Submission
No 36

INQUIRY INTO RURAL WIND FARMS

Name: Mr John and Mrs Niki Zubrzycki

Date received: 17/08/2009

Rural Wind Farms Inquiry submission

SUMMARY

The benefits of wind farms are highly debatable. Yet the government (ABC news 17 August 2009) has just announced that application fees for wind farm projects are being waived, that the approval process will be further streamlined and the threshold for critical infrastructure has been lowered. This is before the outcome of this inquiry into rural wind farms has been determined, in others words rendering this inquiry virtually irrelevant. The entire renewable energy planning process has been dominated by knee-jerk, election-related considerations rather than proper analysis.

In the rush to embrace wind power the NSW government risks destroying landscapes, dividing community, causing environmental damage to farm land and imposing high power costs on NSW consumers.

Wind is an unpredictable power source. The greater the dependency on wind farms the greater the need for backup power sources when the wind stops blowing. This has to come from gas and coal-fired power stations.

It is essential that the NSW government undertakes an impartial inquiry into the costs and benefits of wind power with the participation of farmers, local communities, councils and end users, while at the same time exploring other alternative energy sources which are of greater economic and social benefit.

By lowering the threshold for planning purposes to 30MW you have opened the door to rash, untested, ad hoc development. Wind farms may give landholders some income but they destroy the incentive to make the land more productive and discourage sustainable agriculture. They have an adverse impact on the value of neighbouring land holdings.

Apart from well-documented impacts resulting from noise, vibrations, overshadowing, their construction will cause deep scars on this landscape.

MAIN SUBMISSION

The main problem associated with wind power is the variable nature of the wind as an energy source. Unlike conventional power sources which provide continuous peak output and are best suited to 'base-load' supply, wind power is irrelevant to any discussion of nuclear as it cannot provide such uninterrupted generation.

According to one study by the German power company E.ON Netz in 2004 every megawatt of installed wind power required 0.8 MW of backup from 'shadow power stations', thus, even when not generating, wind turbines are still causing some CO2 emission. In 2005 E.ON Netz declared: -

"... Dependence on the prevailing wind conditions means that wind power has a

limited load factor even when technically available. It is not possible to guarantee

its use for the continual cover of electricity consumption. Consequently, traditional

power stations with capacities equal to 90% of the installed wind power capacity

must be permanently online in order to guarantee power supply at all times."

A 2004 report by the Irish National Grid found that: -

"As wind contribution increases, the effectiveness of adding additional wind to

reduce emissions diminishes [and] the cost will be very substantial because of the

back up need".

One of the conclusions of a recent report from UK Energy Research Centre was that: -

"Wind generation does mean that the output of fossil fuel-plant needs to be

adjusted more frequently, to cope with fluctuations in output. Some power stations

will be operated below their maximum output to facilitate this, and extra system

balancing reserves will be needed. Efficiency may be reduced as a result."

http://www.ukerc.ac.uk/Downloads/PDF/06/0604Intermittency/0604IntermittencyReport.pdf

Australia like the UK and Ireland is constrained by a transmission problem. We have do not have an interconnected power grid of the size of Europe to tap into if the wind suddenly drops.

RENEWABLE ENERGY TARGETS:

As Australia moves to embrace Renewable Energy Targets it is worth noting the experience of the UK where renewable power generation is now

'subsidised' by the mechanisms of the Renewables Obligation (RO), the Climate

Change Levy exemption (CCLe) and the marketing of RO Certificates (ROCs).

The Renewables Obligation places an obligation on electricity suppliers to purchase a percentage of qualifying renewably generated electricity but it also forces a consumer-sourced 'subsidy' to be paid to the renewable generator. The mechanism of payment results in an increase in electricity price to all consumers, whether or not they subscribe to a 'green tariff'.

The net outcome of the 'subsidy' system in the UK is that wind electricity receives about twice the price of wholesale base-load thermal generation per MWh.

The RO provides a huge financial incentive which has brought

multinational power companies flocking to the UK and has been responsible for

the distortion of our planning system. It is worth noting the words of Paul Golby, the chief executive of Eon UK (formerly Powergen), who said: "Without the renewable obligation certificates nobody would be building wind farms." (Daily Telegraph, London, 26/03/2005).

COST

Although a wind turbine pays back the energy consumption of its construction and the accompanying CO2 emission within a few months the cash cost of a wind turbine is a very different matter. Without an enormous subsidy a wind turbine cannot pay back its financial cost in a reasonable time-frame.

This is because a large proportion of the cost derives from value additive operations such as the complex engineering of the drive train and generator and the specialist fabrication of blades which are expensive but do not consume much energy – which is largely absorbed in the smelting of iron and its conversion to steel and manufacture of other metals. It should also be noted that almost every component has to be imported into Australia, unlike solar power where most of the manufacturing on components is done locally or by Australian companies.

EFFICIENCY

Despite claims of wind power companies, wind turbines generate power for only 30 per cent of their operating time. A close examination needs to be made of the claims of wind power producers versus the reality, i.e questions of efficiency. Also claims that they can power so many thousands of homes need to be carefully scrutinised as these are broad generalisations that make no allowance for distribution losses, actual costs and household sizes.

ENVIRONMENTAL DAMAGE

Transporting the turbine components requires access for very large low-loader trucks

and a large mobile crane able to move 50 tonne or larger components. The 52-turbine Crookwell 2 windfarm will require 47km of road to be built where soils are poor and the scars of such construction will be impossible to erase.

NOISE

An aerofoil blade, the size of a jumbo's wing, travelling at 200km per hour

is noisy. The air passing through the rotor is swept into turbulent vortices, the source of much of the sound, and within a metre encounters the obstruction of the tower and as a blade passes a tower every one to two seconds this imposes a pulsating quality to the aerodynamic sound which many people find deeply irritating.

The noise a wind turbine creates differs considerably in terms of its sound power level

at source and say at a distance of one kilometre. The further away you go the background sound becomes deeper and can be incredibly disruptive particularly in usually quiet rural environments.

The consequences of shadow and reflective flicker are also apparent at greater

distances, making wind turbines much more obtrusive than static structures of

similar height. For this reason the industry's repeated attempts to compare them

with transmission towers ('pylons') are deceitful – pylons do not move and are of a

half or even a third of the height of big turbines.

IMPACT ON LOCAL COMMUNITIES

Wind farms bring very short term benefits for employment for local communities. They provide income for landowners but neighbouring properties are disadvantaged and lose value. In many cases, the turbines will be planted on land that is owned by people who do not live there. Since the announcement of several projects in the Crookwell area, dozens of properties have gone on the market as people try to avoid the inevitable negative impact that the completed wind farms will have on land values.

CASE STUDY

As an example of the kind of impact wind turbines will have, I wish to draw to your attention the impact that a proposed wind farm will have on our property

Our 280ac farm lies 28km north of Crookwell. It was established in the 1850s and still contains many remnants of that farming era. Although the landscape had been stripped of trees and terribly overgrazed, with a grant from Landcare we planted more than 2000 trees. We made plans to start a truffles farm and plant fruit trees.

Over the years we have employed local contractors to do fencing work, control weeds and do other jobs thereby stimulating the local economy. Late last year our dreams of settling here eventually were shattered by the announcement of a planned wind farm that would surround our sheltered valley on three sides by turbines more than 130m tall or the height of 30 storey buildings. These turbines will be visible from every part of the farm even though the closest ones will be approximately 1.2 kilometres from our house. The eight turbines located on the western boundary will cast a shadow over the entire property in the late afternoons. On the ridge beyond the eastern boundary dozens of turbines will loom over what is now a tranquil valley.

We have put investments in our farm on hold but we are determined to fight the proposed development. From talking to neighbours it is apparent that few people realise just how huge the wind farms will be. Few can comprehend that the existing wind farm near Crookwell is just one-third the height and a fraction of the scale of what is planned in what is one of

the most beautiful parts of the Southern Highlands. We were attracted to the district because it retained its traditional character of well-tended rural properties and towns and villages free from over development. When the completed the half-dozen wind farms projects in various planning and construction stages will change this landscape and its heritage value forever.

ALTERNATIVES

Why are we investing on such a grand scale in wind farms when we have an untapped source of energy in the sun. Almost every component for solar power is manufactured in Australia, in contrast with wind turbines which are made overseas. Encouraging solar power would also promote Australian manufacturing while lessening our reliance on imports.

Even experts such as Tim Flannery have expressed surprise that wind farms were being set up in NSW rather than the southern parts of the continent where winds are much more consistent. Many European countries are now putting wind farms offshore because of their social and environmental impacts and the reliability of the wind. One of the countries most involved in wind power manufacture, Germany, is investing heavily in research into solar-thermal. Germany has also been forced to build more coal-fired power to look after their energy needs as they found wind not sustainable except as an export industry.

In conclusion we would ask to consider carefully the points we have raised and reject any further unbridled, ineffective wind farm development.

Yours sincerely

John and Niki Zubrzycki