

Western Morning News

WARNING ON THE WIND OVER ENERGY CRISIS

Date : 17.12.04

A searching new report calls for an overhaul of the UK's energy strategy as it warns that onshore wind power could be the worst way of cutting the greenhouse gases that cause global warming.

The detailed research goes so far as to claim that wind is even more expensive and less effective in reducing carbon dioxide output than coal - if used in ways that capture and secure their emissions.

The research released by the Renewable Energy Foundation (REF), which works for a balanced UK energy policy, claims that diverse sources of energy are being neglected because of the Government's determination to pursue a technology that can only achieve minimal results.

It warns that onshore wind could force up electricity costs and will require extensive back-up from conventional fossil-fuel power stations.

The research has been conducted by energy consultant David White, a former senior manager with Esso and Exxon over 30 years.

His report, "Reduction in Carbon Emissions: Estimating the Potential Contribution from Wind Power", questions many of the widely-held beliefs about the "green" potential of onshore wind power. Mr White told the WMN that he believed the Government had taken too much advice from "environmental academics who do not understand the engineering of electricity".

His report describes the Government's measures for cutting CO2 in its Energy White Paper as "seriously unbalanced". It is published after ministers last week admitted the UK's present methods would not achieve the 2010 target for CO2 emission cuts.

Mr White calls for a "reassessment of currently marginalised predictable renewables, such as biomass and tidal energy". And he urges a rethink of "the role wind power, and therefore its subsidy".

The report is released amid ongoing controversy over windfarm applications in the region. Cornwall already has seven windfarms and Devon has been targeted for several others, including ones at Fullabrook Down, Goveton, and Den Brook Valley, while the county's first windfarms at Bradworthy is rapidly being built.

Campbell Dunford, chief executive of the REF, said yesterday: "Other forms of renewable power in the UK are being starved of investment because of the politically-driven myopia in support for wind turbines.

"This is not a 'green' solution, it is going to make the problem worse."

Mr Dunford explained that because wind is intermittent it required constant back-up.

This meant that wind turbines had to be supported by conventional power sources, and the only two available in the UK were coal-fired and open cycle gas, both of

which caused CO2 emissions. The greater the emphasis on turbines the greater the need for these conventional power sources, said Mr Dunford.

"The back-up has to be one that can be ramped up very quickly if the wind dips or drops even by a couple of miles per hour because the grid has to be steady, second by second," he said, adding that even in Germany, which now had 15,000 wind turbines, "they have to have 80 per cent of their conventional power running all the time".

The Danes, one of the world leaders in onshore wind power, have had to pay neighbouring countries such as Sweden to take electricity when they produced a surplus of electricity at times of strong and sustained wind speeds. Last year alone, Denmark - with a population of five million - had paid out £100 million to neighbouring countries, as spare capacity of electricity cannot be stored.

The UK did not have this option because of its island supply system.

Mr Dunford described the idea that onshore wind could curb CO2 emissions while raising levels of renewable power as like "trying to hit the problem with a feather-duster". He pointed out that CO2 emissions had risen since the intense development of turbines in Denmark.

He called for a "joined-up" approach to energy strategy, as he criticised Government short-sightedness over the issue. By example, he said: "Deputy Prime Minister John Prescott wants to build 700,000 more houses in the South-East without one single energy-saving measure."

Mr White's research cites the experience in Ireland where it has been calculated that wind is the most expensive way of reducing CO2. He also examines Denmark and Germany where the proliferation and reliance on turbines has led to unexpected problems.

"Wind turbine technology has been developing in Europe for nearly 20 years, and ample experience has been gained to show wind-generated power to be variable, unpredictable and uncontrollable," he writes.

"In fact, the European experience shows conclusively that the annual production is routinely disappointing, and this does not augur well for the UK's chances of achieving significant emissions abatement." He goes on: "Fossil-fuelled capacity operating as a reserve or back-up is required to accompany wind generation and stabilise supplies to the consumer. The capacity is placed under particular strains when working in this supporting role because it is being used to balance a reasonably predictable demand with a variable and largely unpredictable output from wind turbines." The result of that is "operating fossil capacity in this mode generates more CO2 per Kwh (kilowatt hour) generated than if operating normally."

His analysis attacks the idea of wind as the most progressive source of renewable power: "It seems reasonable to ask why wind power is the beneficiary of such extensive support if it not only fails to achieve the CO2 reductions required, but it also causes cost increases in back-up, maintenance and transmission, while at the same time discouraging investment in clean, firm generation."

nyoung@westernmorningnews.co.uk