



Some questions about wind power

What are the main advantages of wind power? Free fuel, no waste, relatively quick and easy to construct, low carbon emissions at the point of generation.

What are the main disadvantages? Intermittent and unpredictable, poor output, expensive for the consumer (effectively twice the price of conventional), chaotic effect on energy markets and transmission systems, highly intrusive on a crowded island, unable to replace conventional forms of generation on the system.

If the wind is a free fuel, why is wind power expensive? For a high capital cost the output is poor. However, with no means of storing electricity on a meaningful scale, the hidden “external costs” of intermittency on the grid are probably the most expensive element. These costs increase as installed wind capacity increases. Expensive electricity pushes industry to China and India, mainly powered by coal, which is a disaster for the global environment.

EDF say their windfarm will produce enough electricity for 13,000 homes. Is that a lot? No. Homes only use 30% of our electricity; their figure is misleading because it ignores the needs of industry and infrastructure. The 61GW hours/year they say it would produce is less than half of 1% of Didcot’s output (before it was partially closed) and 0.016% of our national requirement.

Do wind turbines save carbon emissions? Taken in isolation, yes, marginally. On windy days they can reduce fuel use at other power stations. However, when considered as part of the electricity system as a whole, the answer is probably no; they drive up emissions elsewhere. Despite their huge wind installations, Germany, Denmark and Holland have the highest carbon emissions in Europe, and their consumers pay the highest electricity prices.

EDF say their windfarm would save 26,000 tonnes of carbon annually; is that a lot? No. Even if we accepted their figures, it would take 1.4 million Bullington wind farms to make 1% difference to global emissions, which are increasing at 3% per year. This is fiddling while Rome burns.

Are windfarms heavily subsidised? Yes – not by the tax-payer but by additions to our electricity bills through the ROC system. The government’s DECC website claims the ROC system is “providing £2bn/year in support for the renewables industry” (largely wind). This obscure system masks the escalating cost and social injustice of a subsidy which transfers from poor to rich, mainly to the benefit of large (often foreign) energy companies. This is a long way from the original green ideal of small-scale local renewable energy.

Is there a place for some wind power? Yes – windy, industrial landscapes and offshore (though at very high cost). But thanks to over-generous subsidies, the target of 13 GW onshore capacity by 2020 has already been met, seven years early. Government figures show that we have 6.3GW in operation, 6.7GW approved or under construction and a further 5.4GW in planning.

How much of our electricity is currently generated by wind turbines? Precious little - onshore 3.2%, with a further 2.1% from offshore. Present government policy is an increase in offshore to three times as much. But that would still leave 85% of our electricity to be generated from other sources when the wind is blowing, or nearly 100% when it is not. See the Renewable Energy Foundation data on www.ref.org.uk

How many wind turbines would we need to provide 20% of the country’s energy? Double the entire wind turbine fleet of the world, completely covering an area the size of Wales (Prof David Mackay). But we would still need all our nuclear and fossil fuel power stations when the wind drops. Nuclear and coal provide constant,

reliable base-load electricity. Gas and hydro are best for dealing with sudden rises in demand (called peak following power). Wind can do neither, so cannot replace nuclear, coal or gas. It is additional energy (at random times), not alternative energy. We pay for two systems instead of one.

But isn't the wind always blowing somewhere across the UK? It is not uncommon for the whole of the UK and much of Northern Europe to be becalmed at the same time.

Why are so many windfarms being built? It is the cheapest and quickest way for energy companies to harvest the available subsidies, encouraged by a policy formed over the last 15 years by "...political motives and ideology, lobbying and rent-seeking by companies in the wind business, a profound misunderstanding of the markets in which renewables have to compete." (Professor Dieter Helm)

Aren't we running out of fossil fuels? Unfortunately not. Fracking in America has transformed the outlook to potentially hundreds of years of supply of gas. It is still a fossil fuel, but gas has half the carbon emissions of coal. Fracking may or may not be right for Britain, but the current problem is too much fossil fuel, not too little.

At what wind-speed does a wind turbine start generating electricity? The blades start turning at about 8mph, but only above 14 mph do turbines generate more than a trickle of electricity. Peak output is reached at around 34mph and at 56mph the turbine is shut down for safety. Met Office data from Middle Wallop shows that, on average, there are only 6 days per month when wind turbines in this area would generate more than a trickle of electricity.

Surely they wouldn't want to build it if it produces so little electricity? The current subsidy regime and tax advantages make it highly attractive financially for wind developers, even on marginal sites. The site near Bullington is not the windiest in Hampshire nor even the windiest in Basingstoke and Winchester Districts.

Are wind turbines inefficient? It does not matter whether they are efficient or not in converting wind into energy – wind as a fuel is free. The question is whether windfarms in Hampshire are an efficient use of scarce financial and environmental resources in providing a reliable electricity supply and reducing carbon emissions – the answer is no.

Do wind turbines harm wildlife? The actual number of birds killed is not usually high, but certain species are especially vulnerable; lapwings, ospreys, owls, and skylarks, for example. Small losses can trigger long term declines. The effect on bats is more serious and their populations can be severely affected.

Are wind turbines noisy? There is now an extensive international body of evidence that low frequency noise, under certain weather conditions can cause sleep deprivation and stress related illness up to a distance of 3km. See www.windbyte.co.uk

Do wind farms affect property values? Of course they do, despite what the wind industry tells you. Valuers now sometimes ask "Are any windfarms proposed in the vicinity?" and some councils have reduced council tax of properties affected. Learn more about this and other issues around the UK and abroad by visiting www.countryguardian.net

What are the alternatives? There are some promising advances in tidal energy. A moving body of water contains 1000 times the energy of the same volume of wind, and it is generally more predictable. There are indications that the efficiency of solar panels can be doubled. China and India are pouring money into researching thorium power. It has huge potential, would be safer, has negligible radioactive waste and the world has 60,000 years of known reserves of fuel. In the meantime, converting our coal power stations to gas would immediately save 55 million tonnes of carbon annually, far more than the planned 33 GW of windmills. Tax revenues from gas could fund serious research and development. But while the wind industry scoops up huge resources, funding for research into more promising alternatives is restricted.

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