

## **The Senate inquiry into The Social and Economic Impact of Rural Wind Farms**

**Submission by**

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Dear Senators

While there is strongly held opposition to wind farms from some organised groups in the community I believe that the enquiry should seek evidence for views expressed and make its findings according to established facts, not emotionally based arguments, however earnestly held.

I make some comments on several aspects of the issue and urge you to investigate the published research on all aspects of the issue.

### **Health effects**

While one must sympathise with and recognise the sincerity of those who believe their health is affected by wind turbines it is important to accept that people's perceptions of their health and environment are complex and may be at variance with actual causes.

The National Health and Medical Research Council recently released a statement, with supporting evidence, that:

There is currently no published scientific evidence to positively link wind turbines with adverse health effects.

Details of the two documents can be accessed at:

<http://www.nhmrc.gov.au/publications/synopses/new0048.htm>

## Noise

Activity	Sound pressure level (dBA*)
Jet aircraft at 250m	105
Noise in a busy office	60
Car travelling at 64kph at 100m	55
Wind farm (10 turbines) at 350m	35–45
Quiet bedroom	35
Background noise in rural area at night	20–40

Based on these figures noise levels from wind turbines have been assessed as “negligible”, that is, they appear to be no different to that found in other everyday situations<sup>9</sup>. Further, a survey of all known published results of infrasound from wind turbines found that wind turbines of contemporary design, where rotor blades are in front of the tower, produce very low levels of infrasound<sup>10</sup>.

<sup>9</sup> Macintosh A and Downie C (2006). *Wind Farms: the facts and the fallacies*. The Australia Institute: Discussion Paper No. 91.

<sup>10</sup> Jakobsen J (2005). Infrasound Emission from Wind Turbines. *Journal of Low Frequency Noise, Vibration and Active Control*, 24(3): 145-155.

Source Wind Turbines and Health. NHMRC 2010

### **Economic impact**

Wind farms will provide new jobs, particularly in rural areas where they are most needed.

### **Environmental effects**

Compared to the environmental effects of traditional energy sources, the environmental effects of wind power are relatively minor. Wind power consumes no fuel, and emits no air pollution, unlike fossil fuel power sources. The energy consumed to manufacture and transport the materials used to build a wind power plant is equal to the new energy produced by the plant within a few months of operation.[112][113] Garrett Gross, a scientist from UMKC in Kansas City, Missouri states, "The impact made on the environment is very little when compared to what is

gained." The initial carbon dioxide emission from energy used in the installation is "paid back" within about 2.5 years of operation for offshore turbines.[114]

Danger to birds and bats has been a concern in some locations. American Bird Conservancy cites studies that indicate that about 10,000 - 40,000 birds die each year from collisions with wind turbines in the U.S. and say that number may rise substantially as wind capacity increases in the absence of mandatory guidelines.[115] However, studies show that the number of birds killed by wind turbines is very low compared to the number of those that die as a result of certain other ways of generating electricity and especially of the environmental impacts of using non-clean power sources. Fossil fuel generation kills around twenty times as many birds per unit of energy produced than wind-farms.[116]

112. ^ "Wind Energy Potential". Awea.org.  
[http://www.awea.org/faq/wwt\\_potential.html#What%20is%20the%20energy%20payback%20time%20for%20a%20wind%20turbine](http://www.awea.org/faq/wwt_potential.html#What%20is%20the%20energy%20payback%20time%20for%20a%20wind%20turbine). Retrieved 2010-08-29. [dead link]

113. ^ "RenewableUK - Top Myths About Wind Energy". Bwea.com.  
<http://www.bwea.com/energy/myths.html>. Retrieved 2010-08-29.

114. ^ Dr M J Hall, FRSC, FIBiol (August 2006). "A guide to calculating the carbon dioxide debt and payback time for wind farms".  
[http://www.viewsofscotland.org/snp\\_conference/PeatAudit-Guide.pdf](http://www.viewsofscotland.org/snp_conference/PeatAudit-Guide.pdf). Retrieved 22 November 2010.

115. ^ American Bird Conservancy (2007). Mortality Threats to Birds - Wind Turbines.' Retrieved 29 September 2010.

116. ^ Sovacool, B. K. (2009). "Contextualizing avian mortality: A preliminary appraisal of bird and bat fatalities from wind, fossil-fuel, and nuclear electricity". *Energy Policy* 37: 2241–2248. doi:10.1016/j.enpol.2009.02.011.

**Source:**

[http://en.wikipedia.org/wiki/Wind\\_power#Environmental\\_effects](http://en.wikipedia.org/wiki/Wind_power#Environmental_effects)

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