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Commissioners, welcome again to Avon.

As I listened to most of the Crocker and Dakota Range evidentiary hearings and ad hoc meetings, I hear you repeat a certain phrase : “Help me to understand”. When you say, “help me to understand”, then that means you don’t understand, or you don’t understand completely. My goal is to help people understand.

After listening to the Dakota Range meeting on Tuesday, I got a sick feeling in my stomach, and you should have also. The setbacks for that project are grossly inadequate and are going to make some people sick and going to force some people out of their homes. Health concerns are springing up all over the Midwest, and if it weren’t for the confidentiality clause and neighbor agreements that the developer puts in the contract, this room could be full of these people with such problems.

Studies show the longer you live near a wind turbine, the worse your symptoms become. There is a big coverup going on with the health effects, so the wind industry is scrambling to keep it under wraps. Because of growing health complaints, the University of Minnesota is starting a study on how people respond to very low-frequency sounds from wind turbines. But guess who is paying for this study? Xcel Energy, the utility company erecting thousands of wind turbines in northeastern South Dakota and the same out of state corporation that our Governor gave 8.1 million dollars of our money to last year. How can you trust any study that’s bought and paid for by the Wind Company?

I have compiled a small library of health-related peer review articles, other studies, and work done around the world by Doctors and Scientists that are experts in this field. I am donating this to the PUC, I do not expect it to get posted on the docket and I don’t want it back. I offer it only as a tool to “help you understand”. **Or**, you can go to this one-page document from the American Wind Energy Association. It reads: “Some rumors persist about sound from wind turbines and human health”. And “Studies have found that a “nocebo effect can take place.”

If the AWEA is right, then every one of these Doctors and scientists that did all this research would have to be wrong.

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Commissioners, you are now in control of people's health and their quality of life. If you grant a permit based on your own criteria, then you are agreeing with the applicant that this project will not substantially impair the health, safety or welfare of the inhabitants. That statement becomes your guarantee to the community.

We went to our County Zoning Board and Commissioners at least a dozen times. We first asked for a 2-mile setback, then last year we asked for a 1-mile setback with waivers. They would not even listen. They gave us a 1000 ft. setback, and a Prevailing Winds Board member wrote in the Avon Clarion last September: "So the County looked to the SDPUC, there they found the draft model ordinance" and he goes on to say "For this, Bon Homme County adopted the state standard of a 1000 ft. setback for safety reasons".

So, our zoning laws are the result of the PUC "state standard". Because our County officials had already been so influenced by the wind developers, we did not stand a chance. The other reason we have no voice is because the County Commissioner for the Avon District is on the Board of Managers for Prevailing Winds. Since this project only takes in the Avon District of the county, we have no representation at the county level.

I don't envy your job. It's evident you have a lot of pressure to grant these permits. But you have the health and safety of South Dakota residents in your control. There are people in this room that will have health effects from these giant wind turbines. Are you going to play Russian Roulette with their health? There is a wealth of knowledge out there to "help you understand".

Justice will not be served until those who are unaffected are as outraged as those who are. Benjamin Franklin

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 fact, wind power makes important contributions toward public health by reducing air pollutants trigger asthma attacks and create smog. In 2016 alone, wind created \$7.4 billion in public health benefits, and by cutting air pollution, wind-generated electricity avoided 12,000 premature deaths according to researchers from the Lawrence Berkley National Laboratory.

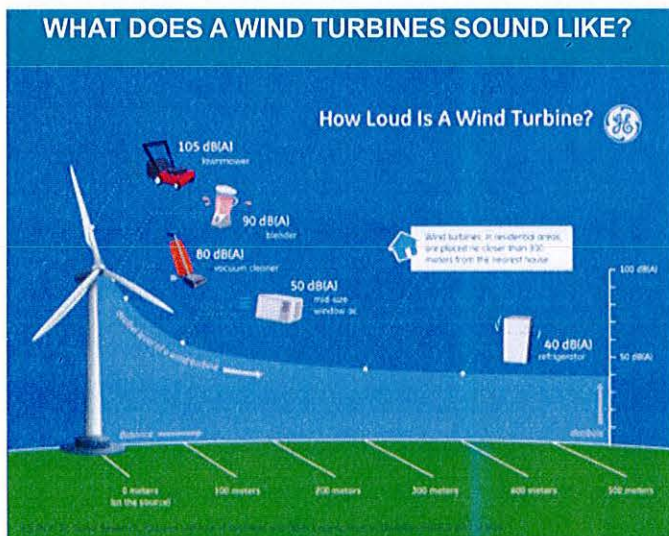
DOES WIND TURBINE SOUND IMPACT HEALTH?

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 confirmed this again, **stating**, "No evidence was found to support a link between exposure to wind turbine noise and any of the self-reported illnesses."

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.

Some relevant studies include:

- Statistic Canada: Community Noise and Health Study
- Wind Turbines and Health: A Critical Review of the Scientific Literature
- Oregon Wind Energy Health Impact Assessment
- Health effects and Wind Turbines: A review of the literature
- Chief Medical Officer of Health of the Province of Ontario



Wind power created \$7.4 billion in public health benefits in 2016 by cutting pollution that causes asthma attacks and other diseases. #WindWorks

