

OUR ENERGY CHALLENGE

COMMENTS OF DURHAM BRANCH OF THE CAMPAIGN TO PROTECT RURAL ENGLAND

- 1) Durham Branch of the Campaign to Protect Rural England (DCPRE) like many other groups and individual believes in renewable energy both to help save harmful emissions of greenhouse gases (particularly carbon dioxide) and to conserve fossil fuels. However DCPRE is very concerned that the result of this is that the vast majority of proposals for renewable energy are for wind farms and the effect this can have on the landscape in particular in the countryside, the very features it seeks to protect.
- 2) There has recently been a spate of applications in the North East in general and Durham in particular which has concentrated minds on the issue. In addition, the Regional Assembly has produced its draft Regional Spatial Strategy (RSS) and the Examination in Public (EiP) is currently taking place.
- 3) Because of the pressures on the countryside in the North East, DCPRE, perhaps more than its parent organisation, has considered the effects of wind farms both in terms of their impact on the landscape, including the people who live and seek recreation there and on their effectiveness on the climate, particularly how they affect emissions of greenhouse gases. DCPRE considers that the impact of structures such as wind turbines on the countryside is potentially very severe and is most concerned about the potential cumulative effect of them. The countryside is very precious in a crowded island such as the UK and should only be developed if there is no realistic alternative.
- 4) DCPRE has therefore undertaken its own study of the benefits or otherwise of wind turbines, considering reports from other countries and evidence given in this country such as to the Public Inquiry at Whinash in Cumbria last year. It produced its own representations which it has submitted to the EiP into the RSS for the North East. A copy of those representations is attached.
- 5) DCPRE accepts that the book “Our Energy Challenge” is not specifically directed towards wind power, but there is no doubt that this is forming a major part of the Government’s attempt to combat climate change. For the reasons given in the attached document, DCPRE believes that this is misguided and that in fact wind power, particularly on shore wind power, is unlikely to achieve the benefits that are claimed for it. While DCPRE is not saying that there is no place for wind power in the UK’s energy industry, it does believe that there are significant problems emanating from wind power and as a result the benefits are significantly less than is frequently claimed. As a result, DCPRE is extremely concerned about impact that wind farms have on the landscape and does not believe that, by and large, there is sufficient benefit that outweighs the harm that is caused to the countryside, both for those who live there and those who enjoy it for recreational purposes
- 6) Since DCPRE submitted its representations to the EiP, there have of course been developments, in particular the E.ON Netz Wind Report 2005 has been translated into English and the booklet “Wind Power and the UK Wind Resource” has been produced. In addition, the decision has been made in the Whinash Public Inquiry and the Advertising Standards Authority has adjudicated upon at least one objection to it in connection with the claims made by the Wind Industry, partially upholding one of the complaints. DCPRE does consider it appropriate here to comment on each of these matters

A) The 2005 E.ON Netz Wind Report

This reiterates many of the points made in the 2004 E.ON Netz Wind Report. In particular, the 2005 Report states

- “Wind power generation – weather restricts availability” (page 7). This and page 8 outlines that the contribution of wind energy to meet electricity consumption at certain periods is low and that handling the differences in generation that can occur with wind power “poses a major challenge to grid operators”.
- “Guaranteed wind power capacity below 10 per cent – traditional power stations essential” (page 9).
- “Wind power forecasting is critical to system integration” (page 10), commenting that “the increased use of wind power in Germany has resulted in uncontrollable fluctuations occurring on the generation side due to the random nature of wind power feed-in”
- “With the continued expansion of the use of wind energy in Germany, demand for standby reserve

capacity will continue to rise and will increase around fivefold by 2020” (page 13)

- “Wind power increasingly affects market developments and power flows in Europe” (page 20), commenting that “neighbouring European transmission system operators are also increasingly affected by the high wind power feed-in in Germany” and that in neighbouring countries it can “lead to significant loads on the operation resources”

- “Wind farms must also contribute towards stable grid operation” (page 21). The Report notes that in northern Germany “the continued expansion of wind energy will make it increasingly difficult to guarantee supply stability in the future”

DCPRE accepts of course that E.On seeks to expand its wind generation base particularly in the UK. But these are important points that cannot be ignored as they can lead to major difficulties in the supply of electricity that can affect the objective given in PPS 22 to “(ensure) all homes are adequately and affordably heated”. They are not points made by eccentric objectors trying to protect their own backyard – they are made by a major European electricity operator. And they are points that may have a much greater impact in the UK as this is an island that does not have ready access to other grid systems, apart from the fairly limited interconnector to France.

B) Wind Power and the UK Wind Resource

This booklet has been produced by one of the Government’s advisors and seeks to show the characteristics of the UK wind resource. While this report does acknowledge the variability of wind power, it seeks to show that wind power on average provides greater output during the winter than the summer and is stronger during the day than overnight. It is stated that extremely low and high wind speeds (when no electricity is generated by wind power) are very rare throughout the UK overall. The author comments “The degree of diversification in the wind power system will also affect the rate of change, as power changes at one site may be offset by changes from other sites, smoothing the overall wind-generated electricity supply”.

DCPRE questions many of the claims made in this booklet on the following grounds

- It does not appear to accord with the actual experience noted by E.On in Germany. At present, all predictions for UK wind power are theory and DCPRE considers they are far from consistent with actual findings in other countries that have used wind power.
- DCPRE believes that the wind resource in the UK is not significantly different from that in many parts of Europe and indeed questions the figure of 27% mentioned on page 6 of the UK report and certainly challenges the figure of 35% given on page 7. Examination of ROCs register for many sites in the North of England shows that, over a sustained period, the output from most wind farms is significantly below this figure, not infrequently below 20%. As stated by David White (energy consultant) in his article “Statistics and Lies”, the European wind atlas shows England and Wales in the same wind contours as most of those countries.
- While it is of course accepted that there is more wind in winter than in summer, and a monthly average can be predicted as to the amount of wind, the stochastic nature of wind still means there is a considerable amount of unreliability concerning when the wind will actually blow. The UK report does not appear to recognise this fundamental problem. The fact that wind is not a “firm” source of energy was a factor that featured in the FELLs evidence to the Whinash Public Inquiry.
- The UK Report says that the need for back up is 17% of installed wind capacity mentioned on page 7. The E.On 2004 Wind Report gives a figure for back up of 80% of installed wind capacity.
- One must also consider that a wind speed of 4 m/s (about 10 mph) does not produce much electricity. Over this winter, wind speeds have regularly been shown on weather maps as being less than 15 mph around the

UK, and certainly on 7 December 2005 no turbine in north Durham was working.

C) Whinash decision

As is now known, permission was refused for this development on landscape grounds. The Inspector concluded that the effects on the landscape and its value for recreation would be so serious that they would outweigh the benefits of securing a renewable energy source and the need to address climate change. DCPRE considers this “balance” is crucial to this issue and that the effectiveness of wind power to help combat climate change is part of this very important equation. DCPRE however is very concerned that the inspector discounted all the arguments put forward by FELLs saying

15.4 FELLs, in particular, appeared at the Inquiry to present what it stressed to be ‘*a critique of*’, as opposed to ‘*a challenge to*’, Government energy policy. Such matters were referred to by others in evidence, written statements and in the many letters of representation. [6.1 – 6.18, 7.15, 7.28, 8.1 – 8.5, 9.6, 9.8 – 9.10, 9.13, 9.20, 9.22] While I heard a number of well-researched and technically competent presentations, such evidence is but a small part of a much larger on-going national debate about climate change and future energy supplies which is likely to draw on wider consultation and expertise. In this context, although it was amply demonstrated that there are those who do not support current Government policy, I consider that a Public Inquiry into a specific wind farm is not the appropriate forum to air these differences. As such very little weight should be given to what was, effectively, an outright challenge to current Government policy.

DCPRE notes he did not consider such a Public Inquiry to be a proper forum to air these differences but the problem is that the proper forum does not appear to exist. It is noted that the Inspector considered that the arguments were “well researched and technically competent”.

In the foreword by the Minister to Our Energy Challenge, Mr Wicks says it is crucial that we have a wide-ranging and informed debate. DCPRE considers therefore that this is an appropriate forum to consider all sides of the arguments in respect of wind power.

Perhaps it is also worth noting that, according to Hansard on 25 February 2005, the former minister for Energy Mike O’Brien stated

- 1) that the Government did not have an estimate of carbon dioxide reductions from the current stock of wind turbines, relying solely for any figure on British Wind Energy Association and
- 2) it did not have a “wind turbine programme”, being, so far as renewable energy is concerned, “technology neutral” – which may suggest FELLs evidence was not “an outright challenge to current Government policy”

D) Advertising Standards Authority ruling re Denbrook in Devon dated 21 December 2005

In this ruling, ASA ultimately upheld a complaint concerning that energy emissions claimed by the developer were exaggerated, saying that

The Authority considered that, although an emissions factor of 860g CO₂/kWh might have been a reasonable figure for RES to use to calculate the reduction of CO₂ emissions at the present time, it was not a reasonable figure to use for calculating the reduction over a period of as long as 25 years without some qualification to indicate the uncertainties about future fuel generating mix. It asked the advertisers not to publish the results of similar calculations in the future without such a qualification.

DCPRE welcomes this ruling but is most concerned about a number of figures given by the ASA in this ruling. In particular, DCPRE questions references to

- The average household consumption of 3300 kWh of electricity per year as opposed to 4700 kWh per year, as the former figure relates to only the best insulated house
- While not giving a specific figure for the capacity factor of turbines, they appear to say it is close to 30%, or at least in the upper 20's
- Alleged confusion in government documents about carbon dioxide emissions being less than 0.86 tonnes per MWh (or 860g per kWh) and whether wind will primarily displace coal fired power stations

DCPRE's representations to the draft RSS deal fully with load factors and emissions including conventional power stations likely to be displaced by wind. In short, DCPRE considers many wind turbines in the North East operate at an output nearer to 20%, and sometimes noticeably less than this. It has also quoted certain Government documents that suggest the emissions savings figure is nearer 0.43 than 0.86 and sees no reason to question these figures. DCPRE however does consider that the need for back up from conventional power stations should be included in this equation, which at present it is not.

ASA declined to let DCPRE have sight of its expert's report, saying it was not bound by the Freedom of Information Act. Unfortunately, despite ASA making rulings of a very public nature, this has been found to be correct. At present therefore DCPRE can only say that, while it welcomes the ASA's finding relating to carbon dioxide emissions even on the narrow basis given and also welcomes the finding concerning property values (notwithstanding that that complaint was not upheld), it challenges other figures given in this ruling but feels unable to comment further without being able to see the expert's actual report

7) In February 2006 CPRE issued a further Policy Position Statement about Onshore Wind Turbines. This mentions that large wind turbines can be a form of pollution which damages the landscape and calls for decisions to be made which avoid damaging valued rural landscapes. DCPRE naturally fully endorses this Policy but is extremely concerned that rural landscapes in its area of concern are already being damaged by such developments and the pressure of further such developments appears unrelenting. DCPRE considers this is even more unacceptable if such developments do not achieve their stated aim, which ultimately is to cut carbon dioxide emissions by a given amount. That is why DCPRE has prepared the representations it has made to the EiP into the RSS in the way that it has and calls for a proper balanced debate into the whole issue which hears all the arguments concerning the value or otherwise of wind power.

8) Finally, DCPRE is aware that UK emissions are only about 2% of global emissions, and this is acknowledged in Our Energy Challenge at page 19 (although we must also be careful that we are not simply exporting emissions to other countries as a result of the UK economy moving away from heavy industry – see pages 24 and 30). DCPRE is not arguing that this means the UK has done all that it needs and does not need to take any further action. DCPRE welcomes all legitimate moves to try to cut such emissions and indeed to use “firm” sources of renewable energy (properly located) if only to conserve fossil fuels for future generations. However, on the other hand, DCPRE does believe that this low percentage highlights that we should take meaningful steps to achieve this, not damage our valued landscapes with dominating developments where there are strong arguments that they will not achieve their stated objective.