

Do wind turbines cause health effects from low frequency vibrations and "infrasound"?

No, they don't. Some people have claimed that modern wind turbines emit extremely low frequency noise (LFN), also known as "infrasound" (from 1-2 Hz). There is no scientifically reliable documentation to support this claim. In fact, sound experts say just the opposite. Dr. Geoff Leventhall, a world-leading expert on infrasound who authored the report, "A Review of Published Research on Low Frequency Noise and its Effects" for the British government, states:

"I can state quite categorically that there is no significant infrasound from current designs of wind turbines. To say that there is an infrasound problem is one of the hares which objectors to wind farms like to run. There will not be any effects from infrasound from the turbines."

In general, wind energy critics tend to support their claims about health effects from low frequency noise with unsubstantiated reports of LFN effects at particular windparks in the United Kingdom, and a misreading of the scientific literature on wind turbine noise analysis. As one example, critics often refer to a British newspaper article from January 2004, in which two family physicians are said to have conducted "new medical studies" on the health impacts of wind turbine low-frequency noise. A search of LFN literature reveals no written studies on the subject by either physician. Attempts to obtain any such studies by direct contact with these physicians have been similarly unsuccessful.

An example of misreading noise literature can be found in paid advertisements. For example, in a paid advertisement, a writer mistakenly equates Professor van den Berg's characterization of a wind turbine sound as "a low-pitched thumping sound" with LFN. A close reading of Professor van den Berg's study indicates that it does not contain any LFN and infrasonic analysis. (G.P. van den Berg, "Effects of the wind profile at night on wind turbine sound", 2003) This point has been confirmed by both Professor van den Berg and Dr. Leventhall.

In a review of this paid advertisement on LFN effects of wind turbines referenced above, Dr. Leventhall states:

"Dr. Pierpont falls into a number of the common errors which occur with people who do not fully understand the topic they are dealing with. In particular, she takes a very restricted, one-dimensional view of noise, referring only to frequencies, whilst ignoring the enormous significance of the level of a noise. A parallel is with harmless and harmful doses of medication. "She is incorrect in her conclusions on infrasound and low frequency noise. Current designs of wind turbines do not product these noises at levels, which might cause problems to people living at normal separation distances. Much of this noise is below hearing threshold, whilst what people hear is noise at higher frequencies, say, above 500Hz, fluctuating in level at the frequency corresponding to blades passing the tower, which is around once per second.

"One is left with a feeling that she is, quite possibly, stepping outside her field of competence in making pronouncements on noise." (Dr. Leventhall's review of the 3/1/05 advertisement)

Extensive work has been carried out on infrasound from wind turbines, which demonstrated that "Low frequency noise and vibration levels were both found to comply with recommended residential criteria even on the wind farm site itself with the acoustic signal, below 20 Hz, being well below accepted thresholds of perception." (www.yes2wind.com)

This type of negative impact would certainly have been surfaced during the NY State Generic Environmental Impact Statement process and during the many other critical reviews of wind power that have been completed. With more than 2,500 GE 1.5 MW wind turbines in service, no infrasound problems have been documented.

Source: <http://www.noblepower.com/issues-and-answers/environmental-issues.html#four>