



9 Offshore

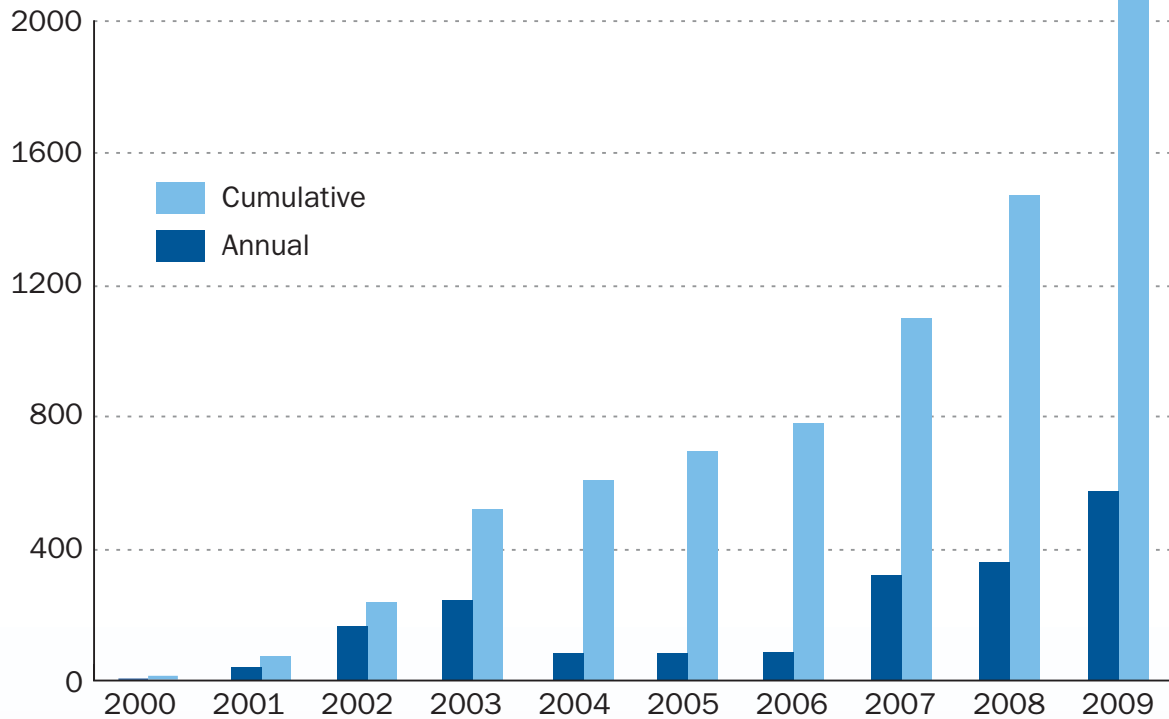
➔ Europe's offshore winds can bring a new, multi-billion euro industry with thousands of green jobs, a new renewable energy economy, with Europe established as the world leader in a technology that provides clean, indigenous and affordable electricity.

Did you know?

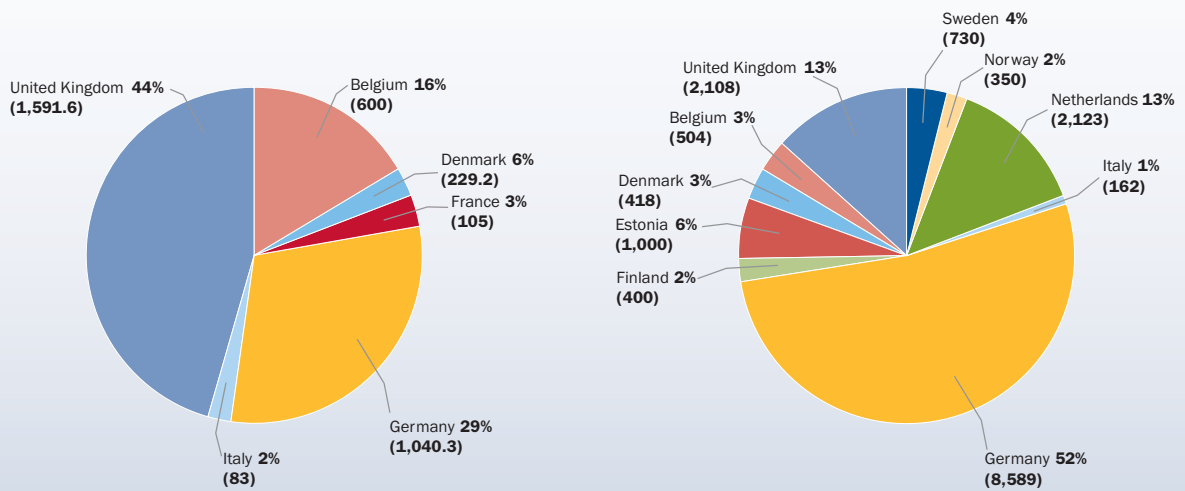
- ➔ There is enough wind around Europe's coasts to power Europe seven times over.
- ➔ Europe is the world leader in offshore wind with a cumulative capacity of 2,063 MW spread across 39 offshore wind farms in nine European countries.
- ➔ Other offshore wind projects totalling over 100 GW are already in various stages of planning. If realised, these projects would produce 10% of the EU's electricity whilst avoiding 200 million tonnes of CO₂ emissions each year.

Photo: Risø Institute

Annual and cumulative installed offshore capacity in MW 2000-2009



Share of offshore wind capacity under construction / Share of consented offshore wind capacity per country



Source: EWEA

Offshore wind energy could become a new multi-billion € industry.

What are the offshore figures?

- ➡ In 2009, 582 MW were connected to the grid in Europe. This represents a growth rate of 56% compared to the 374 MW installed during 2008.
- ➡ The UK and Denmark are the current leaders, with a 44% and 30% share of total EU capacity. In 2009, five countries built new offshore wind farms: UK (284 MW), Denmark (237 MW), Sweden (30 MW), Germany (30 MW), Norway (2.3 MW).
- ➡ EWEA has a target of 40 GW of offshore wind in the EU by 2020, implying an average annual market growth of 28% over the coming 12 years.
- ➡ For 2010, EWEA expects the completion of 1,000 MW more of offshore wind capacity, equivalent to a market growth of 71% compared to 2009.
- ➡ 2009 market growth was 56% compared to 2008, so provided certain other steps are taken, EWEA's 2020 target could be met and even surpassed.

What other steps need to be taken?

- ➡ A Europe-wide offshore electricity grid must be put in place to bring power from where the wind is blowing offshore to where the electricity is consumed.
- ➡ This would smooth the variability of the wind power produced and improve the ability to trade electricity within Europe, boosting Europe's energy security.
- ➡ The supply chain needs to be developed so there are no bottlenecks, such as a lack of installation vessels.
- ➡ Maritime spatial planning should be put in place to give the industry long-term visibility and allow forward planning.
- ➡ Offshore research and development needs to be well funded to maintain Europe's technological lead.





Photo: E.ON

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