



BWEA

Facts on Wind: Top 7 wind farm myths dispelled

1 **Myth: Wind farms reduce nearby house prices.**

Fact: Recent UK studies show no clear relationship between the proximity of wind farms and property prices.

A 2007 survey by the Royal Institute of Chartered Surveyors on the potential impact of wind farms on house prices concluded that "proximity to a wind farm simply was not an issue." Estate agents in the case study areas analysed reported that there were generally other factors that had a more significant effect on property prices than a wind farm.

A Scottish Executive study found that those living nearest to operating wind farms are their strongest advocates, stating: "The overwhelming majority of people living within 20 km of a wind farm support an increase in the proportion of electricity generated in Scotland through the use of wind power over the coming 15 years (82%), while just 2% feel that there should be a reduction."

In the world's most comprehensive study on the subject to date, the USA's Renewable Energy Policy Project compiled a survey of house values in the vicinity of wind turbines compared with those with no turbines in the vicinity. They examined 24,300 property transactions from 10 locations within the US over a period of six years; and concluded that there was no evidence to suggest that wind turbines sited within a five mile radius of property had a negative impact on value. In fact, property values appeared to rise above the regional average within the case study locations, suggesting that wind turbines actually had a positive effect on value.

2 **Myth: Wind farms are noisy.**

Fact: A 2007 Salford University survey showed that the occurrence of complaints about wind turbine noise is very low.

In 2007, as part of research into wind farm noise commissioned by the government, the University of Salford surveyed all local authorities in the UK where wind farms were in operation. Out of all UK wind farms (133 at the time of the report, some operating for up to 16 years), only one wind farm has ever been found guilty of causing a nuisance to the nearest residents – and the issue has since been resolved through management of the turbine control system. In comparison, the report highlights that in one year alone (and for only 69% of local authorities in England and Wales, not the entirety of the UK), there were 39,508 cases of noise nuisance not related to wind farm noise."

To summarise, advances in wind turbine technology mean noise levels are difficult to detect or inaudible at distances to housing prescribed by planning guidelines.

The strict guidelines on wind turbines and noise emissions contained in the 'ETSU Working Group' guidelines are reflected in national planning policy for renewable energy developments. Local authorities also have the power to impose additional limits.



3 Myth: Wind speeds vary, so wind farms need 'back up capacity' from traditional energy sources.

Fact: In 2009 three reports published by respectively the National Grid, energy company Poyry and a coalition of non-governmental organisations, produced the same conclusion: large amounts of wind energy capacity on the system need relatively small amounts of back up.

Commenting on additional fossil fuel capacity required as back up once the UK has 33GW of installed wind capacity, the National Grid stated that only around 7GW to 10GW will be required, up from around 3.5GW used as back up today. The report by four leading UK NGO's claimed that "thermal plant breakdowns generally pose more of a threat to the stability of electricity networks than the relatively benign variations in the output of wind plant."

An earlier UK Energy Research Centre report reviewed more than 200 studies on intermittency and none showed that introducing significant levels of renewable energy to the grid would lead to reduced reliability. It also found that "100% 'back up' for individual renewable sources is unnecessary; extra capacity will be needed to keep supplies secure, but will be modest and a small part of the total cost of renewables."

In addition, energy experts see the problem of balancing the grid covered by a combination of retained capacity, greater interconnection between energy markets (including the super-grid) and demand side management, including smart metering.

4 Myth: Wind power development uses more energy than it generates.

Fact: Modern wind turbines pay back the energy used in manufacture within 2–10 months depending on the wind speed of the site and the type of turbine used

Wind turbines generate electricity without generating carbon dioxide or any other greenhouse gases, the fuel is cost free, and it will never run out. Most turbines have a life expectancy of 20–25 years, so they will generate at least 24 times the energy used in manufacture and installation.

At the end of a wind farm's working life, the area can be restored at low financial and environmental costs. The footprint of a utility-sized wind turbine powering more than 2000 homes can be as little as 16 feet (five metres) in diameter, with all the land around it being available for agriculture.

Currently, in Britain, there is close to 4GW of installed wind energy capacity, this is saving 6 million tones of coal per year, and the associated CO2 emissions of 4 329 408 tones of CO2 annually.

5 Myth: Wind farms have a negative effect on tourism.

Fact: A Scottish Government commissioned report in 2008 showed that wind farm developments have a minimal impact on tourism.

Of the visitors surveyed in the study 93-99% said wind farms would have no impact on their decision to return to Scotland. 68% said they felt positive that a 'well sited wind farm does not ruin the landscape' with a further 12% neutral about this statement.

Wind farms are also attracting visitors in their own right: the UK's first commercial wind farm at Delabole, Cornwall received 350,000 visitors in its first ten years of operation, while 10,000 visitors a year take the turbine tour at the EcoTech Centre in Swaffham, Norfolk. In a visitor survey undertaken on behalf of the Wales Tourist Board, 68% of respondents said that if the number of wind farms increased in Wales it would have no difference to the likelihood they would take holidays in the Welsh countryside. A further 9% said any impact would be negligible and only 2% said they would be 'less likely to come back'.



6 **Myth: Wind farm developments rely on Government subsidies.**

Fact: The planning and construction of UK wind farms is financed entirely with private capital, no matter what the costs are.

Furthermore, wind energy does not require Government money for any of its life cycle phases, such as decommissioning. Only when the wind farm is fully operational and starts delivering electricity to the grid, it qualifies for Renewable Energy Certificates (ROC's) for each megawatt unit of electricity it produces.

The ROC payments are fixed by the electricity market, not by the Government, and are a necessary incentive, protecting and encouraging investment in low-carbon energy technologies. All sources of renewable electricity qualify for ROC's.

According to a report by the Sustainable Development Commission, in 2007 the average cost of ROC's was £9 per household, with only a part of this going to wind energy, as the money from ROC payments was distributed to all qualifying technologies, including land fill gas, biomass and combined heat and power.

7 **Myth: Denmark has stopped building wind farms.**

Fact: Currently around 20% of Denmark's electricity is supplied by wind power, with the Danish government setting out plans to meet 50% of its electricity needs with wind energy by 2025.

There is a myth that Denmark has cancelled its wind programme – reportedly due to either the inefficiency of turbines or health risks associated with them. The reality is very different. Currently around 20% of Denmark's electricity is supplied by wind power, with the Danish government setting out plans to meet 50% of its electricity needs with wind energy by 2025. This includes doubling its wind power capacity from 3GW to 6GW.

As a stage in reaching this goal, the plans are to have an additional 1300MW of capacity by 2012, bringing the country's total to 4.4GW. Denmark has estimated that it can connect 2.25GW of offshore wind turbines and 3.5GW of onshore turbines without reinforcing its main electricity transmission grid.

Increasing support for wind energy is very much part of the Danish Government's energy policy. In Feb 2008, the Danish Climate Change Minister Connie Hedegaard said: "We are increasing subsidies for wind turbines, biogas and biomass. Never has Danish society staked so much on renewable energy as we are now doing. In the coming years we will be undertaking massive development of wind power in Denmark, especially offshore."



References

Fact 1

Royal Institute of Charters Surveyors (RICS) and Oxford Brookes University, March 2007
www.rics.org/Newsroom/Researchandreports
Public Attitudes to Wind Farms, a Survey of Local Residents in Scotland, carried out by MORI for the Scottish Executive
www.scotland.gov.uk/Publications
Renewable Energy Policy Project Report
www.repp.org/articles

Fact 2

The Assessment and Rating of Noise from Wind Farms
www.berr.gov.uk/energy/sources/renewables
Salford University Research Into Aerodynamic Modulation of Wind Turbine Noise
www.berr.gov.uk

Fact 3

UKERC: The Costs and Impacts of Intermittency
www.ukerc.ac.uk

Fact 4

Energy from Wind: An Explanation of Terms
www.berr.gov.uk
Danish Wind Energy Association
www.windpower.org
Energy White Paper: Meeting the Energy Challenge
www.berr.gov.uk

Fact 5

Visit Scotland
www.visitscotland.org
The Scottish Government
www.scotland.gov.uk/Publications
Wales Tourist Board
www.ecodyfi.org.uk/tourism

Fact 6

Reform of the Renewables Obligation
www.berr.gov.uk/files/file46838.pdf
Domestic Energy Bills and Costs of Implementing Environmental Measures'
www.sdcommission.org.uk/publications/downloads/DomesticEnergyPriceAnalysis.pdf

Fact 7

Danish Energy Agency
<http://www.ens.dk/sw67323.asp%20%20>
Danish Wind Industry Association Annual Report 2008
www.windpower.org
BWEA: Delivering the UK's Wind, Wave and Tidal Energy
www.bwea.com



Greencoat House
Francis Street
London SW1P 1DH

Tel: 020 7901 3000
Fax: 020 7901 3001

info@bwea.com
www.bwea.com