



## WESTERN PLAINS LANDSCAPE GUARDIANS Assoc.

1<sup>st</sup> November 2012

### **Submission to Environment and Communications Legislation Committee**

#### **Renewable Energy (Electricity) Amendment (Excessive Noise from Wind Farms) Bill 2012**

We are pleased to have the opportunity to make a submission on the bill to amend the **Renewable Energy (Electricity) Act 2000**.

#### **INTRODUCTION**

Our organisation represents over 100 residents of western Victoria who have had their lives impacted upon by the actual or proposed operation of wind energy installations in our area of the state.

The group first came into being as a response to an application by an Australian company to build a 247 turbine installation at Stockyard Hill, between Skipton and Beaufort. Over the course of the application process, and during and since the Planning Panel hearing in 2010 we have made exhaustive inquiry of all aspects of wind turbine impacts and particularly those related to noise, and as well have spoken to many people suffering the ill effects of living next to wind turbines.

The members of WPLGA are predominantly land owners and farming business operators who take an active role in their community. They are a group of people with varied political views who cannot in any way be collectively or individually characterised as climate change deniers or apologists for the fossil fuel industry. We are sure all would publically support the need to introduce sources of renewable energy into the national grid, and few if any would actually oppose the use of wind turbines for this purpose, as long as they are appropriately sited.

## NEED FOR THE BILL

There has arisen within the community an increasingly pressing concern that the present planning guidelines for wind turbine noise control, right across Australia, are not doing their job. In the majority of turbine installations within Australia serious problems have resulted for neighbours once the plant begins operation, even when noise guidelines have supposedly been complied with. These problems have led to suffering on a significant scale that has in many cases driven people to leave their homes. The extent of this damage and dislocation is difficult to determine as turbine operators have often resorted to confidentiality clauses in financial settlements reached with aggrieved neighbours so that the true nature of the problem is suppressed.

That this problem is not confined to Australia but is a wide ranging international one is now becoming apparent. We refer to this extract from a recent British Medical Journal article.

*A large body of evidence now exists to suggest that wind turbines disturb sleep and impair health at distances and external noise levels that are permitted in most jurisdictions, including the United Kingdom. Sleep disturbance may be a particular problem in children, [1] and it may have important implications for public health. March 11, 2012 by Christopher D Hanning and Alun Evans in British Medical Journal*

Recent noise tests by five independent and otherwise unconnected acousticians at the Falmouth (Massachusetts), Capital (NSW), Waubra and Cape Bridgewater (Vic), and Hallett (SA) wind projects have clearly proven that dangerous levels of infrasound and low frequency noise are present inside dwellings adjacent to these projects, where people are seriously unwell, some resorting to abandoning their homes.

Wind power plants are at this very moment being approved and built in Australia on the basis of noise guidelines that are inadequate to properly protect neighbours from harm. And this will continue to take place while planning guidelines in the states and territories of Australia encourage the rolling out of wind energy installations without proper protection for those who live in close proximity to them.

Acoustic experts consider that the cause of harm from wind farms comes in a large degree from infrasound and low frequency sound, together known as ILFN. ILFN travels much further than audible sound and penetrates buildings, making it impossible to safeguard houses from intrusion. In fact efforts to protect houses from it have tended to exacerbate the effects. Double glazing and other blocking measures have resulted in buildings becoming more effective echo chambers once the ILFN has entered the house.

The wind industry has consistently maintained that the level of ILFN from turbines is inconsequential and of no more harm than that which arises from the sound of waves at the seashore. It is in part because of this industry denial that governments have not been mindful to put in place mechanisms to force the industry to properly model and measure ILFN at proposed wind farms.

It is up to the Federal Government to implement broad legislation that will effectively impact upon negligent power generators right over Australia and the proposed bill goes some of the way towards achieving this.

## CONCERNS WITH BILL

The definition of excessive noise contained within the bill would appear to be problematic and such that it will no better protect neighbours than the present planning requirements in the various states and territories.

Standards and guidelines already in use provide for noise limits of background noise + 5dBA. Extending this out to 10dBA would appear to be a weakening of the already ineffective protection measures.

The definition does not attempt to define an unsafe level of ILFN which is clearly the more serious factor in the noise/ harm equation. Methods of measurement of such emanations are presently available.

The excessive noise definition takes no account of special audible characteristics, such as blade tower interaction, or amplitude modulation. These factors have been shown to be the source of many complaints and are improperly understood. They surely need to be investigated and be taken into consideration in any definition of excessive noise.

Many wind farm victims complain about the annoyance being more evident at night, and paradoxically when there is little or no perceptible wind outside. However up at the turbine hub the wind speed may be quite high and the noise produced can be heard over greater distances because of the wind shear, sometimes known as the Van den Berg effect. The proposed definition talks of measurements being taken within 30 metres of premises. In many cases it is the noise level within the house that is the most troubling and it has been the criticism of acousticians that no attention has been paid to these measurements. The Van den Berg effect may not be measurable within the terms of the proposed definition of excessive noise.

In the words of Australian Noise expert Dr. Robert Thorne;

*“It is concluded that wind farm noise prediction, as implemented under NZS6808 (the New Zealand wind farm standard) is not adequate in assessing potential adverse effect, and implementation of the standard does not and will not provide an acceptable level of amenity. Application of the standard does not provide a conservative assessment of sound levels that may be experienced under different meteorological conditions.”*

## CONCLUSION

On the face of it the definition of excessive noise contained within the bill, is no better than the commonly used New Zealand standard, and will not serve to better protect wind farm neighbours. A great deal more work needs doing in finding a definition more inclusive of the types of annoyance wind turbines generate apart from that detected by the dBA scale.

Our members strongly support the proposed amendments to the **Renewable Energy Act 2000** but believe that the definition of excessive noise is insufficient to protect people from IFLN.

Yours Sincerely,

Megan Read  
Secretary of the Western Plains Landscape Guardians Association