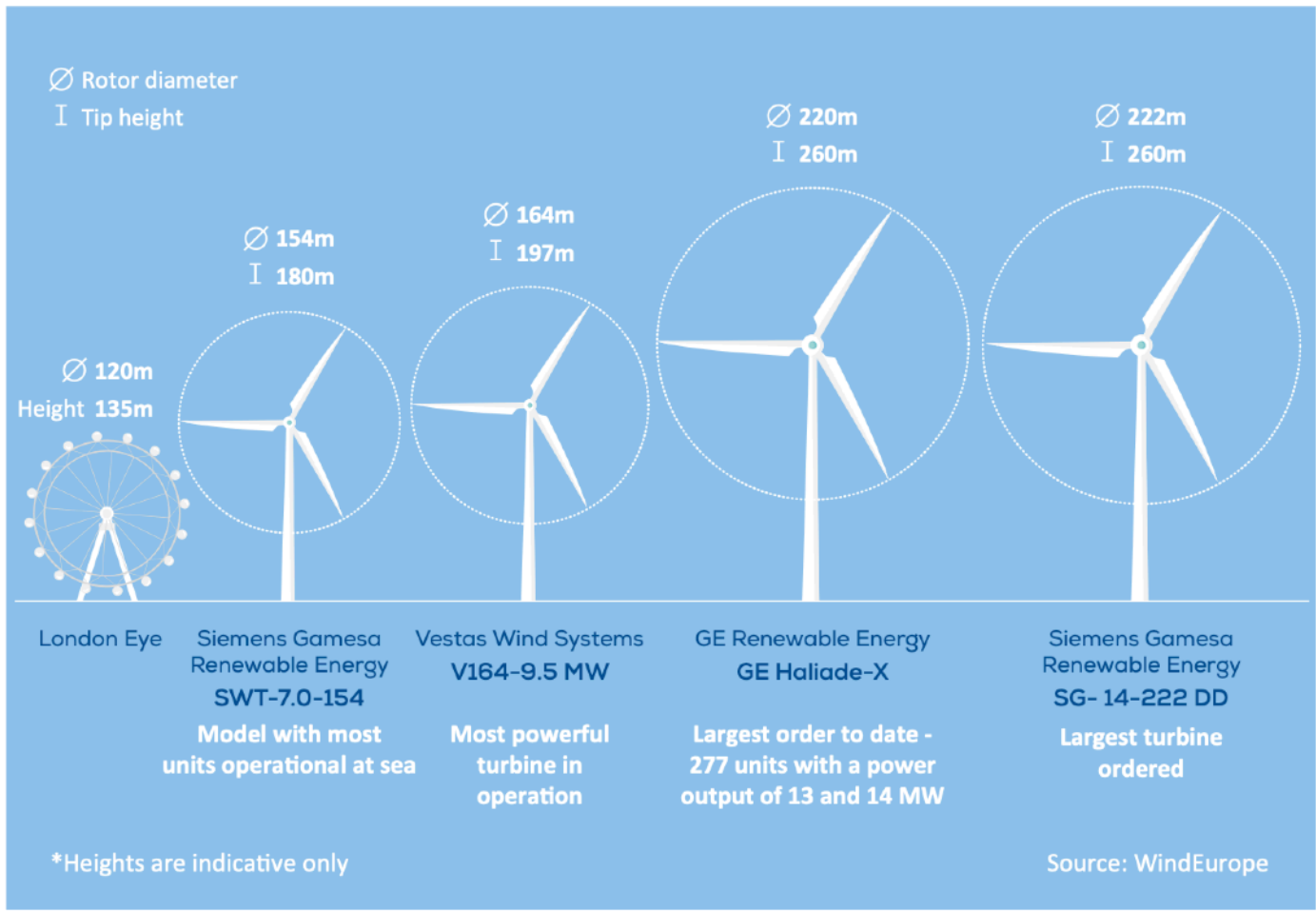
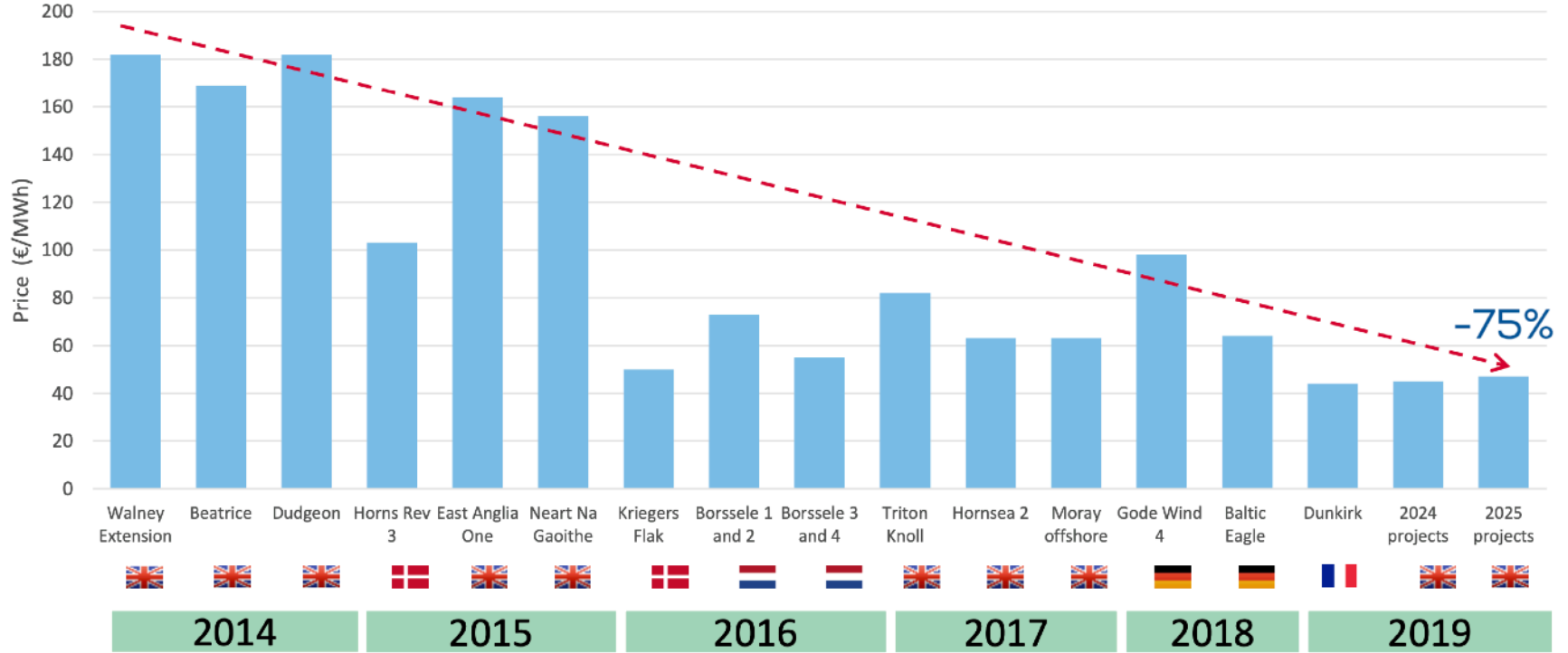


Figure 6. Average annual installed wind farm size and average turbine power rating for offshore wind in Europe.





Auction results



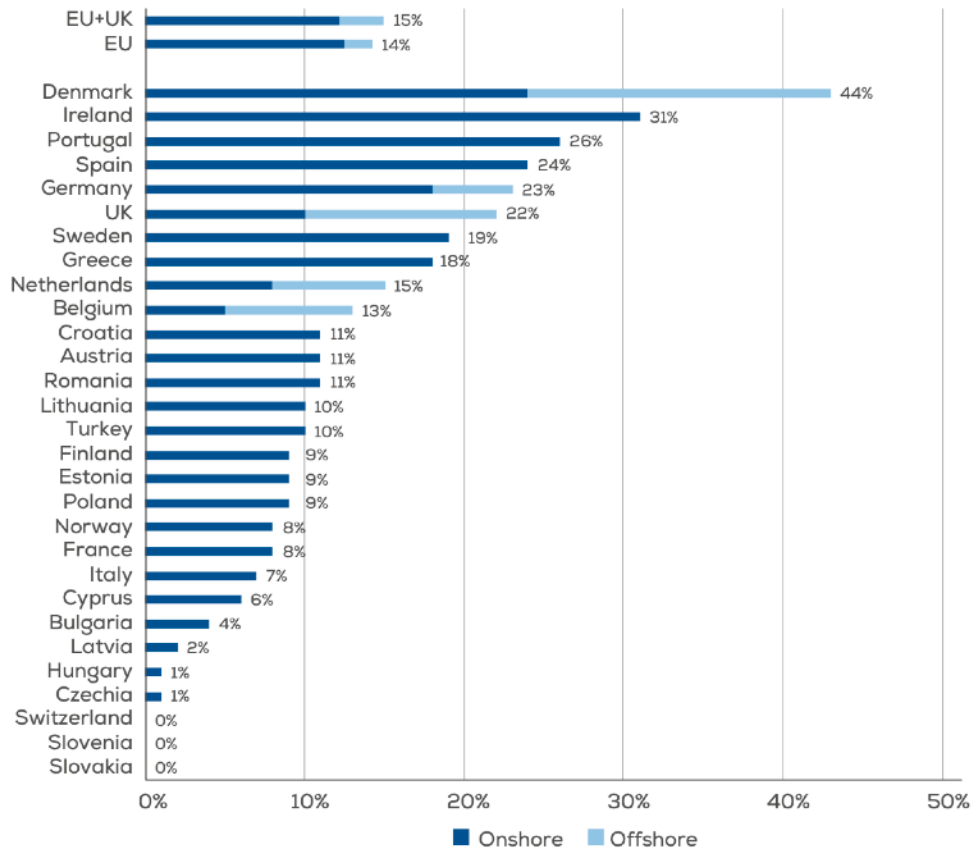
Source: WindEurope



STATUS & CHALLENGES



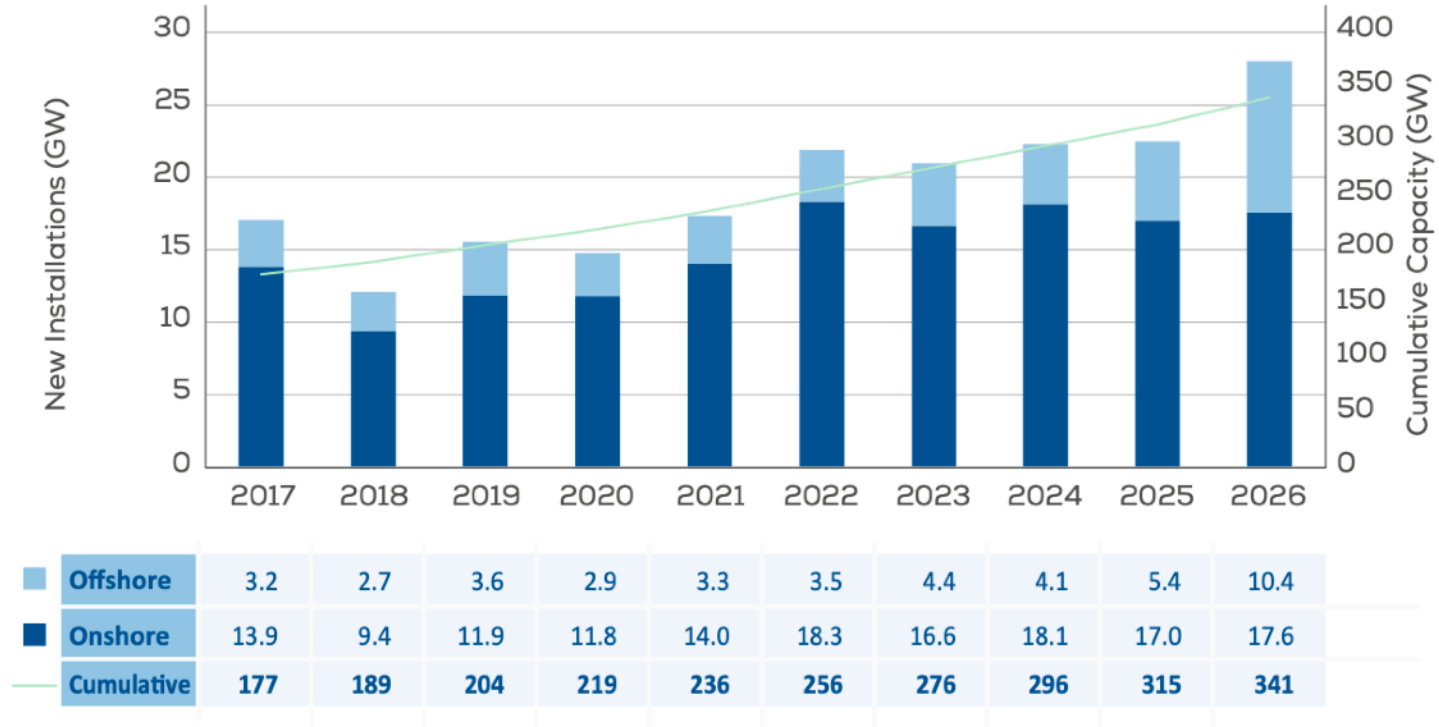
Percentage of the average annual electricity demand covered by wind in 2021¹⁴



Source: WindEurope



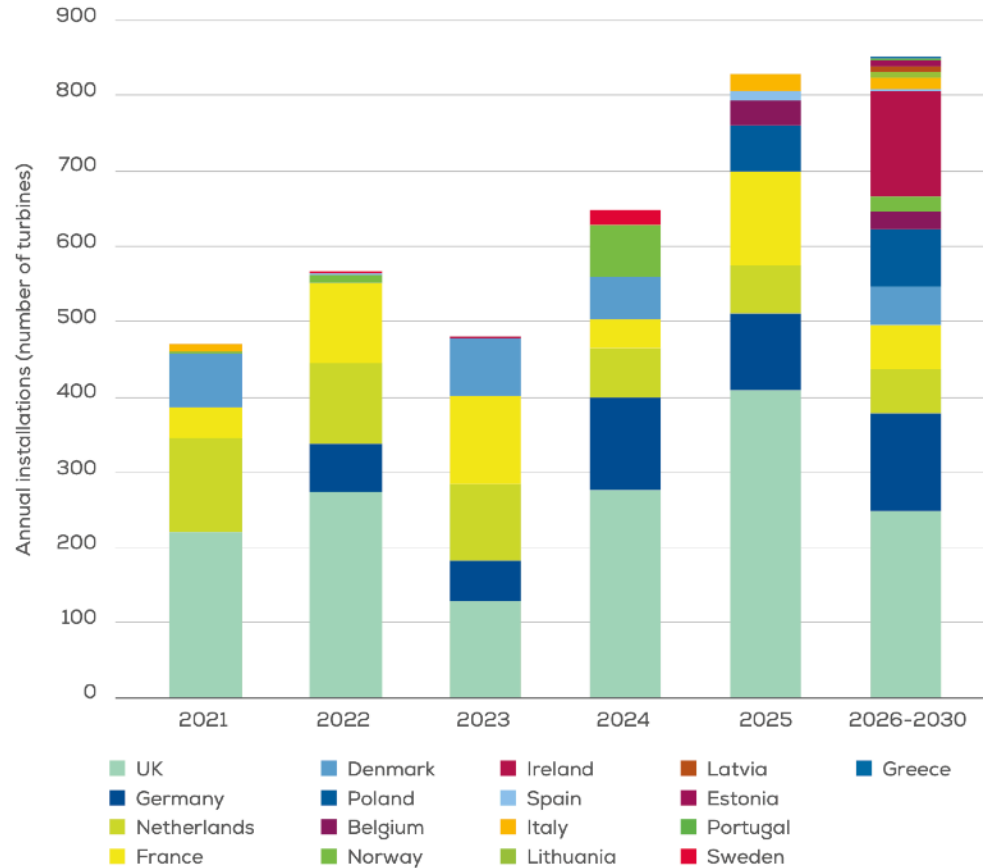
Expected new installations 2022-26 - Realistic Expectations Scenario



Source: WindEurope



Estimated number of turbines to be installed over the next decade

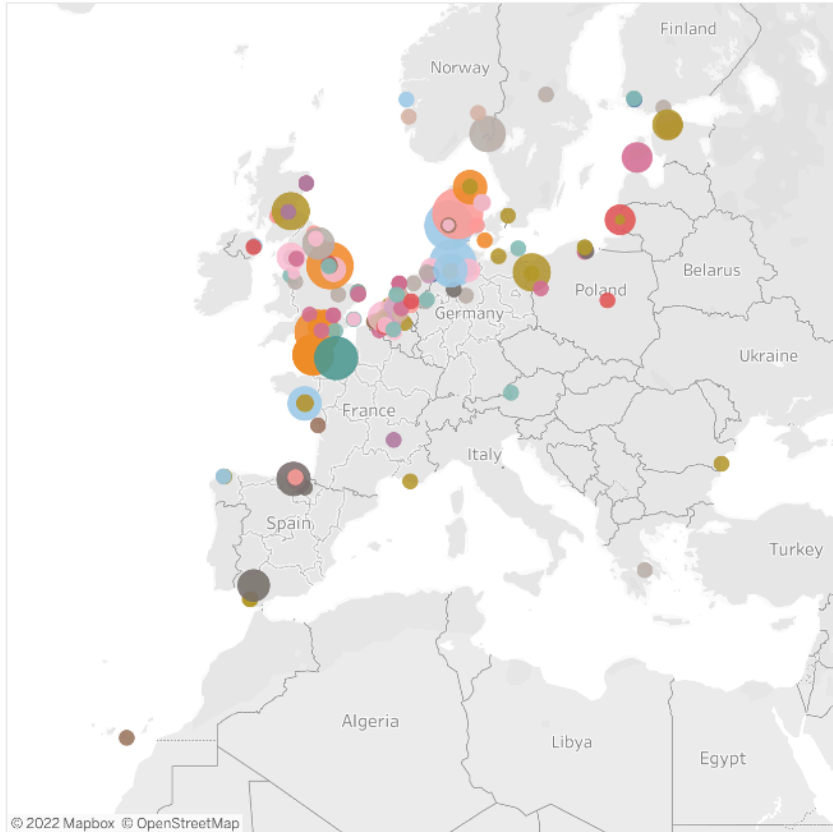


Source: WindEurope



Wind supply chain map

Regional Map



Onshore or Offshore

- Null
- Both
- Offshore
- Onshore

Type (map)

- Assembly
- Blades
- Cables
- Components
- Construction
- Foundations
- Generators
- Grids
- Logistics
- Nacelles
- O&M
- Operations
- Other
- Port
- R&D
- Towers

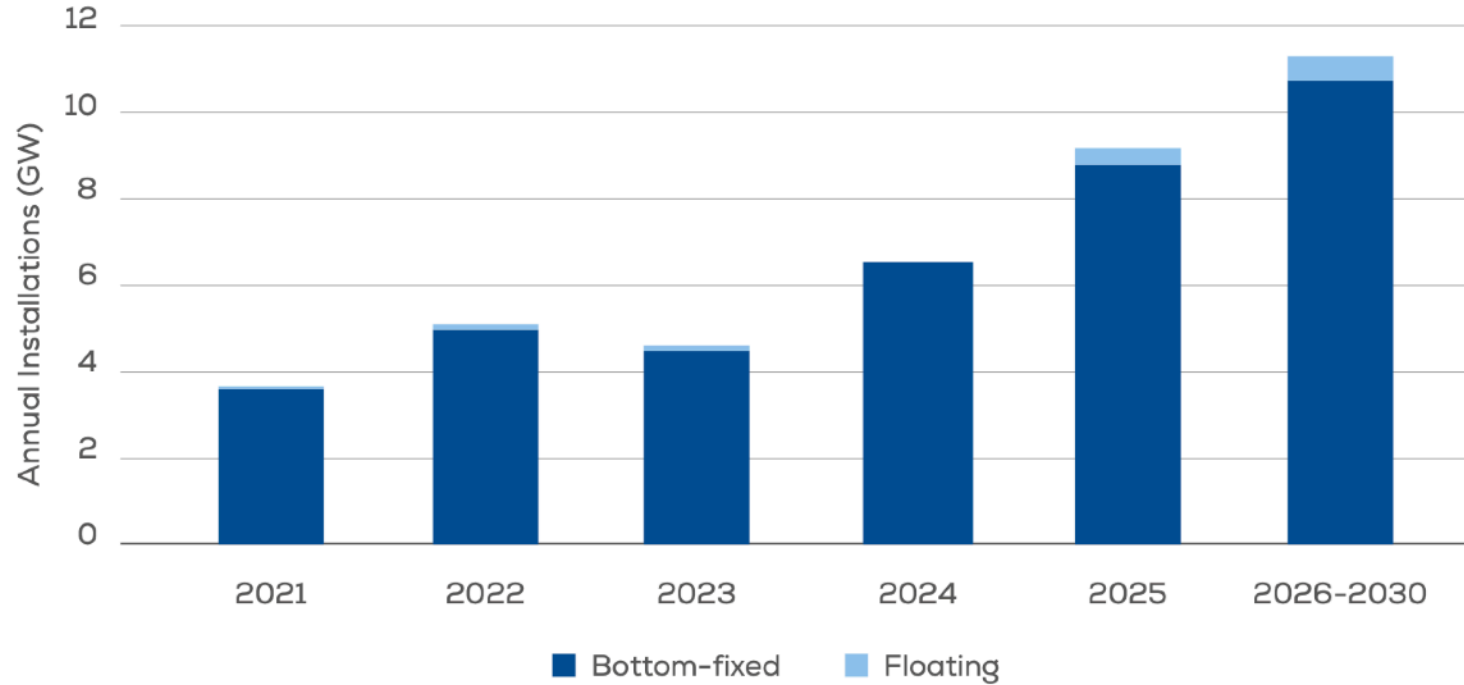
Company

(All) ▾

Source: WindEurope



Estimated share of bottom-fixed and floating wind in the next decade



Source: WindEurope



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