

Wind Turbines and Sound: Wind Farms as Good Neighbors



Wind turbine noise may be one of the most easily misunderstood issues related to wind energy projects.

The Bottom Line

Aside from being difficult to understand, technically, individuals have a wide range of varied reactions to sound of all kinds, including wind turbine sound. That means it is extremely difficult to pinpoint a particular sound level (or decibel measurement) as being universally the “right” level.

The fact is, wind developers take great care to ensure that projects are sited in a way that makes sound at neighboring residences lower than would typically be noticeable. This is done through advanced and very accurate computer modeling technology, a long history of operational experience, and good common sense. The support of communities and neighbors are the life-blood of the industry. The care taken to properly site turbines is evidenced in the hundreds of thousands of people that live near wind farms without issue.

It helps that wind turbines sound is extremely low. Most people that visit operating wind projects are amazed at how quiet they are: typically, two people can carry on a conversation at normal voice levels even while standing directly below a turbine.

Wind Energy Provides Public Health Benefits

Emitting virtually no air or water pollution, wind energy is essential to reducing energy-sector public health impacts. In 2018 alone, wind avoided \$9.4 billion in public health impacts by cutting harmful air pollutants that trigger asthma attacks and create smog. Between 2007 and 2015, wind-generated electricity avoided as many as 12,000 premature deaths according to researchers from the Lawrence Berkley National Laboratory.

Does Wind Turbine Sound Impact Health?

Some rumors persist about sound from wind turbines and human health. The reality is that numerous independent studies and government health organizations from around the world have found **no link between human health and wind turbine sound**. For example, a Massachusetts study found no evidence for a set of health effects from exposure to wind turbines. A major study in Canada of over a thousand homes stated, “No evidence was found to support a link between exposure to wind turbine noise and any of the self-reported illnesses.”

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Studies have found that a **“nocebo” effect** can take place, the opposite of the well-known “placebo” effect. The nocebo effect describes a situation in which individuals who are led to expect physical symptoms may actually experience these symptoms, whether or not the supposed cause of the symptoms is actually present. In this case, increased exposure to misinformation about wind actually seems to increase the likelihood that certain individuals will report negative health effects such as headaches or nausea, although no scientific evidence shows wind turbines cause any such health effects.