

Date: 10 February 2010

By email: community.affairs.sen@aph.gov.au

**Senate Inquiry into the Social and Economic Impact of Rural Wind Farms**

Dear Sir/ Madam,

I would like to make the following 14 brief comments with respect to wind farms and Australia's response to climate change:

1. Australia has an almost embarrassingly large amount of space within which to accommodate wind farms, and sensibly located wind farms will not impact property values. A local area coal fired power station would have a much greater impact on property value.
2. The NHMRC states "There are no direct pathological effects from wind farms and...any potential impact on humans can be minimised by following existing planning guidelines" [1]. A local area coal fired power station would pose a greater risk to health.
3. "Sound from wind turbines does not pose a risk of hearing loss or any other adverse health effects in humans. Sub-audible, low frequency sounds and infrasound from wind turbines do not present a risk to human health." [1]
4. "Infrasound associated with modern wind turbines is not a source which will result in sound levels which may be injurious to the health effects of a wind farm neighbour." [2] Traffic movement is a greater source of disturbance.
5. "It is unlikely that evidence of adverse health effects will emerge in the future because there is no biologically plausible mechanism known by which wind turbines could cause health effects." [2]
6. A wind farm typically generates 35-45dBA [3], at a distance of 350m - less than the 50 – 55dBA suggested for recommendation by the NSW DECC for nighttime noise in residential areas (depending on the type of road). [4]
7. China is the leading supplier of the rare earth materials used in wind turbine manufacture. Until recently there has been little regulation of these mines, resulting in adverse human health and environmental impacts. Regulation is now being introduced and environmental concerns are being addressed. Australia is also a source of rare earth materials.[5]
8. In spite of its outstanding natural advantages and reflecting on its anachronistic commitment to fossil fuel, Australia lags far behind the rest of the world in the deployment of wind power. In 2009 capacities in the USA, Germany, China, Spain and India were 35, 26, 25, 19 and 11 GW respectively, with world capacity of 158 GW. In contrast Austria's capacity was a paltry 1.7 GW. [6]
9. A 2010 Galaxy poll showed 93% want to see more investment in renewable energy [7] and 75% want renewables subsidised rather than fossil fuels.[8] A 2010 Newspoll shows 75% believe humans are driving climate change.[9] All of the peer reviewed evidence points to anthropogenic green house gas emissions as the primary cause of global warming. This conclusion is accepted by the world's academies of science, including the Australian Academy of Science, the CSIRO and the Bureau of Meteorology. [10]
10. Statement from the American Association for the Advancement of Science in 2006: "The pace of change and the evidence of harm have increased markedly over the last five years. The time to control greenhouse gas emissions is now." [11]

11. Recent Government analysis shows that Australia's emissions are likely to significantly increase by 2020.[12]
12. Deep emissions cuts are required to keep carbon dioxide levels below 450ppm and warming less than 2 deg C. Evidence is accumulating that avoiding dangerous climate change requires returning to carbon dioxide levels of less than 350 ppm.[13]
13. Wind and solar energy supplies can be brought on line quickly and as Prof. Ross has recently observed, renewable presents an economic and employment opportunity.
14. Melbourne University and the Beyond Zero Emissions group have developed a comprehensive plan highlighting the feasibility of a rapid transition to a renewable energy based economy for Australia. Indeed recent reports show this to be possible for the world.[13] Wind plays a major role in these assessments.

## References:

- [1] National Health and Medical Research Council, 2009, Wind Turbines and Health - A Rapid Review of the Evidence, viewed 10 October 2010, [www.nhmrc.gov.au/\_files\_nhmrc/file/publications/synopses/evidence\_review\_\_wind\_turbines\_and\_health.pdf]
- [2] American Wind Energy Association & Canadian Wind Energy Association, 2009, Wind Turbine Sound and Health Effects - An Expert Panel Review, prepared by W.D Colby, R. Dobie, G. Leventhall, D.M. Lipscomb, R.J. McCunney, S.T. Seilo, B. Søndergaard, viewed 23 October 2010, [http://www.awea.org/documents/AWEA\_CanWEA\_SoundWhitePaper\_12-11-09.pdf]
- [3] (a) <http://www.synergy-wind.com/documents/6Noise.pdf>; (b) <http://www.bwea.com/ref/noise.html>
- [4] <http://www.environment.nsw.gov.au/resources/noise/2010218draftroadnoisepol.pdf> section 2.3.1
- [5] <http://www.theaustralian.com.au/business/the-substances-leave-a-toxic-trail-but-they-are-essential-for-green-technology/story-e6frg8zx-1225983227242>
- [6] <http://www.gwec.net> and <http://windturbinezone.com/market-research-reports/2009-global-wind-power-report-by-country>
- [7] <http://www.oxfam.org.au/blogs/2010/12/australians-support-investment-in-renewable-energy/>
- [8] <http://news.smh.com.au/national/poll-finds-76-want-renewables-subsidy-20080401-22rv.html>
- [9] [http://www.newspoll.com.au/image\\_uploads/101201%20Climate%20Change.pdf](http://www.newspoll.com.au/image_uploads/101201%20Climate%20Change.pdf)
- [10](a) <http://www.science.org.au/reports/climatechange2010.pdf>; (b) <http://www.csiro.au/resources/State-of-the-Climature-Snapshot.html>
- [11][http://www.aaas.org/news/press\\_room/climate\\_change/mtg\\_200702/aaas\\_climate\\_statement.pdf](http://www.aaas.org/news/press_room/climate_change/mtg_200702/aaas_climate_statement.pdf)
- [12] <http://www.climatechange.gov.au/en/publications/projections/australias-emissions-projections.aspx>
- [13] [http://www.columbia.edu/~jeh1/mailings/2011/20110118\\_MilankovicPaper.pdf](http://www.columbia.edu/~jeh1/mailings/2011/20110118_MilankovicPaper.pdf)
- [14] (a) [http://www.energy.unimelb.edu.au/uploads/ZCA2020\\_Stationary\\_Energy\\_Report\\_v1.pdf](http://www.energy.unimelb.edu.au/uploads/ZCA2020_Stationary_Energy_Report_v1.pdf); (b) <http://www.abc.net.au/rn/futuretense/stories/2010/3056957.htm> (c) .Jacobson, M. Z. & Delucchi, M. A. *Providing all global energy with wind, water, and solar power, Part I: Technologies, energy resources, quantities and areas of infrastructure, and materials*. Energy Policy. doi:10.1016/j.enpol.2010.11.040 (2010). (d) [http://www.wwf.org.uk/news\\_feed.cfm?4584/The-Energy-Report---100-renewable-energy-by-2050](http://www.wwf.org.uk/news_feed.cfm?4584/The-Energy-Report---100-renewable-energy-by-2050) (e) <http://www.zcb2030.org/> (f) <http://bit.ly/OzRenEnergyByNumbers>