

BWEA Briefing Sheet

Benefits of Wind Energy



The case for wind energy is simple: it is renewable, economic, safe and good for the environment.

Let's Save Emissions

Electricity generated from the wind replaces generation from conventional power stations, thus preventing the emissions of several greenhouse gases, including carbon and sulphur dioxides. Wind turbines in the UK currently prevent the emission of one and three-quarter million tonnes of carbon dioxide each year.

Energy Security

Our energy future is uncertain. As energy demand increases, our country's traditional fuels of oil, coal and gas are running out. By 2020 we may need to import gas to cater for up to 80%¹ of our electricity needs. We would be both literally and metaphorically near the end of the line for fossil fuels and any interruption in that supply could leave us without power. The wind is a free energy source, widely available and will never run out. Electricity generated from the wind will be vital in building a secure and sustainable energy future that will help keep the lights on in Britain.

Jobs and the Economy

Wind energy is the fastest growing energy sector in the UK creating jobs with every megawatt installed. To date, over 4,000 jobs are sustained by companies working in the wind sector, and this is projected to increase as the industry grows². The Department of Trade and Industry³ has estimated that Round Two of offshore wind developments alone could bring a further 20,000 jobs for Britain.



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Recent examples of industry growth in the UK include the Vestas (previously NEG Micon) manufacturing facility on the Isle of Wight which employs over 500 people, 420 of whom live on the island, making this company one of the island's largest employers. The German turbine manufacturer DeWind was acquired by UK company FKI in 2002 and employs around 400 people manufacturing complete wind turbines in its plant in Loughborough. In addition to manufacturing, various other sectors are involved in wind energy development, ranging from environmental consultancy, electrical and civil engineering to financial and legal services.

Community Benefits

Wind energy can bring many benefits. Local energy generation creates local jobs, both in the construction and ongoing maintenance of wind energy projects, bringing direct economic benefits to communities.



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Financial help is available for households and communities to install wind turbines through schemes such as the Clear Skies Renewable Energy Grants⁴ and the Scottish Community and Householder Renewables Initiative⁵, while schemes such as Defra's Rural Enterprise Scheme⁶ and the Agricultural Business Development Scheme in Scotland are available to farmers and agricultural businesses.

In addition, some wind energy developers give direct financial benefits to local communities who can spend this income on their choice of environmental or educational projects. Generally this is in the region of £1,000/MW annually for local projects which have included for instance energy efficiency programmes.

Local Electricity Generation

Wind energy can be generated locally and distributed directly to the local distribution network; this is known as embedded generation. This reduces the distance over which electricity has to travel, meaning less electrical losses in transmission and distribution, and therefore saving energy.

The benefits from local electricity generation are particularly valuable in areas remote from centralised systems and where the transmission or distribution grid is weak. Local energy generation will also be of great importance as the UK's fossil fuel sources start to run out and wind energy can partly ensure that we will not be all dependant on energy imports.



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It's Safe!

Last but not least, wind energy is one of the safest energy technologies, and enjoys an outstanding health & safety record. In over 20 years of operating experience and with more than 50,000 machines installed around the world, no member of the public has ever been harmed by operating wind turbines. High standards exist for the design and operation⁷ of wind energy projects as well as close industry co-operation with the certification and regulatory bodies in those countries where wind energy is deployed.

Wind energy is a benign technology with no associated emissions, harmful pollutants or waste products. Part of its popularity can be attributed to its safe and reliable method of operation.

1 DTI (2003), Joint Energy Security of Supply Working Group (JESS), DTI and Ofgem, Third Report, November 2003

2 DTI (2004), Renewable Supply Chain Gap Analysis, www.dti.gov.uk/energy/renewables/publications/pdfs/renewgapreport.pdf

3 DTI Press Release, 14 July 2003, Hewitt Announces Biggest Ever Expansion in Renewable Energy

4 Clear Skies, www.clear-skies.org

5 Scottish Community and Householder Renewables Initiative, www.est.org.uk/schri/

6 Rural Enterprise Scheme, www.defra.gov.uk/erdp/schemes/res/default.htm

7 BWEA (1994), Best Practice Guidelines for Wind Energy Development, www.bwea.com/ref/bpg.html