

For those undecided – some thoughts from Hempnall resident, Trevor Shurmer

## **Where we are with windpower Why?**

Governments throughout the World, with the exception of a notable few, recognise the need to curtail man-made global warming. Many signed up, in 1997, to the KYOTO agreement – essentially, as part of the EEC, our Government pledged to reduce CO2 and other harmful emissions over the oncoming years.

As part of this agreement, our Government took the decision by White Paper in 2003 to produce 10% of our electricity from renewable sources, by 2010, and after 2010 the pledge gets even greater.

They decided to offer massive subsidies to qualifying renewable electricity (by way of Renewable Obligation Certificates), but disastrously, the subsidies were not weighted.

Consequently, wind turbine technology, already on the market, formed the soft and cheapest option for Investors, leaving better long term options such as wave and photo voltaics (solar), that required greater level of research and development, out in the cold.

Landowners jumped on the bandwagon, realising a great opportunity to make money.

Subsidies are so high that even poor wind sites can still make a significant profit for the wind turbine company, the landowner and the investors.

In 2007, the Government produced another Energy White Paper to modify the vision for the future energy needs. The subsidies continue, but they have banded (weighted) them, though the bandings are not effective until 2009. The effect will be to substantially increase the subsidy for other types (including offshore wind).

Consequently, there is an even greater rush to get planning for on-shore before 2009.

In the meantime, people like me, due to the local issues, have carried out a great deal of research, and it has become abundantly clear that wind is by far the worst of the renewable options.

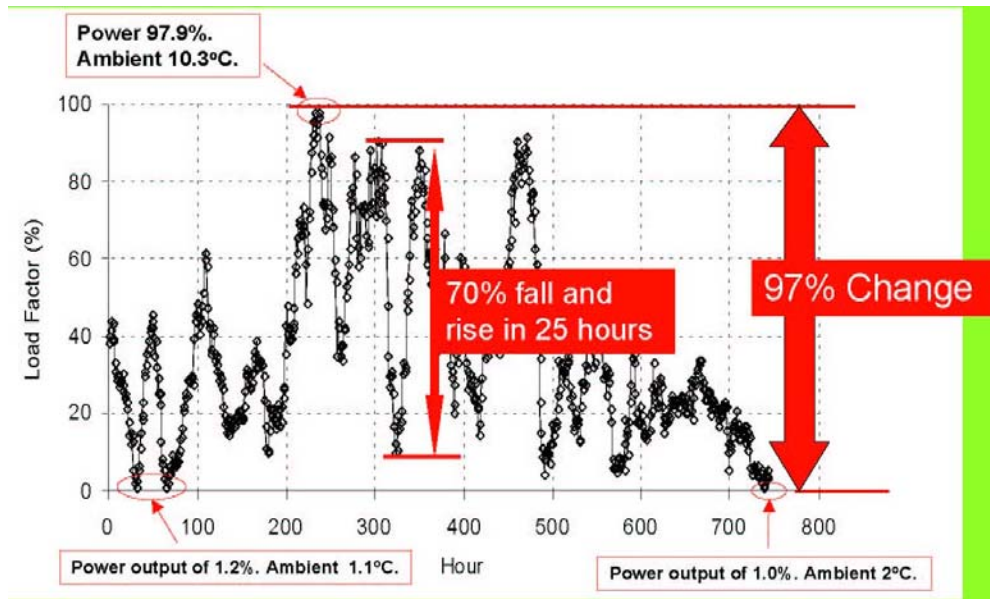
However, the situation is complicated by Governments including the UK, Danish and German, blindly carrying on throwing money at what will, I am convinced, prove to be a fruitless exercise.

Why is it such an issue? Why can we not accept on-shore wind as a concept?

1 - Most importantly, irrespective of your feelings about the morals of the subject, our national grid simply cannot support fluctuating supplies unless they are planned. The grid requires a predictable, consistent and reliable supply of electricity. Wind is none of these.

Wind turbine efficiency (known as the "load factor") differs hugely from hour to hour, and day to day, so much so that the graph below, taken from the Renewable Energy Foundation website, shows a normal situation:

The grid simply cannot support this unpredictability.



It is important to realise that the “load factor” of wind turbines increases with increasing wind speed, up to a point where 100% “load factor” is reached. In high winds, the turbine blades have to be “feathered” and they will produce either much less, or nil, electricity.

We cannot turn power stations on and off, so even if wind turbine power stations (the term windfarms makes them sound too friendly – they are a power station) become more extensive, the grid will start to be de-stabilised.

Denmark is often commended as the Country we should look to. It is true that they have many wind turbines, much more per head of population than we have. However, they are in a different position. It is often said they can produce 20% of their power needs from wind – technically they can, but mostly, they sell to adjacent countries where there is more hydro-electric power which is more controllable in the short term.

Germany, another country with a large wind capacity, has major issues balancing their grid, and despite their fine words, is planning 26 new coal fired power stations.

2 – Our Government and other political parties are seeking to gain short term political advantage by moral blackmail, knowing full well that their spoken aspirations are simply not possible.

Even worse are the political parties who refuse to accept that nuclear power now has to form part of the answer.

In fact, whilst on the surface, we apparently have no discernible energy policy, the Government is conditioning us to the fact that nuclear will form a significant part of our future needs.

Whether nuclear is good or bad is not for me to say in this article, but the tragedy of the Government inaction over the last 10 years is that we have been put in this position of having to accept nuclear as at least part of the answer, because of a lack of investment in more sustainable forms of renewable energy. Even yesterday Gordon Brown has cemented a further deal on nuclear.

Understanding the predicament is a matter of mathematics and an understanding of the requirements of the grid – my research has made me realise that all of this talk of wind energy is, simply, wind!

Our energy needs are increasing, not decreasing, by between 1.5 and 2% per year. The national grid requirements vary between 60 GW on “heavy use” days, and 35/40 GW generally.

On the heavy days, can we rely on wind to supply part of our needs? No, we can't, and the national grid must cater for those (frequent) times when the weather is very cold and still, when wind turbines will be producing virtually nothing.

So, what does this mean in practice?

It means, despite Government assertions to the contrary, that the grid will have to substantially ignore electricity produced from wind farms, as the grid operator cannot afford to reduce the supply from our existing power stations.

Does this matter?

Yes, of course it does – we are already paying an amount in our electricity bills to pay for the subsidies for these useless structures, and here we are already complaining about high energy costs. I hope those who support wind energy will keep this in mind when the bills increase still further – it has already cost us billions, and it will only get worse.

3 – Why Hempnall? Why not?

Another factor is the indiscriminate siting of wind turbine stations – most sites are not “chosen”, they are merely agreed to by landowners, irrespective of the feelings of villagers like us or the harm to the landscape and environment.

The landowners obtain very significant rents over the lifetime of the turbine (20-25 years).

Hempnall is a great example of a site “chosen” for no reason other than landowner compliance.

Be in no doubt, the choice of Hempnall is nothing to do with the environment, and everything to do with the commercial interests of two local landowners.

It is not just the visual aspect, it is the potential for noise (who attended the talk by the Davis's of Market Deeping who had to leave their house?), light flicker at certain times of the day, the impact on the area of transporting and erecting these structures (130 metres tall), and in some cases, impact on wildlife.

Not only this, power between the turbines and the grid is lost in transmission, making these small scale turbine sites even less attractive to the Country (albeit it doesn't appear to make the slightest difference to the turbine operator as their “ROC's” are calculated at the “station boundary” my understanding is that this is at the turbine site).

The nearest point to the grid from Hempnall is either Alington or Hapton, about 7-8 miles away.

And another thing – when the weather is still, the wind turbines actually become a net user of electricity from the grid!

4 – Abysmal power contribution to the National Grid really does beg the question “Is it worth it?”

If I could truly say that the Hempnall (or any other small) UK site would make a meaningful contribution to the long term UK energy requirements, then I would personally find it difficult to argue against.

However, even assuming a 30% load factor (that seems to be the going rate suggested by the wind companies for this type of site – I am sure that over the longer term this is much too positive), then at best, we are looking at 7 megawatts, less transmission losses (they don't mention that bit).

The Country would require thousands upon thousands of these structures littering our countryside to make a slight dent in requirements – and that is on a windy day throughout the Country.

5 – How is the energy from the proposed Hempnall power station to be transmitted to the grid?

By, we are advised, underground cable. Think of the disruption to the land to transmit a pitiful supply of electricity to the grid.

6 – Why would off-shore be a better bet?

Whilst the initial cost of off-shore is higher (hence the higher subsidies announced for off-shore in the 2007 White Paper), the wind is more consistent, we can build much larger sites with the associated economies of scale, and the planning issues and visual impact are much smaller.

Those who say “every little helps” are not being realistic and have either no real understanding of how the national grid operates, or worse still want us to return to the dark ages.

So, if you want to accept an unstable national grid and a landscape littered with turbine power stations, then by all means accept a widening of on-shore wind turbines.

If, on the other hand, you want a stable and consistent supply, similar to that we have enjoyed for the last century, then [support research and subsidy into a stable and consistent form of renewable energy](#), and don't be hoodwinked by businessmen or political factions masquerading as supporters of green energy.

The Hempnall proposal, even to the supporters, surely becomes less attractive by the minute.

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References:

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Stern Report

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