Seas of change: offshore wind energy

Offshore expansion key to a sustainable and stable energy future for Europe

The offshore wind industry is flourishing. EWEA statistics show that a total of 1,471 MW was installed worldwide by the end of 2008, all of it in EU waters.

Since December 2007, the number of countries that host offshore wind turbines has increased from five to nine – that is, one third of EU Member States.

In 2008, Europe installed 357 MW, equivalent to almost 1 MW of offshore capacity being added every single day.

EWEA has three scenarios for offshore: low, reference and high, depending on the key criteria for offshore development.

According to the reference scenario, there will be 3.5 GW of offshore wind in the EU in 2010, 35 GW in 2020 and 120 GW in 2030.

Strong future development depends on a European legislative framework for offshore wind being put in place, upgrading, extending and reinforcing the grid and the streamlining of planning issues as well as a better supply chain.

What are the advantages of offshore wind?

It has stronger, more constant winds than on land – winds off the UK coast are strong enough to cover the country's electricity demand three times over.

Offshore turbines generate electricity 70-90% of the time.

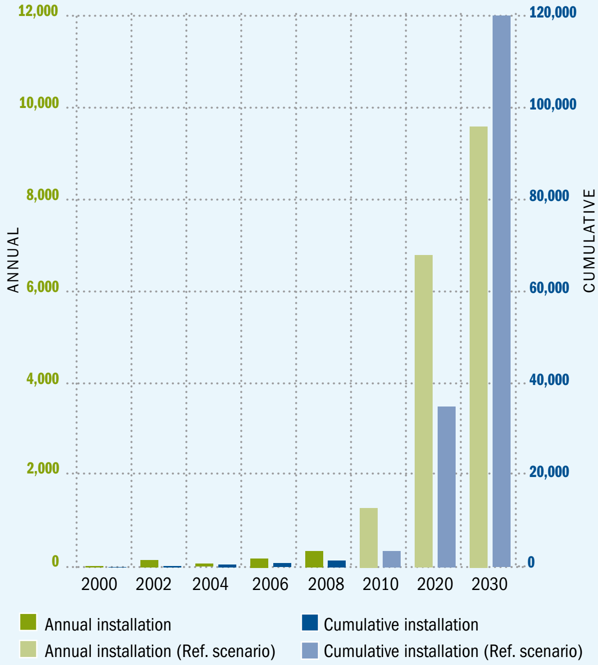
Offshore wind energy provides an indigenous energy supply for Europe.

40 GW of offshore wind energy (EWEA's high scenario target for 2020) would save 105 million tonnes of CO_2 – about 30% of the EU's Kyoto commitment, saving €3 billion (CO_2 at €25/t).

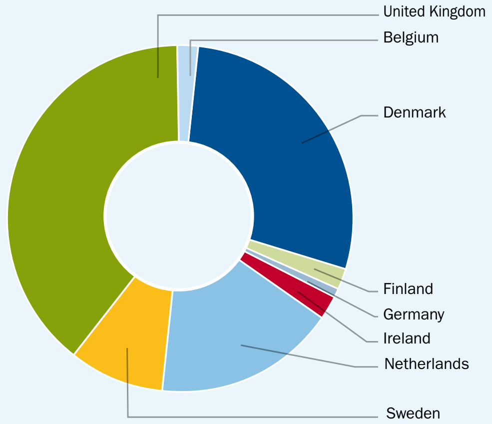
Europe is the leader in offshore wind technology and installation.

Offshore wind provides jobs and regenerates marine areas.

Offshore wind market development in the EU up to 2008 and EWEA's scenarios up to 2030 (MW)



Operational offshore wind farms



United Kingdom	39%	590,80 MW
Denmark	28%	409,15 MW
Netherlands	17%	246,80 MW
Sweden	9%	133,30 MW
Belgium	2%	30,00 MW
Ireland	1%	25,20 MW
Finland	2%	24,00 MW
Germany	1%	12,00 MW
TOTAL		**1,471,33 MW**

Key objectives

- Put in place a European policy framework for offshore wind power. The European Commission's Communication on offshore wind, published as part of its Strategic Energy Review in November 2008, is the first step towards such a policy framework.
- Upgrade, extend and reinforce the electricity grid to accommodate large amounts of offshore wind energy. In its 2008 Strategic Energy Review, the European Commission made a commitment to publish a Blueprint for a North Sea offshore grid.
- Optimise the supply chain, linking the different regions and avoiding bottlenecks.
- Ensure that the project authorisation process is transparent, and regulation of the different marine activities (fishery, shipping, offshore wind) well-coordinated.
- Establish long-term, stable markets.
- Prioritise funding for offshore research and development, with clear benchmarks and demonstration programmes.
- Ensure that Member States adapt regulations to cover both their territorial waters and their economic exclusive zone (370km from the coast).
- Make sure that Member States improve planning procedures and implement the use of marine spatial planning instruments.

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EWEA supports WIND POWER WORKS

EWEA THE EUROPEAN WIND ENERGY ASSOCIATION

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