

From: jessica cornett [<mailto:smileeee80@yahoo.com>]

Sent: Monday, April 23, 2018 9:48 AM

To: Puco ContactOPSB <contactopsb@puco.ohio.gov>

Subject: Please include this with docket# 18-0488-EL-BGN. as many families and children will be immediately impacted as will their health



*William Mulvaney, Superintendent
Darren Loschen, Principal*

District 225

ARMSTRONG TOWNSHIP HIGH SCHOOL

*30474 Smith St.
P.O. Box 37
Armstrong, IL 61812
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Dear Chairman Weinard,

My name is Bill Mulvaney and I am the Superintendent of Schools for Armstrong Township High School and Armstrong-Ellis CUD #61. I also served on the wind panel that met to try and give direction to the county board on wind turbine ordinances. Our panel did not come up with any recommended changes, but I would like to share a few thoughts with you.

I have noticed that we have some children in our district that appear to be having some medical issues related to the wind turbines. Headaches, lack of sleep and jaw issues seem to be the most common. The students also complain about not being able to sleep or not getting a full night's sleep due to sound issues.

We have also been advised that we will be losing a couple of families because the wind turbines were placed close to homes and the families can no longer handle the flicker and noise issues.

While these issues were brought up at our panel discussions, I was not fully aware of the impact that the wind turbines would have to my school districts. It is never a good thing when children have health issues or families have to leave their homes to get away from the turbines. The revenue generated by the turbines is a blessing to our schools, but the unintended consequences are real.

I hope this letter sheds some light on real issues that affect districts that house wind farms. I also hope that when ordinances are discussed in the future, that these issues are considered.

Sincerely,

William C. Mulvaney
Superintendent
Armstrong Schools

public comment 18-0488-EL-BGN

From: jessica cornett [<mailto:smileee80@yahoo.com>]
Sent: Monday, April 23, 2018 2:25 PM
To: Puco ContactOPSB <contactopsb@puco.ohio.gov>
Subject: Public comment for Docket # 18-0488-EL-BGN

I am the mother of five children, one of whom was born with mental and physical deficits, including sensory impairments. After the phone call with John Moran informing me of proposed locations of wind turbines around my home and in his own words " YEAH I WOULDNT WANT MY HOME THERE EITHER" I was led to do some serious investigating.

It has been brought to my attention from many specialists that wind turbines are a hazard to human health and can in fact cause wind turbine syndrome. Some of the effects from industrial turbines on humans in relationship to the infrasound are tinnitus, head pressure, migraines, nausea, vomiting, dizziness, disturbance of sleep and brain functioning all of which would be catastrophic to any human being let alone a child who has health issues already as my own daughter.

In regards to the shadow flicker I asked that question at the "informational meeting" about how it would affect the surrounding properties and no one had any information on it as they stated they haven't done the studies yet. I informed them I have a daughter who was born with a rare eye abnormality where her eyes did not develop correctly and that can be verified by specialists at Cleveland Clinic, and that shadow flicker would cause significant harm to her physically and mentally as her eyes do not have the capability of functioning and/or processing that type of visual disturbance. We have been told that glasses cannot help her and she very well could end up blind as she gets older. Again she has a very thick record at Cleveland Clinic that can verify all of this. No one could answer me as to how she would be protected.

In NO situation should anyone's health be put in harms way, let alone a child who was diagnosed with kidney cancer in utero, given 1 year to live and is now 15 proving cancer wrong. Yes she has disabilities but she has the right to life and to be safe and protected just like every human being on the face of this earth.

For the sake of my family and children, and for all of those families and children in the area who are standing up and fighting against this unjust attack on our lives as we know them DO NOT allow wind turbines to be put up in Seneca County.

Protect our rural community and the families that reside there.

Protect what really matters, the future of this nation, OUR CHILDREN, THEIR HEALTH, THEIR RIGHTS.

May God Bless us all.
Thank you, Jessica Cornett

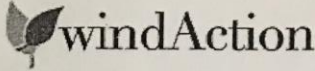
[Sent from Yahoo Mail for iPhone](#)

From: jessica cornett [<mailto:smileeee80@yahoo.com>]

Sent: Monday, April 23, 2018 10:09 AM

To: Puco ContactOPSB <contactopsb@puco.ohio.gov>

Subject: For all those that will be immediately impacted with health issues please include with Docket #18-0488-EL-BGN

Page I

The WindAction Group (www.windAction.org)
Facts, analysis, exposure to industrial wind energy's real impacts

MAR
5
2018

Article

Wind power - Jammers for the heart: Mainz researchers investigate the consequences of infrasound

Allgemeine-Zeitung - Michael Bermeitinger - March 5, 2018
Impact on People Germany

A working group of the Department of Cardiothoracic and Vascular Surgery of Medicine caused a stir at the congress of the professional society with their research on the impairment of the heart muscle by wind turbine infrasound. In this interview, the lead researcher explains that wind turbine infrasound can reduce the force of cardiac muscle contractions, under certain conditions, by up to 20 percent.

MAINZ - The wind energy euphoria is still continuing in politics and industry, but local residents find this energy generation highly controversial. Landscaping is one aspect, but also the harmfulness of inaudible infrasound. And here there is more and more support from research. For example, a working group of the Department of Cardiothoracic and Vascular Surgery of Medicine caused a stir at the congress of the professional society with their research on the impairment of the heart muscle by infrasound. We spoke with the initiator of the work, HTG Director Professor Christian-Friedrich Vahl.

Professor Vahl, how did you come up to this topic?

A friend of mine, the artist Cyrus Overbeck, had a house in Ostfriesland near a large wind farm. And he increasingly complained of difficulty concentrating and sleeping - symptoms that are described all over the world in the vicinity of wind turbines.

And the connection between sound and heart disease?

The impact of audible sound is indeed being researched by the working group around Professor Münzel in an exemplary way. I myself examined the effects of high-frequency vibrations on the development of muscle strength in physiology Hamburg. The assumption that even inaudible sound, ie infrasound, has effects on vessels is not new either.

What kind are these effects?

<http://www.windaction.org/posts/48039-wind-power-jammers-for-the-heart-mainz-research> 4/19/2018

Page II

When the aortic valve, which regulates the flow of blood from the heart to the body, is calcified and constricted, the bloodstream and thus the flow changes. For example, it is being discussed whether this altered sound is involved in the formation of dangerous sagging after constrictions.

What is infrasound and how does it work?

The audible sound ranges from 20 to 20,000 Hertz, below 20 Hz it is no longer audible, but it is physically perceptible at high sound pressure - possibly with corresponding consequences. Wind turbines convert 40 percent into energy and 60 percent into infrasound.

But there is noise protection ...

Infrasound has a long range and is not dampened by windows or masonry. It would take 30 meters high and eight meters thick walls to protect against the usual infrasonic frequencies. And with ever-increasing wind turbines of up to 200 meters and rising power, naturally, the infrasound load will be higher.

What question did you ask yourself about infrasound?

We simply wanted to know qualitatively whether the direct application of infrasound to the heart muscle tissue has an effect on the development of strength.

And how was that measured?

To test whether infrasound has a direct effect on force development, we've connected a speaker to a heart muscle piece. The loudspeaker is a special industrial vibrator that transmits the smallest monophosphere vibrations in the infrasound range to the specimen. But also the preparation itself was prepared.

In what way?

We have used an established but complicated technique to eliminate all membrane-bound processes and measure them only on the isolated contractile apparatus. This ensures the contraction of the heart muscle.

How big can you imagine the preparation?

It is about three millimeters long, 0.2 millimeters wide and is fixed between speaker and force gauge. The preparation was activated, then the loudspeaker was switched on.

And what effect did the infrasound have?

At the given time it is safe to say that infrasound under the conditions of measurement reduces the force developed by the isolated cardiac muscle, under certain conditions up to 20 percent is lost. The fundamental question of whether the infrasound can affect the heart muscle is answered.

What's next?

The next step, of course, are measurements on the living specimen.

What conclusion do you draw from the previous results?

We are at the very beginning, but we can imagine that long-term impact of infrasound causes health problems. The silent noise of infrasound acts like a jammer for the heart.

WORKING GROUP: Department of Cardiothoracic and Vascular Surgery (HTG) of the University Medical Center Mainz

Page III

- Dr. Rayan Chaban
- Dr. Ahmed Ghazy
- Hazem El Beyrouti
- Dr. Katja Bushman
- Dr. Lena Brendel
- Prof. Christian-Friedrich Vahl

Translation into English completed using Google Translate.

Source: http://www.allgemeine-zeitung.de/lokales/mainz/nachrichten-mainz/stoersender-fuers-herz-muskel-verliert-an-kraft-forscher-der-mainzer-herzchirurgie-untersuchen-folgen-des-infraschalls-durch-windkraftanlagen_18566513.htm

<http://www.windaction.org/posts/48039-wind-power-jammers-for-the-heart-mainz-researchers-investigate-the-consequences-of-infrasound>

From: jessica cornett [<mailto:smileeee80@yahoo.com>]

Sent: Monday, April 23, 2018 10:03 AM

To: Puco ContactOPSB <contactopsb@puco.ohio.gov>

Subject: For all the families and children and elderly who will be immediately impacted please include these with Docket #18-0488-EL-BGN

Facts about Industrial Wind Turbine Noise

Page I

- Wind farm proponents; (wind developers, participating landowners, and government officials); often rely on an industry-backed study to deny health problems. One often cited is the Massachusetts Department of Environmental Planning (DEP) "Wind Turbine Health Impact Study, which has been under a great deal of criticism, with one scientist (Raymond S. Hartman, PhD) saying it "fails to rise to the level of reliable scientific research, is incomplete, biased, distorted, without scientific merit, and not to be used as the basis for public policy." Meanwhile, there are peer-reviewed papers and studies that find links between turbine noise and ill health. Because this is currently not settled, proven science, no one, including governments can claim certainty. Because it is uncertain and involves public health and safety, government must maximize safety measures such as noise limits and setbacks to protect its citizens.
- The FACTS are:
 - The closer people are to wind turbines, the greater the negative impacts to them. Close proximity increases exposure to noise pollution, and other risks and annoyances.
 - Not all, but some more sensitive people suffer adverse health effects as a result of living near large wind turbines. This is a result of exposure to the audible and inaudible sound industrial wind turbines produce.
 - Scientific studies show wind turbines disturb sleep, and sleep disturbance is proven to cause impaired health.
 - Peer-reviewed scientific studies have proven the existence of infrasound (McPherson), and how it physically affects people (Salt and Kaltenbach), (Salt and Lichtenhan). "Large wind turbines generate very low frequency sounds and infrasound (below 20 Hz) when the wind driving them is turbulent. The amount of infrasound depends on many factors, including the turbine manufacturer, wind speed, power output, local topography, and the presence of nearby turbines (increasing when the wake from one turbine enters the blades of another). Infrasound cannot be heard and is unrelated to the loudness of the sound that you hear. Infrasound can only be measured with a sound level meter capable of detecting it (and not using the A-weighted scale)." - Alec N. Salt, PhD.
 - It is known that infrasound causes health problems. And it is now being established through sound studies in Brown County, Wisconsin and the Cape Bridgewater Wind Farm in Australia that large wind turbines create infrasound that can be measured in nearby homes. These are facts. The only debate is what safety measures must be taken for mitigating this. LFN and infrasound must be included in zoning regulations.
- What a Few of the Peer Reviewed Studies are Saying:
 - Ambrose - Wind turbine acoustic investigation - Infrasound and low-frequency noise - A case study 2012 An acoustical study was conducted to investigate the presence of infrasonic and low-frequency noise emissions from wind turbines located in Falmouth, Massachusetts, USA. During the study, the investigating acousticians experienced adverse health effects consistent with those reported by some Falmouth residents. The authors conclude that the rapid onset of adverse health effects during the study confirms that wind turbines can harm humans if placed too close to residents.
 - Hanning - Turbine Noise Seems to Affect Health Adversely 2012 In a survey of people residing in the vicinity of two US wind farms, those living within 375-1400 meters (1,230 – 4,593 feet) reported worse sleep and more daytime sleepiness, in addition to having lower summary scores on the mental component of a health survey than those who lived 3-6.6 km (1.9 – 4.1 miles) from a turbine, with a sharp increase in effects between 1 km and 2 km. A New Zealand

survey showed lower health related quality of life, especially sleep disturbance, in people who lived less than 2 km from turbines. A large body of evidence now exists to suggest that wind turbines disturb sleep and impair health at distances and external noise levels that are permitted in most jurisdictions.

- o **Jeffery - Adverse health effects of industrial wind turbines - 2013** Industrial wind turbines can harm human health if sited too close to residents. Harm can be avoided if IWTs are situated at an appropriate distance from humans. Owing to the lack of adequately protective siting guidelines, people exposed to IWTs can be expected to present to their family physicians in increasing numbers. The documented symptoms are usually stress disorder-type diseases acting via indirect pathways and can represent serious harm to human health.
- o **Nissenbaum - Effects of industrial wind turbine noise on sleep and health - 2012** We conclude that the noise emissions of IWTs disturbed the sleep and caused daytime sleepiness and impaired mental health in residents living within 1.4 km of the two IWT installations studied. Industrial wind turbine noise is a further source of environmental noise, with the potential to harm human health.
- o **Phillips - Properly interpreting the epidemiologic evidence about health effects of industrial wind turbines on nearby residents 2011** There is overwhelming evidence that wind turbines cause serious health problems in nearby residents, usually stress-disorder-type diseases. It is always possible that further research will reveal that, under certain circumstances, turbines can be sited near people's homes with minimal health risk. Such is always possible for any exposure, given the nature of science (open to additional information) and changing technology. But our current knowledge indicates that there are substantial health risks from the existing exposure, and we do not know how to reduce those risks other than by keeping turbines several kilometers away from homes. Dismissal of health effects cannot be seen as honest disagreements about the weight of the evidence.
- o **Salt - Infrasound from wind turbines could affect humans 2011** Based on our current knowledge of how the ear works, it is quite possible that low-frequency sounds at the levels generated by wind turbines could affect those living nearby. We can conclude that based on well-documented knowledge of the physiology of the ear and its connections to the brain, it is scientifically possible that infrasound from wind turbines could affect people living nearby.

Don't Ignore New Information

- Knowledge about this is changing fast. A groundbreaking study by sound engineer Stephen Cooper completed at the Cape Bridgewater Wind Farm in Australia proves the connection between large wind turbines and its effects on people. It found a link between an operating wind farm and the sensations of 6 residents in 3 of the nearest homes. The results of this study have prompted a senate inquiry in Australia.
- Cooper's is the first study of effects on people that included a cooperating wind farm operator, in conjunction with a researcher that does not work exclusively for wind farms. Six subjects, 3 couples from different homes, were participants in this study. They were self-selected as being particularly sensitive and susceptible to wind farm acoustic emissions, so much so that one couple has abandoned their house. Cooper found that these six subjects are able to sense attributes of the wind turbine emissions without there being an audible or visual stimulus present, and that these responses correlate with the wind turbine power being generated but not with either the sound or vibration.
- It finds that something is coming from the wind turbines to affect these people and that something increases or decreases as the power output of the turbine increases or decreases. See <http://www.pacifichydro.com.au/pacific-hydro-releases-cape-bridgewater-wind-farm-acoustic-study/>

- Events in Brown County, Wisconsin support the Cape Bridgewater study. A study was done at the Shirley Wind farm involving four acoustical consulting firms and included Hessler Associates, who derives significant income from wind development projects. The study found "sufficient evidence to classify LFN and infrasound emanating from the turbines as a serious issue, possibly affecting the future of the wind industry". It "showed unequivocally that low level infrasonic sound emissions from the wind turbines were detectable..." The long-term response for inhabitants at one residence studied was severe for the wife and child, causing the family to move, while the husband has experienced no ill effects. This illustrates the complexity of the issue.
- After this independent sound study was done and with careful consideration, the Brown County Board of Health declared industrial wind turbines a human health hazard. See <http://bccrwe.com/index.php/8-news/16-duke-energy-s-shirley-wind-declared-human-health-hazard>

These studies mean that: (1) wind farm operators cannot say there are no known effects and no known people affected. (2) Local governments charged with protecting the health and welfare of citizens cannot say any longer that they know of no adverse effects.

The Only Proven Safety Measure is a Safe Setback

- Setbacks must be measured from a non-participant's property line. A setback measured from a dwelling limits the non-participating landowner's use of their property, and greatly reduces protections for non-participants from noise pollution and its proven ill effects, shadow flicker, property devaluation, and potential property damage from blade failure or fire.
- All landowners should have the right to do with their land what they choose as long as it doesn't harm or impede a neighboring land owner. A setback for safety reasons, regardless of its distance, must be maintained. Any zoning that allows a wind turbine to be built next to a non-participant's property line eliminates that property owner from safely using that land. It creates an easement over the neighboring, non-participating property that eliminates the owner from any further developments. This amounts to an uncompensated taking of private property rights.
- Because of widespread concerns about health and safety, many jurisdictions scattered around the United States and Canada have adopted larger setbacks in recent years.

<i>Government Entities</i>	
Catarunk, Maine	7,920 ft.
Moscow, Maine	7,920 ft.
Haut-Saint-Laurent, Montérégie, Québec	6,562 ft.
Fayette County, Pennsylvania	6,000 ft.
Carteret County, North Carolina	5,280 ft. from all abutting property lines
Frankfort, Maine	5,280 ft. from property line
Umatilla County, Oregon	5,280 ft. from "unincorporated community"
Mason County, Kentucky	5,280 ft. from property line
Trempealeau County, Wisconsin	5,280 ft. from inhabited structures
Hillsdale County, Michigan	5,280 ft. from residences
Sumner, Maine	5,280 ft. from property line
Newport, North Carolina	5,000 ft. from neighboring property lines
Ellis County, Kansas	4,921 ft. from rural residences
Rumford, Maine	4,000 ft. from property line
Clifton, Maine	4,000 ft. from occupied structures
San Diego, California	3,937 ft. from residences
Halifax, Nova Scotia	3,281 ft. from habitable building

Claybanks Township, Michigan	3,000 ft. from property line
Cape Vincent, New York	2,953 ft.
Potter County, Pennsylvania	2,900 ft.
Wareham, Massachusetts	2,800 ft. from residences
Goodhue County, Minnesota	2,700 ft. from non-participants
Roanoke County, Virginia	2,640 ft. from residences
Tipton County, Indiana	2,640 ft. from residences
Union Township, Wisconsin	2,640 ft. from residences
Perry, New York	2,640 ft. from residences
Rock County, Wisconsin	2,640 ft.
Buckland, Massachusetts	2,640 ft. from residences
Granville, Pennsylvania	2,500 ft. from property line
Charlton, Massachusetts	2,500 ft.
Allegany, New York	2,500 ft.
<i>Advisory Boards</i>	
UK Noise Association	5,280 ft.
French Academy of Medicine	4,921 ft. from residences
National Research Council	2,640 ft.
<i>Turbine Manufacturers</i>	
Volkswind	1,640 ft. (US) 3,280 (Germany)
Vestas Safety Manual	1,300 ft.

One Mile = 5,280 feet ½ Mile = 2,640 feet ¼ Mile = 1,320 feet
 1,000 ft = 305 meters 1,000 meters = 1 km = 3,281 ft = 0.62 mi

RECOMMENDATIONS

Any zoning change that reduces the protections provided under the current Lancaster County limit of 35dBA at night significantly impacts the health of non-participating land owners.

The appropriate setback distance must be measured from the non-participant's property line, not their residence. To ensure citizen health, safety, and property rights, the setback should correspond to a distance of ten rotor heights, or not less than one mile from the non-participant's nearest property line, (unless agreed to).

LFN and infrasound must be included in zoning regulations, and the zoning specify that all post construction sound measurements can be requested by a nonparticipant, and be measured with C-weighted sound measurements to ensure that it is not excessive. The costs of all such testing should be paid by the wind developer, not the county.

The Lancaster County Health Department was provided information from Brown County, Wisconsin regarding wind turbines causing health risks. Based on responses from the Health Department, it appears this information was ignored. Ignoring this information is dangerous for our citizens.

If there is no clear scientific consensus about safety, the county must err to the side of caution and have strict sound limits and significant setbacks.

Public comment 18-0488-EL-BGN

From: chris aichholz [<mailto:caichholz@yahoo.com>]
Sent: Tuesday, April 24, 2018 10:18 AM
To: Puco ContactOPSB <contactopsb@puco.ohio.gov>
Subject: sPower Complaint - 18-0488-EL-BGN: Seneca Wind Farm

To whomever this may concern

I am writing this email as my notice of complaint of the company sPower who has a proposed wind turbine project in Seneca County. I attended their "Community Information Meeting" last Tuesday, April 17th 2018. I was highly upset at how they handled this meeting. They had a couple of "maps" that was available to the public and a couple of basic informational sheets which they ran out of as well. Other than these mentioned materials this was all they offered. There was hundreds of citizens of Seneca County at this meeting seeking answers to their questions and craving more information about the project. As the room began to fill up with hundreds of people there was no room left for the people that were lined up outside the building to make their way into the cramped and too small room that sPower had rented out. This is when sPower's "Project Manager" John Moran stood up and made an "announcement". I am paraphrasing here, if everyone has their map/information and if you do not have any questions for us feel free to leave whenever you are ready. He continued on by saying there will be NO formal presentation. When he finished making his announcement you could feel the frustration among the crowd as they were all expecting some sort of presentation of information. When the community saw the event labeled "Community Information Meeting" they thought there would be more than what was provided.

The maps were altered/photo shopped to be highly deceptive. Let me explain further, the maps seemed to make certain landmarks/bearing points hard to see. The biggest one that stands out is US 224 which is our largest highway in our area. In the map you could hardly even make this road out. Also the village of Bloomville was made so obscure that you could hardly see it. Also this map seems very inaccurate as some of the turbines are located right next to structures/woods.

I just feel in summary that this company is being deceptive on purpose. Some of the questions I asked officials from the company were answered with untruths as the questions I had prepared to ask them I had highly researched and knew the answers going in. An example of one of the questions I asked was regarding the safety setback range in Ohio and the company rep said that Ohio had the most restrictive setback distances in the Country - FALSE - in all reality Ohio has some of the least restrictive setback restrictions in the WORLD! This officials name was Bridget Canty. I specifically sought this lady out because a day prior to this "meeting" my LinkedIn professional profile had been viewed by her. I reached out to her via the phone to see why she was viewing my profile? Although I know that they were researching me because I have been highly outspoken publicly to be highly anti wind in Seneca County. Very shady stuff and makes a person nervous. Also I would like to make it known that I wrote a very

heartfelt letter to my commissioners and my state rep Bill Reineke and only sent it to them. Mrs. Canty said at the meeting that she read my letter and it was very well written. As you can imagine I was taken back as how did this lady 3 days after I sent the letter to my elected officials she had already read my letter!!! Collusion is a big word to throw around without evidence but this seems to have a certain smell to it. I will let you decide that on your own.

Thanks

Chris Aichholz

A lifelong resident of Seneca County

This foregoing document was electronically filed with the Public Utilities

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in

Case No(s). 18-0488-EL-BGN

Summary: Public Comment electronically filed by Docketing Staff on behalf of Docketing.