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To:	<plan_comment@planning.nsw.gov.au></plan_comment@planning.nsw.gov.au>
Date:	19/01/2013 7:39 PM
Subject:	Submission on Crookwell III wind farm application 10_0034
Attachments:	Capital Region and Southern Tablealands wind turbine ILFN.PDF; Dickinson
	submission to Standards NZ 20090407.pdf

Anna Timbrell - Submission on Crookwell III wind farm application 10_0034

Application Crookwell 3 wind farm, Project No: 10_0034.

To: Major Projects Assessments Department of Planning & Infrastructure, GPO BOX 39 Sydney NSW 2001

19/01/2013

Re 10 0034, Project Application Crookwell 3 wind farm

I, George Papadopoulos, am aware of the proposal to construct up to 35 wind turbines adjacent to Crookwell 2 wind farm, between Crookwell and Goulburn.

I wish to lodge my objection to this wind turbine proposal. My chief concern is the effects of infrasound/low frequency noise emanating from modern wind turbines, the distance it travels, and its effects on humans and wildlife.

Low Frequency Noise and Human Health

As a registered and practising pharmacist, I have been preoccupied over the last year or so with many consistent reports of "V8 engine" or "diesel engine" tinnitus-like complaints in the Capital and Southern Tablelands region (myself suffering from the same).

On further questioning, all these individuals have reported the same peculiar noise as being external to the head; as though coming through the walls of their home; the problem is worse indoors than outdoors; and in some cases causing severe distress and sleep disturbance. All but one individual, who had already identified the cause, believed they were suffering from tinnitus.

All cases have arisen in the Capital and Southern Tablelands region, most since the Autumn of 2011, and a few since 2009.

The peculiarity of these reports is that the severity and temporal occurrence of noise perception coincides rather well – it is not an ongoing problem. The symptoms follow weather patterns: atmospheric inversions and humid atmospheric conditions usually produce the worst symptoms. It is unambiguously an environmental stimulus.

A few of them also report irregular repetitive sensations of air pressure thrusts, much like when slams a door. Not all members of the household necessarily perceive the problem. The problem vanishes when one

leaves the region, or at least stays further away from the wind turbines.

The symptoms are by and large consistent with individuals sensitive to low frequency noise as described by Dr Levanthal in 2003 in his report to DEFRA. See:

http://archive.defra.gov.uk/environment/quality/noise/research/lowfrequency/documents/lowfreqnoise.pd

It is also interesting to note that all these individuals live within 30 to 35 km of the wind turbine developments in the Capital/Gunning regions of NSW, and given circumstances.

It is clear that we are dealing with a low frequency noise load in the region of which the bulk is produced by wind turbines. (attached is an information leaflet that I have produced on the same, with further information and references provided)

Increasing the low frequency noise load will therefore intensify the suffering of those who currently are affected, and predictably increase the percentage of those suffering. Therefore the developer should be required to demonstrate that this wind development will not add to the existing infrasound/low frequency noise load of the region.

Effects of low frequency noise on bats

Prior to suffering what I describe above, I noticed in 2009 that there was a dramatic decline in the numbers of small insectivorous bats on my property, and a coincidental dramatic increase in scarab beetle damage on eucalyptus trees. I have another two anecdotal reports of the same problem on the southern side of Yass and in the northernmost suburbs of Canberra, around the Gungahlin township.

In 2006, during the height of the drought, I estimated a population of up to 4 or 5 resident small insectivorous bats per acre of scrub. Now I am fortunate to spot more than three at a time over my entire 200 acre block.

I would postulate that either the low frequency noise from wind turbines interferes with the ability of bats to detect their prey, or something similar. Overseas, it is believed that some wind turbine models,

[i][ii]

particularly the larger models, attract bats to their deaths. Therefore, the developer should therefore be required to identify which particular frequencies of low frequency noise attract local and migrating bat species, and demonstrate that the proposed model of wind turbine does not, and will not during the span of its operation, produce frequencies that attract bats or interfere with their capabilities of detecting prey.

Conclusion

I reiterate my objection to the proposed Crookwell III wind farm. Attached for your information is additional information in a paper by Professor Philip Dickinson, an acoustics expert in New Zealand. He too also addresses the low frequency noise issue I have flagged above, and says:

"There have been numerous reports of low frequency noise penetrating closed windows and being heard more clearly indoors than outside. Sounds below 125 Hz can excite room resonances and be amplified, significantly disturbing sleep and hence compromising health."

The Upper Lachlan Shire area already has 5 functional wind farms with another currently under construction. The long distance issues with low frequency noise will only get worse if this project proceeds.

George Papadopoulos, 1540 Cooks Hill Road, Yass NSW 2582.

[i] http://www.midwestenergynews.com/2012/07/30/bats-blades-more-research-needed-on-bat-wind-farm-fatalities/ [ii]