

My name is Stephen Ambrose and I support the proposed three-year moratorium on wind energy generating plants.

I am a Board Certified Member of the Institute of Noise Control Engineering and a Full Member of the Acoustical Society of America. I have over 35 years' experience working in acoustics, environmental sound, and industrial noise control. My career started with Stone & Webster Engineering Corporation in Boston Massachusetts. I was responsible for quieting large electric power stations to coexist as a good acoustic neighbor. I am currently an independent consultant practicing near Portland, Maine. I coauthored the Bruce McPherson Infrasound and Low Frequency Noise Study for Falmouth, Massachusetts, followed by a number of peer-reviewed papers and articles about wind turbine noise and adverse public health impacts.

For my career, I have stressed the importance for clients to reduce their noise levels sufficient not to cause an adverse public response. People have a negative reaction when the noise increase approaches 5 dB, which represents sporadic complaints. Noise control engineer's work are judged acceptable when there are no noise complaints. Wind turbine siting documents should not use an urban nighttime noise level of 45 dBA as a design goal. This level is too loud for rural environments that have nighttime sound levels in the low 20s and high teens.

There should be no wind turbine complaints about noise with today's knowledge and instrument capabilities. I have never investigated a noise problem where the public has been so vocal about ruined lives and home abandonment. Why are neighbors complaining about industrial wind turbines? Why are regulatory agencies unable to protect public health and wellbeing? I will answer both of these questions.

A career long friend and fellow acoustician, Robert Rand and I decided to investigate wind turbine complaints. We are committed to our profession "Canons of Ethics"; Hold paramount the safety, health and welfare of the public. These are similar to those held by Professional Engineers and Health Professionals. Our first visit to a wind turbine site quickly revealed why neighbors were complaining. Wind turbines sound awful. Beyond 1000-ft the higher frequencies are no longer audible. Blade rotations cause the noise levels to fluctuate loudly with an unnatural sound character. Pedersen & Wayne research shows that wind turbine sounds are more objectionable than noise produced by traffic, trains and planes.

Many wind turbine neighbors are going to describe how their lives have been ruined by audible noise and infrasound produced by wind turbines. I encourage each committee member to believe the wind turbine neighbors' testimonials. I have measured wind turbine noise levels at impacted neighbors' homes during moderate to strong wind speeds. Wind turbines are the only noise source where one is invited by newly met strangers to live in their house, sleep in their beds and have them leave to sleep elsewhere. It was a surprise to experience the debilitating effects described by Dr. Nina Pierpont's research, "Wind Turbine Syndrome". I felt miserable with a headache, nausea, loss of cognitive ability, sleep interference and interruption. When I left the

area all symptoms went away. It needs to be understood that not everyone is affected by wind turbines. I view my experiences as an effective peer-review investigation of wind turbine neighbors' complaints.

Regulatory boards are now unable to protect public health and wellbeing because the wind turbine industry has substituted their own measurement and assessment procedures through international committees. The wind turbine acoustic standards differ dramatically from other noise sources. Wind turbines are evaluated using A-weighted sound levels by removing all low frequency and infrasound from consideration. A-weighting lowers infrasound levels by 50 dB at 20 Hz and 70 dB at 10 Hz. This promotes false statements that wind turbines do not produce infrasound. I have measured infrasound using a sound level meter and a microbarograph. I have experienced the adverse health effects caused by infrasound. Again, I felt miserable with a headache, nausea, loss of cognitive ability, sleep interference and interruption. I felt better when only a few miles away from the wind turbines influence.

I would like to add a cautionary comment about the Public Service Board justification for granting the Certificate of Public Good (pg. 100). I quote the second sentence first: 'The Petitioners have demonstrated wind turbines are not likely to emit audible or perceivable infrasound'. This is a very weak statement to justify the first sentence. 'We conclude that the noise monitoring plan need not include monitoring for infrasound, sound levels below 20 Hz'. My professional opinion is the Public Service Board has been very cleverly, 'misled', or may be the better word is 'duped'.

Industrial wind turbines have proven to be a public health hazard in too many communities in Maine, Massachusetts and Vermont. People choose to live in a pristine natural environment. Wind turbines expose neighbors to excessive noise and adverse health impacts.

I recommend that anyone who thinks wind turbines are good acoustic neighbors to do what I did. Go to a wind turbine site, live as a neighbor, and sleep in their bed when the wind blows strong. I do not want to do that again. The very nice house used in the infrasound study is available, because the owners have abandoned their dream house and cashed in their retirement to find another place to live.

I conclude with this; neighbors are better acoustic analyzers than any instrument made today. I respect their judgment. Thank you for your time and consideration. I will be happy to answer any questions.

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