Submission
No 18

# INQUIRY INTO RURAL WIND FARMS

**Name:** Mr Gordon Halliday

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5th August 2009.

The Director,

General Purpose Standing Committee No 5

Parliament House,

Macquarie Street, Sydney, NSW 2000.

Dear Sir,

Inquiry into rural wind farms

I hereby submit my input to the Standing Committee. My experience with rural wind farms derives from my role as Vice-President of the Upper Hunter Landscape Guardians (UHLG), a residents group whose aim is to preserve the Upper Hunter's natural landscape. I make this submission as an individual. Like many members of the UHLG our property is threatened by the development of the proposed Kyoto Energy Park to the west of scone.

The prime areas of contention with the Kyoto Energy Park development which have general applicability are as follows:

<u>The role of utility scale wind generation in (a) reducing greenhouse gas emissions generated by electricity production and (b) producing off peak base load power</u>

The role of utility scale wind generation in reducing greenhouse gas emissions is not properly tested in the environmental assessment process.

Using the Kyoto Energy Park as an example, forty-two industrial size (150m height) turbines will be manufactured overseas for shipment to Australia and then overland transfer to the Upper Hunter for construction on site. The site is located more than 40km from a connection point to the grid requiring the installation of new HV powerlines and two sub-stations, one on the site and the other at the connection point for transfer into the main power distribution system. Road upgrades are required to handle the inward construction traffic. The turbines have a nominal life of twenty-five years but based on useful life examples from overseas this will be more like fifteen years.

Proponents of wind farms should be required to provide a calculation of the greenhouse gas emissions in establishing the farm and set that against any greenhouse gas emission savings from the wind energy generated compared with coal.

It is my understanding that wind farms are inefficient and generate energy only about 30% of the time, in lumps and that wind cannot provide power in isolation of base-load power from coal.

Locating rural wind farms to optimise wind resource use and minimise residential and environmental impacts

Wind farms are highly impacting on rural, rural-residential and residential properties because of visual impact, noise and vibrations. The logical approach would be to locate wind turbines close to existing power stations and coal mines and adjacent to existing HV transmission systems. In the Hunter Valley this would be close to the Bayswater/Liddell power stations where the environment is already industrialised.

There is a limit to the amount of wind power that can be absorbed by the base generating/transmission system. This limit should be calculated and wind turbines should be built close to existing infrastructure to generate power up to the system limit.

The impact of rural wind farms on property values

Evidence from Gippsland in Victoria (report by John Jess, Valuer in November 2008) indicates a significant reduction in property value due to wind farms, particularly rural-residential, lifestyle properties where a loss in value of 30% is noted. In the Upper Hunter there is already evidence of a 20% reduction in the value of a rural residential property that would be close to the proposed Kyoto Energy Park.

Visual Impact

There need to be guidelines for assessing visual impact based on the local and regional characteristics of an area. In the Upper Hunter it is proposed to erect the turbines on the high ridge lines that delineate the hills in the area; quite a different setting to rolling countryside.

To quote a local architect responding to the Kyoto Energy Park development application "I actually like the look of turbines. They are an admirable, beautiful piece of engineering. However placing immense turbines on top of low rocks comprising some of the oldest, eroded, fine grained hills and cliffs in the world, is ridiculous.

What is not being understood here is the importance of scale. The hills are not high. They are very old, crumpled, full of detail and small texture, patterns of cliffs and transparent foliage. Their detail is intricate, highly divided. **This gives them an illusion of greater height, nobility, grandeur, presence, mystery.**

Put a tall, fat white pole on top of this, say half the height of the upper escarpment and scree, and its bubble is burst; its grandeur gone, its mystery removed, it becomes a mere plinth. The pole takes your eye, the detail is forgotten. The scale is destroyed. "

Noise and Vibration

The noise test used in assessing wind turbines is essentially the same as that for industrial development in a city or for mines. Yet turbines are being placed in areas that are inherently quiet. On the valley floor where we are you can hear a cow belch kilometres away on a cold winter's night.

Vibration is an insidious impact that is now being recognised in overseas studies as "wind turbine syndrome". Symptoms such as sleep problems and physical sensations of pulsation, headaches,

dizziness, unsteadiness and nausea, exhaustion, anxiety, concentration problems and tinnitus have been recorded.

Low frequency noise vibrations travel great distances, especially at night. In quiet rural surroundings the blade passing the tower creates a whoosh sound approximately every 2 seconds which in addition to generator noise produces symptoms as described above. Exposure to this noise over an extended period is debilitating.

The first signs of wind turbine syndrome in Australia are emerging; refer ABC Radio Report below:

**"Wind turbine noise forces couple out**

A couple near Ballarat say they have been forced to move out of their home because low frequency noise from nearby wind turbines is damaging their health.

Noel Dean owns a farm at Waubra that he says is surrounded by wind turbines owned by Acciona Energy.

He says he and his wife Janine started experiencing health problems when the turbines were switched on.

"I was waking up with headaches so I said to Janine, 'we're getting out of here', so we came to Ballarat," he said.

Cassie Franzose is the chairwoman of the Western Plains Landscape Guardians.

She says the Deans are not alone.

"People are really beginning to see what sort of impact this has on the residents in the area as well as on the landscape," she said.

Wind farm opponents from the central and western regions will meet in Ballan tonight.

Acciona Energy has issued a statement saying the Waubra Wind Farm complies with government noise level standards.

ABC News

15 July 2009 "

There are currently no setback requirements from residences and landowner property boundaries in Australia for wind turbines. Based on the precautionary principle these are a necessity to mitigate against "wind turbine syndrome". A minimum set back of 3km for a turbine from a residence should be mandated to be extended up to 5km depending on topography.

Conclusion

Thank you for taking the time to consider this submission.

Yours faithfully,

Gordon Halliday

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