

Can wind farms make people sick? Simon Chapman investigates

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Simon Chapman, professor of public health at the University of Sydney, has been investigating concerns about the safety of wind farms. He writes:

“Last week Kevin Rudd and Peter Garrett were confronted at a Ballarat meeting by angry residents living nearby the Waubra wind farm, 35km north west of Ballarat, run by Acciona.

ABC AM’s [report](#) included the following.

‘Belinda Wheel: Mr Rudd, residents are suffering from sleep deprivation, ah, health problems due to wind turbines sited too close to home.

Berni Jannsen: Within weeks of the last ones being turned on I started getting headaches, started getting heart palpitations.

Donald Thomas: Mostly ear pressure, headaches, heart palpitations, high blood pressure.

Samantha Hawley (reporter): Donald Thomas lives about three kilometres from the wind farm.

Donald Thomas: Before the wind mill started operating there was none of this.

Samantha Hawley: Last week the company bought a property from one of its most vocal critics who is now subject to a confidentiality agreement.’

With often clanking windmills having been around for 5,000 years, what are we to make of such claims, particularly since the affected residents were reported as living some 3km away from the wind farm?

Are they calculated displays from a few people seeking to cash in on hopes of land sales or compensation? Do they reflect genuine health effects actually caused by the noise from the windfarm?

Or are they equally genuine health effects caused by residents’ anxiety about the towers?

The noise generated by modern wind turbines at distances between 300-600 metres is generally within 40 to 50 decibels, the equivalent to the sound of light traffic at 50 feet or the sound in a normal living room with ordinary conversation. So at 3km, the turbines would be virtually inaudible. Suggestions that the reported health problems are due to “low frequency” noise or “changes in air pressure” have been made.

A large review of the scientific evidence, commissioned by the American and Canadian wind energy associations, AWEA and CanWEA, is available [here](#).

It concludes “Following review, analysis, and discussion of current knowledge, the panel reached consensus on the following conclusions:

- There is no evidence that the audible or sub-audible sounds emitted by wind turbines have any direct adverse physiological effects.
- The ground-borne vibrations from wind turbines are too weak to be detected by, or to affect, humans.
- The sounds emitted by wind turbines are not unique. There is no reason to believe, based on the levels and frequencies of the sounds and the panel’s experience with sound exposures in occupational settings, that the sounds from wind turbines could plausibly have direct adverse health consequences.”

The authors discuss the likelihood that the “nocebo” effect comes into play with community concerns about adverse effects producing a worsening of mental or physical health, based on fear or belief in the likelihood of adverse effects.

Dr Tim Driscoll from the University of Sydney’s School of Public Health has a long history of investigating community concerns about various environmental hazards. He says: “If the people truly are worried about their health (as they may be) or about their property values (as they may be), then they might well become anxious, which in turn might put their blood pressure up, give them headaches and make their heart race. These are genuine health effects arising from their worry, which in turn arise from the thing they are worried about, even though the thing they are worried about may not objectively be a risk to health.”

Risk communication researchers have long identified elements of risk perception which are likely to amplify community anxiety and outrage about alleged environmental hazards. When a hazard is natural, anxiety is low compared to when it is industrial or artificial. We rarely hear of communities living in windy locations describing symptoms caused by the sound of wind. But with wind farms the sound is artificial. Natural fluoride occurring in water bothers no one, but the same levels added by local governments can incite anxiety.

Hazards that are imposed as opposed to voluntary exposures increase outrage. Skiers voluntarily expose themselves to high level risk without complaint. But there are legions of examples of extremely low level risks “imposed” on communities that cause mild panics.

Similarly, the “new” can provoke anxiety. Mobile phone towers went through a phase of concerning citizens who daily walked past suburban electricity substations and TV towers without a care in the world.

Wind farm turbines are now generating pathology, but where are the queues of suffering Dutch from living near the sound of traditional windmills?

The fact that the report referred to above was industry funded will undoubtedly cause some to instantly dismiss it as being a snow job by the dastardly wind energy industry. Indeed this is another factor: trustworthy versus untrustworthy sources.

Ideally the wind industry should have given the money to a University and asked it to take full control of the review process, with no involvement by the industry in the selection of the independent expertise. The wind turbine industry is not exactly an industry with a reputation for mendacity, but trust is fragile commodity.”

Update

Meanwhile, Dr Stephen Corbett reminds us that there is a long and established literature on the threats posed by windmills:

Foretold by Cervantes?

.....They immediately come upon thirty to forty windmills that appear as giants to Don Quijote. He tells Sancho that he is going to kill them all; keeping their treasures for themselves and doing God a favor by removing their evil from the earth. Sancho tries to convince his master that these are windmills, but to no avail as Don Quijote charges at them amidst Sancho’s screaming.

Just then they came in sight of thirty or forty windmills that rise from that plain. And no sooner did Don Quixote see them that he said to his squire, “Fortune is guiding our affairs better than we ourselves could have wished. Do you see over yonder, friend Sancho, thirty or forty hulking giants? I intend to do battle with them and slay them. With their spoils we shall begin to be rich for this is a righteous war and the removal of so foul a brood from off the face of the earth is a service God will bless.”

“What giants?” asked Sancho Panza.

“Those you see over there,” replied his master, “with their long arms. Some of them have arms well nigh two leagues in length.”

“Take care, sir,” cried Sancho. “Those over there are not giants but windmills. Those things that seem to be their arms are sails which, when they are whirled around by the wind, turn the millstone.”

-Part 1, Chapter VIII. *Of the valourous Don Quixote’s success in the dreadful and never before imagined Adventure of the Windmills, with other events worthy of happy record.*