

## **Environment and Sustainability Committee**

Inquiry into Energy Policy and Planning in Wales  
EPP 133 – Gareth Thomas

Dear Sir,

I would like to contribute to the inquiry that has been set up to consider how the current devolution arrangements for energy policy and planning affect the delivery of the Welsh Government's desired future 'energy mix' in Wales and the Welsh Government planning guidance as it relates to onshore wind energy and the impact on local communities and infrastructure.

I am a Chartered Electrical Engineer and am absolutely disgusted at people in the same profession as I who are willing to stand up and tell bare faced lies about the efficiency of Wind Farms.

The simple facts are:

In Wales, on shore wind farms produce on average less than 20% of their installed capacity.

Worse than this, there is another figure which is never mentioned by wind farms which is the Capacity Factor. This is the percentage of installed capacity that can be relied upon to produce power when required. Figures for this are hard to come by, but my impression is that it is less than 8% of installed capacity. This means that for every 100MW of installed wind power, there has to be a power plant somewhere else that can provide up to 92MW on demand to provide the power when the wind does not blow.

The backup power that has to be provided has to run at very low efficiencies because it has to be backed off when the wind farms are providing power.

Conventional power stations run very efficiently when running near to capacity, but the introduction of wind power requires that they run inefficiently, putting more pollutants into the atmosphere than they would otherwise do.

The majority of electric power produced in the UK is consumed in the South East. The so called switch to Green Energy requires that energy produced by the wind farms in Scotland and Wales has to be transported to the South East. There are two impacts from this:

1) National Grid are having to spend millions of pounds reinforcing the power lines from North to South to carry the power produced by wind farms when they are at full capacity. As they only produce 20% of their power on average, this is a huge investment that would not be required by more reliable energy sources.

2) There is a substantial power loss in carrying electricity over large distances. I have calculated the power losses on the proposed mid Wales connections when at full capacity. If the hub were to be at Cefn Coch the loss would be 6.69MW (0.8% of Capacity) and if it were to be at Abermule the loss would be 12.37MW (1.4% of Capacity). These figures do not look high, but these are the losses in just getting the power to line between Oswestry and Shrewsbury. The additional losses in transporting this power to the South East will be many times more. I have not done the calculations because I do not know the capacity of power lines running to the South East, but I would not be surprised if more than 10% of installed capacity is lost

in transporting it over large distances. As wind farms only produce 20% on average, to lose 10% of it because of its location away from the point of consumption is madness beyond belief.

The only reason that large power companies are looking at constructing these large wind farms is because they have a guaranteed subsidised price for the power they produce which at over 40p/kWh is far higher than the consumer is currently paying. But it is not the Governments that will be paying them, the additional cost is to be passed onto the consumer.

Therefore, at a time when governments are making cut backs and when we are going through a recession, it is absolute madness that companies are being allowed to spend huge capital investments because they are being allowed to recover this investment from the British public. With a large installed wind power base, and the investment required to reinforce the National Grid to transport the power, Electricity prices in the UK will rise several fold. We have already seen huge increases imposed by the power companies this year, and this is just the start of it. The policy of encouraging wind generation will drive this country further into recession, and business' will not be able to compete with foreign competition.

In addition to the economic madness of wind power, I would also like to draw your attention to the scale of what is being proposed in mid Wales. The wind farm developments south and west of Newtown will require 25 abnormal load conveyors per week over a period of 6 years - that's 4 per day. A load conveyor will consist of 3 abnormal loads - that's 12 / day. How can any business in Mid Wales expect to survive with this kind of disruption to the road infrastructure. The Wind Farm brigade claim that they will create jobs. I would argue that they will destroy far more jobs in Mid Wales than they will create.

And finally, apart from the economic farce and destruction of business' currently operating in Mid Wales, the environmental effects on mid Wales will destroy it for ever. Attached you will find a picture of Cadair Idris and the surrounding mountains taken from the Kerry Ridgeway which borders England. I am sure you will agree that the landscape in this picture is beautiful. Most of the land in the picture this side of Cadair Idris is 'Search area B' and so will be completely covered in windmills if the proposed madness is allowed to go ahead. Mid Wales would never be the same again, and the tourism industry, currently valued at £650m/annum, will be completely annihilated. The proposed windmills, at over 600ft tall, are massive. If you look at the horizon of the picture to the left of Cadair Idris, you can see the turbines at Cemmaes, and these are only a fraction of the size of the ones proposed for the new farms. To make room for some of the wind farms, huge areas of forestry are to be cut down, greatly reducing the country sides ability to absorb CO2 from the atmosphere, in addition to the job losses that will result in less forestry to manage. The current Welsh assembly will be remembered as the government that destroyed Mid Wales.

I hope that you will give my points due consideration, and I urge you to take independent scientific advice on the merits of wind energy, not let the wool be pulled over your eyes by large companies that only have profit in their minds at the cost of the British public. As a lot of letters in the Electrical Engineers magazine I read have

indicated, the technology for wind energy is here, but it comes at a very high price. With the current economic state of this country we can ill afford to throw money away on an economical forms of energy generation.

Please have a look at the attached links to an article and some members letters on the IET web site. In the 15th Issue of volume 5 (2010), please read the first three letters, in particular the letter from Colin M Gibson CEng FIEE Power Network Director, National Grid Group 1993-97. You will find that these, along with other comments from prominent engineers, is seriously questioning the UK Governments push for an economical wind energy.

<http://kn.theiet.org/magazine/member-news/27/opinion.cfm>

<http://eandt.theiet.org/magazine/2010/15/feedback.cfm>

Regards

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