

# Wind Turbines Make Waves: Why Some Residents Near Wind Turbines Become Ill

Bulletin of Science, Technology & Society  
31(5) 414–426  
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DOI: 10.1177/0270467611417852  
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## Abstract

People who live near wind turbines complain of symptoms that include some combination of the following: difficulty sleeping, fatigue, depression, irritability, aggressiveness, cognitive dysfunction, chest pain/pressure, headaches, joint pain, skin irritations, nausea, dizziness, tinnitus, and stress. These symptoms have been attributed to the pressure (sound) waves that wind turbines generate in the form of noise and infrasound. However, wind turbines also generate electromagnetic waves in the form of poor power quality (dirty electricity) and ground current, and these can adversely affect those who are electrically hypersensitive. Indeed, the symptoms mentioned above are consistent with electrohypersensitivity. Sensitivity to both sound and electromagnetic waves differs among individuals and may explain why not everyone in the same home experiences similar effects. Ways to mitigate the adverse health effects of wind turbines are presented.

## Keywords

wind turbine, dirty electricity, power quality, ground current, contact current, electrohypersensitivity, noise, infrasound, vibroacoustic disease, wind turbine syndrome

## Introduction

With growing concern about climate change, the carbon budget, depletion of fossil fuels, air pollution from dirty coal, radiation from nuclear power plants, and the need for a secure energy supply, more attention and funding are being diverted to renewable energy. Among the various types of renewable energy, wind has received a lot of attention due, in part, to opposition from communities earmarked for wind turbines and from communities that have experienced wind turbines firsthand.

Some people who live near wind turbines report difficulty sleeping and various symptoms of ill health and attribute these problems to noise and shadow flicker—two elements they can perceive. Indeed the U.S. National Research Council (Risser et al., 2007) identify noise and shadow flicker as the two key impacts of wind turbines on human health and well-being.

Not all health agencies, however, recognize that sound waves from wind turbines may cause adverse health effects. Following a review of the literature, the Chief Medical Officer of Health for Ontario (2010), concluded

that while some people living near wind turbines report symptoms such as dizziness, headaches, and sleep disturbance, the scientific evidence available to date does not demonstrate a direct causal link between

wind turbine noise and adverse health effects. The sound level from wind turbines at common residential setbacks is not sufficient to cause hearing impairment or other direct health effects, although some people may find it annoying.

Low frequency sound and infrasound from current generation upwind model turbines are well below the pressure sound levels at which known health effects occur. Further, there is no scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects.

What specifically is responsible for the illness reported near wind turbines is controversial; while some of this controversy is scientifically valid, some of it is politically motivated (Phillips, 2010).

It is intriguing that not everyone in the same home experiences symptoms, and the symptoms are not necessarily worse for those nearest the turbines. Indeed, the situation may be much more complex than noise and shadow flicker.

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