



Did you know?

There are many amazing facts and figures about wind energy – here's our top ten!

embrace the revolution
www.embracewind.com

1. The UK is the windiest country in Europe, so much so that we could power our country several times over using this free fuel.
2. A modern wind turbine is designed to run continuously for over 20 years, or for 120,000 hours. By comparison, the design life time of a car engine is 20 times less at only 4,000 to 6,000 hours.
3. Wind turbines are a remarkably robust technology, designed to be operated remotely, needing only 40 hours maintenance time per year. There are wind turbines installed and generating electricity in the desert, the Arctic and even in the North Sea.
4. A typical turbine in the UK will generate over 4.7 million units of electricity each year, that's enough to make 170 million cups of tea a year, to run a computer for 1620 years, or to meet the electricity demands of more than 1,000 homes each year.
5. The blades on a modern wind turbine sweep 48 tons of air every second, that's the same weight as 10 elephants or 5 double decker buses.
6. Every unit of electricity from a wind turbine displaces one from conventional power stations: wind turbines in the UK currently prevent the emission of one and three-quarter millions tonnes of carbon dioxide each year.
7. The impetus for modern wind turbines came with the oil crisis of the mid-70s and the technology advanced so rapidly that wind energy is listed as one of the top ten inventions of the 1980's.
8. In the last 20 years, the power production of wind turbines has increased by a factor of 100, while the costs of generating electricity from the wind has fallen by 80%.
9. Wind is the fastest growing energy source worldwide, and has been for over a decade with an annual growth rate of 30%.
10. The global wind industry has an estimated annual turnover of £5.5 billion, 84% of which is based in Europe.

References

1. Selzer, H, 1986, 'Wind Energy: Potential of Wind Energy in the European Community', published by D Reidel, Dordrecht, Holland, cites a technical wind potential onshore in the UK of 1760 TWh, compared a total consumption of 348.2 TWh in 2003 (UK Energy in Brief, July 2004, pp19)
2. EWEA, 'Wind Energy - The Facts – an analysis of wind energy in the EU-25', Feb 2004, available online at www.ewea.org/06projects_events/proj_WEfacts.htm
Query with Andrew Garrad: problem is that 20 years with 8760 hours in them is actually 175,200 hours (or inverse 120,000 hours is only 13 and a half years). (also, theoretically means that cars are designed to last for only 8 months if you drove it all day, every day ...)
3. EWEA, 'Wind Energy - The Facts – an analysis of wind energy in the EU-25', Feb 2004, available online at www.ewea.org/06projects_events/proj_WEfacts.htm
4. Based on standard industry calculations, assuming a typical modern wind turbine rated at 1.8 MW, and an average annual domestic electricity consumption of 4700 kWh. See www.bwea.com/edu/calcs.html
5. BWEA calculation assuming 40m rotor radius, 8m/s wind speed and density of air 1.2 kg/m³
6. Standard industry calculations assuming typical emissions from coal-fired plant of 860g CO₂/kWh and 767.4 MW generating wind capacity installed. See www.bwea.com/edu/calcs.html
7. From "Inventing the 20th Century: 100 inventions that shaped the world", published on 11th September by the British Library.
Contact the Press Office on 020 7412 7111 or press-and-pr@bl.uk <mailto:press-and-pr@bl.uk>
(Admittedly it came 10th, but then cold fusion only made it to third!)
8. EWEA, 'Wind Energy - The Facts – an analysis of wind energy in the EU-25', Feb 2004, available online at www.ewea.org/06projects_events/proj_WEfacts.htm
9. EWEA, 'Wind Energy - The Facts – an analysis of wind energy in the EU-25', Feb 2004, available online at www.ewea.org/06projects_events/proj_WEfacts.htm.
10. AWEA & EWEA, Global Wind Power Growth, March 2004, cites €8 billion installed in 2003. See www.ewea.org/documents/0310%20FINAL3%20%20Global%20Markets%20Release1.pdf and Germany, Spain and Denmark as 3 leading countries in www.ewea.org/documents/0203_EU2003figures_final6.pdf