Public Health Association
AUSTRALIA

POSITION STATEMENT: Human Health Effects of Wind Turbines

The Public Health Association of Australia notes that:

1. Acoustic health effects of wind turbines have been raised as an issue in the media and grey literature.

2. Issues of the negative effects of any energy source have to be viewed in the context of global environmental change, particularly global warming from anthropogenic greenhouse gas emissions. The adverse social and health consequences of global warming are worldwide, cumulatively large, affect whole populations and the biosphere [1].

3. Renewable forms of energy, such as solar and wind, appear to be associated with relatively low adverse health effects, compared to the risks of nuclear energy [2] and the well documented health impacts of fossil fuel combustion [3,4,5].

4. Reviews of the literature to date have failed to identify any adverse physiological effects attributed to exposure to wind turbines, with the exception of those mediated by noise in a small proportion of exposed people, in whom symptoms may be related to perception, annoyance and pyscho-sociological factors [6, 7, 8]. This view is most recently summarised in the literature by NHMRC 2010 [9] and Knoppfer and Ollsen [10].

5. There is no evidence to date to suggest that infrasound has significant effects on human health via physiological mechanisms at the low pressure levels generated by wind turbines [3,7,10].

6. Whilst the concerns of individuals who feel they are affected need to be heeded, there is a danger that the factors that attend introduction of any new technology (understanding of the technology and the sense of control over the deployment and of the risk [8, 12], aesthetic concerns, the "NIMBY phenomenon", a sense of missing out on the benefits) [9] may be exploited by those wanting to oppose expansion of wind energy.

The Public Health Association of Australia therefore:

7. Acknowledges that in some circumstances, a small proportion of people report experiencing adverse effects and distress related to audible noise from wind turbines, similarly to other sources of noise distress.

8. Supports providing an avenue whereby complaints can be reported and reviewed in a timely and effective fashion.

9. Recommends that any proposed research by scientific experts in this field be conducted with rigorous methodology and the results published in the peer-reviewed literature.

10. Recommends effective early community consultation and engagement as the key to preventing misinformation and community division in deployment of renewable energy developments and that consideration be given to models where the benefits from wind farms are shared amongst the whole community, not just those on whose land they are sited.

11. Recognises that in the broader context of climate change, the many problems with fossil fuel sourced energy and the need to urgently transition to a non-carbon energy economy, wind sourced energy plays an important and an immediate part in the energy mix.

12. Supports appropriate deployment of wind turbines given the urgency of addressing the transition away from carbon based energy.

References

1. PHAA 2010, Safe climate Policy at http://www.phaa.net.au/policyStatementsInterim.php#e (22/11/2011)
2. PHAA 2011, Nuclear Industry Policy at http://www.phaa.net.au/policyStatementsInterim.php#e (22/11/2011)
3. Epstein, PR, Buonocore, JJ, Eckerle, K, Hendryx, M, Stout, BMI, Heinberg, R, Glustrom, L, 2011, "Full cost accounting for the life cycle of coal," *Annals of New York Academy of Sciences* 1219: 73-98.
4. Lockwood AH, Walker-Hood K, Rauch M, Gottlieb B. Coal's Assault on Human Health. A report from Physicians for Social Responsibility; 2009. Available online: http://www.psr.org/assets/pdfs/psr-coal-fullreport.pdf
5. Castleden, WM, Shearman, D, Crisp, G & Finch, P, 2011, "The mining and burning of coal: effects on health and the environment," *Medical Journal of Australia* 195(6): 333-335.
6. Leventhall, Geoff, 2010) Submission and Appendices to the Senate Inquiry: The Social and Economic Impact of Rural Wind Farms, available at http://www.aph.gov.au/senate/committee/clac_ctte/impact_rural_wind_farms/submissions.htm (accessed 2 June 2011)
7. Bolin, K, Bluhm, G, Eriksson, G & Nilsson, ME, 2011, "Infrasound and low frequency noise from wind turbines: exposure and health effects," *Environmental Research Letters* 6: 035103.
8. Chapman, Simon, 2011, in press, University of Auckland.
9. NHMRC, 2010, Wind Turbines: a rapid review of the evidence, National Health and Medical Research Council
10. Knopper, LD & Ollson, CA, 2011, "Health effects and wind turbines: A review of the literature," *Environmental Health* 10(1): 78.
11. Health Protection Agency, 2010, *Health Effects of Exposure to Ultrasound and Infrasound: Report of the independent Advisory Group on Non-ionising Radiation*, Health Protection Agency Centre for Radiation, Chemical and Environmental Hazards, Chilton, Didcot, Oxfordshire, UK
12. Chapman, Simon, 2010, *Croakey*, 23 Feb 2010

ADOPTED 2011

Adopted in December 2011 as part of the 2011 policy development and review process.