

Wind Farm Report

Last Thursday was an important day for the thousands of people fighting to protect their community from poorly sited onshore wind farms. The backbench business committee allocated me a 3 hour debate to discuss onshore wind farms and their impact on Britain's landscape.

The debate about onshore wind farms goes to the very heart of the battle between 'localism' and the 'national interest'. It is true that there are genuine issues of national interest that must be taken into account - the failure of the last Government to plan to meet our future energy needs is second only to their catastrophic economic legacy. The shocking fact is that between now and 2020, some 35% of British power generating capability through nuclear and conventional power stations will be retired due to old age with nothing yet ready to replace them. The Department for Energy and Climate Change is working flat out to plug the energy gap but it's a tall order.

The second challenge where national need is battling against local need is in the area of energy security and our dwindling North Sea gas reserves. We are now a net importer of gas and will increasingly rely on potentially unreliable sources for imports, so there is a great need to rebuild our own generating capability. The third issue comes from the binding EU target that Labour signed us up to, requiring that we achieve 15% of our total energy from renewables by 2015. It's not clear that this is achievable even with the massive 'race for onshore wind' begun by Labour. A more realistic option would be to measure 'net' carbon emissions thereby taking into account measures to insulate and otherwise reduce energy usage.

At present Britain has around 350 operational wind farms, 260 either under construction or awaiting construction and 250 at the planning stage. That means that there are already 3,000 turbines in the country, with another 6,500 either awaiting construction or planning permission. To meet the 10,000 turbines needed to ensure that we hit our 15% renewable target by 2020, the rush over the last decade has been for onshore wind.

The scepticism of whether wind energy can meet these challenges is not confined to the UK. Denmark has led the way on onshore wind. It now has more than 6,000 wind turbines for a population of just over 5 million people. In theory, wind turbines could provide for one fifth of Denmark's energy needs, but its national power company has stopped supporting new onshore wind turbines, for three reasons. The first is the enormous public backlash. Communities have just had enough. Secondly, electricity prices in Denmark are the highest in Europe. Since 2005, subsidies paid by businesses and consumers to wind farm developers have totalled some £620 million. However, the key reason why Denmark is putting a stop to onshore wind farms is its effectiveness. Electricity generated in Denmark could provide for 20% of its total needs, but not much of it is used in Denmark. When the wind blows there is no storage facility, so the country sells much of its surplus energy to Norway, Sweden and Germany, often at a substantial loss.

Another issue for Denmark is that the Danes have failed to close a single conventional power station whilst they have developed wind energy. Wind turbines only produce electricity when the wind blows. The Danish found that a back up supply of power was always needed for when the wind was not blowing. Therefore, no power plants have been turned off and

furthermore, the Danes have found that it is not practical for large baseload plants to be turned on and off as the wind dies and rises, in fact the quick ramping up and down of these plants would actually increase their output of pollution and carbon dioxide.

What does that mean for the UK? First, we know that wind farms are unreliable. The intermittency causes a problem for the grid. Too much wind means that the turbines have to be turned off. No wind means that they are useless. Wind cannot be stored, and in the UK the average production from wind turbines is about 30%. That means that the theoretical capacity of 100% is only achieved to the tune of 30% on average because of the intermittency of wind. We therefore have to keep all our power plants going to provide a back-up source and we will have to build new power plants anyway.

Secondly, last December, when temperatures dropped to an average of minus 0.7° and demand for heat rose by 7%, there was no wind. Wind power did not contribute at all to meeting a 7% increase in demand for heat.

Thirdly, we have to consider the costs. It is difficult to establish the relative costs because energy prices move all the time, but roughly speaking, wind energy costs about two and a half times the price of nuclear energy and twice the cost of traditional fuel sources. However, it is not just the fuel itself. There is also the cost of building the turbines. The costs of the raw materials for that are increasing, and as the demand for wind turbines increases, so does the cost of building them.

Finally, there is the cost of upgrading the grid to deal with the enormous amount of new connectivity that will be needed by 2020 if we are to have a total of 10,000 onshore wind turbines. The cost has been put at around £5 billion.

In 2008, the Centre for Policy Studies predicted that meeting the 2020 renewable target would require a taxpayer subsidy of between £4 billion and £5 billion a year. That would add £3,000 to the total fuel bills of every household, this figure excludes the cost of updating infrastructure and it takes no account of the fact that, in 2009, 4 million households were already in fuel poverty.

I am delighted that the Government have announced that they intend to share the financial benefit of onshore wind farms with communities. That is important because there is no doubt that taxpayers are already paying a huge price through increased energy bills to pay for the Renewable Obligation Certificates (ROCs).

The greatest cost of onshore wind farms that is probably also the hardest to quantify is the impact on communities. Hundreds of campaigners are fighting against having wind farms in their areas. Their concerns are wide-ranging. They include visual concerns: many of the new wind turbines are bigger than Big Ben and taller than the London Eye; they are said to intimidate villages and ruin areas of outstanding natural beauty, the flicker caused by rotating blades in the sun is disturbing to many and there is much local disturbance while they are being built.

Turbines are also audible at a great distance - potentially, as far as two miles with the sound being constant 'white noise' that never goes away and is often noisiest at night. The impact on wildlife is substantial. A survey estimates that each turbine kills between 20 and 40 birds a year and larger animals, such as horses, find them frightening. Another key concern cited by

communities is interference with television and radio. Emergency services are concerned about the impact on their frequencies and the Ministry of Defence has expressed concern about interference with radar.

Only one in three wind farms are approved by democratically elected local authority planners with many applications being approved on appeal. Perhaps the most frustrating planning point is that developers don't have to justify that their proposed site is windy!

Whilst I accept that onshore wind has its part to play in generating renewable energy, I conclude that the benefits of onshore wind have been hugely exaggerated by the developers who stand to make huge sums from the taxpayer incentives. In addition, we are genuinely adding to fuel poverty in this country and costing consumers and businesses billions of pounds because of this battle to develop onshore wind. We need to look much more closely at other sources of renewable energy. Ground source heat pumps have been described as, 'the most energy-efficient, environmentally clean and cost-effective space-conditioning systems available'. There are also tidal and marine technologies, which are more predictable and reliable than wind, and they are cheap to maintain once they are established. Hydroelectric power is even more reliable than tidal power, because it allows water to be stored to meet peak demand.

After my own speech a further 12 colleagues spoke in a good natured and good humoured debate. Colleagues represented their constituents well and a wide range of points were debated. Interestingly, no one spoke in favour of onshore wind, but all spoke strongly in favour of greater local democracy in decision making! Charles Hendry MP, Minister of State for Energy and Climate Change responded for the Government. He stressed the need for a balance of technologies which should include nuclear, clean coal and a 'broad mix' of renewable. Whilst he didn't give any firm guarantees regarding onshore wind farms, I was delighted that during the day he had announced that the Government was committed to listening to the wishes of local communities and that it would be an obligation of the developer to only site wind farms in windy places!

It used to be the case that criticising onshore wind energy led to being denounced as a 'climate change denier'. I sincerely hope those days are over and that a sensible and productive debate on how to deal with our energy gap, our energy security and looking after the interests of our communities can now be had.