

# **BLOWING AWAY MONEY**

*Wind Energy - fables, fallacies and failures*  
by

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There is some evidence from power grids overseas about the use of wind and alternative power on a large scale and, as far as alternative energy advocates are concerned, none of it is good.

Wind advocates can point to a number of studies saying that 20 per cent penetration of wind energy will increase wholesale electricity costs by 10 per cent. This implies that wind energy is 50 per cent more expensive than conventional, but a closer look shows that the studies are theoretical and don't say anything about how much carbon would be saved. It is a safe bet that 20 per cent penetration will not result in 20 per cent savings, and some reason for thinking that it might not result in any saving at all.

Whatever readers may make of that, there are three reports of any consequence of which I am aware that give results from real world operation of wind turbines. There is the much quoted *Wind Report 2005* issued E.ON Netz GmbH, which cites alarmingly high reserve or backup generator requirements for wind energy. These reserve requirements would be quite enough to wipe out any carbon savings.

Then there is *Wind Energy - The case of Denmark* produced by a prominent conservative think tank, the Center for Politiske Studier (Centre for Political Studies or CEPOS) in September 2009. This report estimates that Denmark produces the equivalent of about 19 per cent of its electricity demand with wind turbines, but only about half of that is used locally. The rest is exported to Sweden, Norway and Germany through connections to the national grids, and those countries use the energy to pump water uphill into their major hydroelectric dams. As well as having lots of dams, those national grids are much larger than the Danish network and so can absorb the additional power easily.

Although wind power has saved some emissions in Denmark (the report does not consider reserve requirements, or make any estimate of effective savings it assumes a saving), the report estimates that the cost per tonne of CO<sub>2</sub> is 87 Euros or \$US124, or more than six times the price of carbon on the ETS at the time of the report. Danish domestic electricity prices are among the highest in the European Union, although this is not strictly the result of wind power. Commercial and industrial prices are deliberately kept down to make industry competitive with the rest of Europe.

Another report is from the Rheinisch-Westfälisches Institut für Wirtschaftsforschung (a leading economic research institute based in Essen) issued in October 2009. Entitled, "*Economic impacts from the promotion of renewable energies: The German Experience*", the report says that extensive subsidies for wind power have resulted in the country having the second largest installed wind capacity

in the world, behind the US. Subsidies for photo-voltaics, has also resulted in the country having the highest installed base of PV in the world, ahead of Spain.

Despite having a lot of wind turbines and retail distributors of power paying wind farms three times the going wholesale rate for power (through the mechanism of “feed-in tariffs”), only about 6.3 per cent of total power consumption is supplied by wind. The report also estimates that wind subsidies account for 7.5 per cent of consumer electricity prices. The contribution from photo-voltaics is a negligible 0.6 per cent, despite utilities paying eight times the going rate for electricity from those projects. It gets worse. Further into the report, the institute estimates the cost of carbon abated through this process simply by assuming the wind energy displaces an equivalent amount of gas and coal generation. No allowance is made for reserve requirements, or of the cost and loss of efficiency from retailing the network to accommodate wind. On those favourable assumptions the report calculates the cost of saving each tonne of carbon at 54 Euros or several times the price of carbon on the European ETS at the time of the report. The cost of using PVs to reduce carbon comes to a staggering 716 Euros a tonne.

Australia has adopted wind energy has a solution to reducing carbon emissions without investigating any of the vast problems encountered with substantial use of wind overseas.

**\* Mark Lawson is a senior journalist/reports editor with the Australian Financial Review. This article is adapted from a book to be published in the first week of June 2010, *A Guide to Climate Change Lunacy – bad forecasting, terrible solutions* (Connor Court, RRP: \$A29.90). He can be contacted on [mlawson@afre.com.au](mailto:mlawson@afre.com.au)**