

**Submission to the Senate Inquiry Into  
The Social and Economic Impact of Rural Wind Farms**

Frank Eden, Iris Domeier,

In our submission we would like to address the health and economic effects of Rural Wind Farms, by making a comparison to the main alternative to electricity generation – coal fired power stations.

**Health Effects for people living in close proximity to wind farms**

All human activity comes with consequences some beneficial some harmful. If we assume that electricity generation is necessary, then we should take a balanced approach and compare the health effects of different forms of electricity generation. Non-renewable forms of electricity generation, for example coal fired power stations, not only have an effect on those who live nearby, they also have a much wider impact. The CO<sub>2</sub> pollution from these generators affects everyone worldwide.

This senate review is focussed on the effects of those who live nearby. In every respect wind generation beats coal-fired power hands down.

**Air Pollution**

I have lived near a coal fired power station. They are not pleasant, and they pollute a wide area around the site. Wind power generates no air pollution whatsoever.

Local communities in coal-burning regions are affected by fly ash, containing fine particles, heavy metals, arsenic, boron, molybdenum and low level radioactivity. The allergic effects of fine particles (less than 10micrometres) include toxic effects by absorption into the blood (eg lead, cadmium, zinc), hypersensitivity effects, bacterial and fungal infections, fibrosis, and cancer.

Wind power generates no fine particles.

**Water Use**

The coal industry is a heavy and wasteful user of this limited resource. The cost per megalitre charged to coal-fired power stations is lower than to other consumers and represents a hidden subsidy.

Wind turbines use no water after construction.

**Land Degradation**

Underground coal mining collapses the land surface, and releases methane gas to the surface. Open-cut mining is worse and uses even larger areas of land. The land-area use per kilowatt-hour of electricity generated is much larger than wind power, and releases vast quantities of dust.

On the other hand, the land degradation due to wind turbines is essentially negligible. The only degradation is due to roads that need to be built for servicing the turbines. The land use prior to the erection of the turbines in most cases continues afterwards, for example grazing and pasture are basically unaffected.

## **OH&S**

Miners involved in underground coal mining are at risk of suffering from respiratory disease, explosions and fire, collapse of tunnels, poisonous fumes and noise. In Australia, between 1989-1992, the mining industry had the third highest rate of traumatic deaths, 36 per 100,000.

The wind industry has a much better safety record.

## **The Economic Impacts of Rural Wind Farms:**

The Coal Industry has an economic benefit which is highly centralised.

The wind industry on the other hand is very decentralised. Vast areas of Australia (mainly coastal regions) are suitable. The number of employees involved in the construction and maintenance of wind farms is a boon for rural areas. Farmers can gain a safe basic income which does not depend on the weather.

## **Concerns over the excessive noise and vibrations emitted by wind farms, which are in close proximity to people's homes.**

As with all industries standards should be set to avoid excessive noise and vibrations eg mandatory setbacks.

We are in favour of mandatory setbacks. We have a friend who lives near the wind farm at Lake George. He cannot hear the turbines at all unless the wind blows from a certain direction. However people live quite happily in areas where there are excessive levels of noise. Major roads all over the state have houses built within 20 metres. The noise levels in these locations are quite excessive, but strangely these noise levels are more easily ignored by councils and planners who continue to let new homes be built in close proximity to the roads.

## **The interface between Commonwealth, state and local planning laws as they pertain to wind farms**

In NSW alone, the direct and indirect subsidies to the coal industry have been found to be around \$1 billion per year. (<http://nonewcoal.greens.org.au/coal/speeches/SubsidiesMadeToCoalIndustryPt2.doc>)

The subsidies to the renewables industry are far easier to identify and are much lower. To date the subsidies have been mainly in the form of the MRET scheme. These subsidies are a tiny proportion of those which benefit the coal industry, and go only a small way towards the creation of this new industry in Australia.

*“Globally, about 2.3 million people work either directly in renewables or indirectly in supplier industries. The wind power industry employs some 300,000 people, the PV sector accounts for an estimated 170,000 jobs, and the solar thermal industry accounts for about 624,000”.*

Work undertaken by CSIRO has found that achieving the transition to a low-carbon economy will require a massive mobilisation of skills and training to equip new workers and to up-skill three million workers already employed in the key industry sectors. This will have a positive effect on rural communities which often struggle to survive.

We are hopeful that solar thermal will become an economic proposition - in the meantime however the best way to reduce our dependence on fossil fuel is wind power. It is clearly the most cost effective renewal energy. The vocal few who oppose wind turbines perhaps do so for their own very good reasons, but this minority should not be allowed to prevent all of the very positive outcomes possible by a transition to clean energy.