

12-12-18

Dear Matt,

There has been wave after wave of LTE in opposition to IWTs in Santa County. I have enclosed, as a sample, one Sunday's edition because most of these letters writers don't follow up to send them on to OPSB.

If possible at all, please could these letters I've enclosed become part of public comments for Santa Wind case # 18-0488-EL-BGN and Apex Republic Wind # 17-2295-EL-BGN?

Mr Ferrel and Mr Smith have presented OPSB comments. Capt Curran lives in Santa County at 6026 S CR 47, New Riegel

Sincerely,

Diane Hudak

6300 TR 151

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## INFRASOUND EFFECTS

I congratulate Seneca County for being selected to participate in one of the largest experiments to determine the effects of infrasound on human organ systems. With large numbers of massive wind turbines planned in this densely populated county, medical effects on internal organs can be analyzed.

The size of the proposed wind turbines ensures the generation of low-frequency infrasound. The proximity of wind turbines to schools guarantees that as children age, internal organ deterioration can be compared to child control groups from similar demographic locations lacking wind turbines. After 10, 20 and 30 years, researchers can evaluate effects on human internal organs from infrasound. This is important, because western scientific research and medical literature has little written concerning short, or long-term infrasound effects on human organs such as lung, heart and kidney.

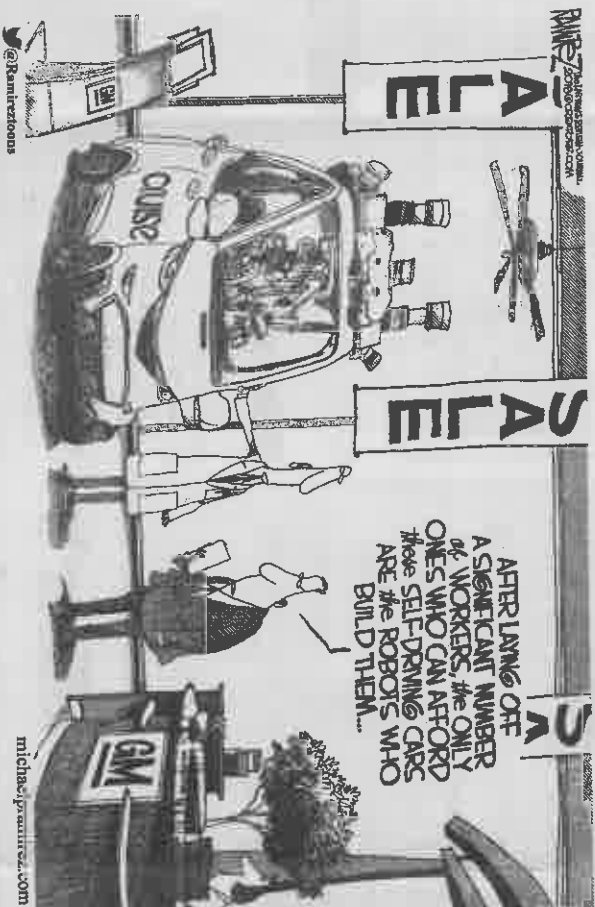
However, infrasound effects on internal organ tissue have been studied by numerous researchers in the former Soviet Union. They found that infrasound waves cause significant changes to heart tissue and other internal organs.

In the 1990s, European investigators studied internal organs in animal subjects and human workers exposed to infrasound. They found significant changes in lung tissue and heart pericardium. The authors also were concerned with potential damage to internal kidney structures.

In January 2018, German researchers presented results concerning infrasound effect on cardiac tissue contractility. They found cardiac tissue exposed to infrasound decreased tissue contractility by 25 percent.

Seneca County wind farm companies state that wind farm sound levels will only approach 55dba. That information is misleading concerning infrasound. The "A" designation is a filtration formula including only audible sound between 20Hz and 20,000Hz. Infrasound is defined as occurring between 0-20Hz and is not identified with the dbA formula.

With multitude turbines planned, decibel level determination may be problematic. Overlapping sound wave energies add together, similar to overlapping ripples on water from multiple stones dropped simultaneously. Some waves cancel out. Other waves enlarge. Wind turbine numbers become directly proportional to infrasound



wave energy multiplication. Also, infrasound waves are stable, traveling great distances.

For those interested in their own personal research on infrasound effects, information was obtained for this letter from the PubMed website (Key words: infrasound AND heart, or infrasound AND physiological effects) and the Wikipedia website. Soviet research, translated from Cyrillic, was obtained from the archives at The National Library of Medicine at the National Institutes of Health, Bethesda, Maryland.

*Retired Capt. Michael T. Curran,  
U.S. Navy,  
New Riegel*

## BLINDED BY MONEY

I read the following statement at the Nov. 20 county commissioner's meeting.

Public comment: I wasn't going to attend today's commissioners meeting, since I didn't think it would be worth my time, but then I read Commissioner (Holly) Stacy's letter to the editor in today's Advertiser-Tribune and I changed my mind.

Commissioner Stacy, in your letter, you referred to "facts have been misconstrued" and "not sharing real facts" or "not stopping misinformation." I take personal offense to your comments since I have been the primary presenter at the Seneca Anti-Wind Union informational meetings (which you have yet to attend) and I feel I

# Are wind turbines really good for economy, environment?

In a column Saturday, Gordon Gray is a guest columnist. Jim Fassel is a guest columnist.

feel that some of his answers leave out enough facts to cause misdirection in the minds of those who have not thoroughly researched wind projects. Here is my reply to Mr. Gray's comments:

1. True, the Seneca Wind project will connect to the same grid that serves Seneca County.

2. The Seneca Wind project, just like every other wind project, will have an effect on electricity prices, that being to raise them. When an activity is promoted by favorable tax policies, and then further laws are passed "requiring" the product be purchased, then the net effect is to cause the price to rise. Electric utilities are required to buy power from renewable sources and so they do, at any price necessary. Because they operate on a more or less fixed margin, it does not matter to the utilities how much they have to pay for the power as they are allowed to mark up the retail price to get their guaranteed profit. The country with the highest percentage of "renewable" electricity is Denmark. The country with the highest retail price of electricity also is Denmark, about three times higher than here.

3. The PJM grid which serves Seneca County extends to the highly populated and high-electricity-usage East Coast. That is why the wind companies want to build here. Ohio is about as far west as you can go and still tap into that grid. The wind is much better

farther west.

4. We do not need to build wind projects to reduce the environmental impacts of our energy usage. There are formulas to show that adding wind to the mix of electrical generators actually increase the amount of natural gas used, not reduce it. More gas burned equals more environmental impact. The wind industry likes to say that turbines burn zero fuel. But something has to back them up during the 70 percent of the time they are not running at their rated output. That would be natural gas generators of the kind that can power up and down almost instantly to make up for the variability of the output of wind turbines.

This kind of natural gas generator is only about 35-percent efficient. A gas generator designed to operate on a more constant basis is about 62-percent efficient (that is an 88-percent better efficiency). Therefore, even though a wind/gas system runs free part of the time, it runs at low efficiency most of the time and burns more gas in doing so. Compare it to driving your car in the mountains. Even though you are coasting downhill burning no fuel part of the time, the rest of the time you are getting very poor mileage. The end result is you burn more fuel than when driving on flat terrain, even though you have none of the coasting periods where you burn no fuel.

5. Mr. Gray goes to great extents declaring that sPower has only to comply with Ohio Power Siting Board sound regulations and not the World Health

do my best to be truthful and to only present the facts.

Let's review the facts:

FACT 1: The turbines being proposed are 652 feet tall, only 18 inches shorter than the tallest turbines in the United States that are located in Randall County, Texas, where you can't see a home anywhere close to the turbines. Now, Emerson Creek plans to use even taller turbines.

FACT 2: The turbines will generate shadow flicker.

FACT 3: The turbines will generate noise.

FACT 4: The turbines will kill bats, eagles and other migratory birds.

FACT 5: The turbines will ruin our rural landscapes.

FACT 6: The turbines will reduce our property values.

FACT 7: At night the turbines will be lit with red flashing lights.

FACT 8: 26 of the proposed Seneca Wind turbine sites are not legal per the current setback laws, including one that is 740 feet from my property line.

FACT 9: 16 turbines are proposed to be located within a 2-mile radius of Seneca East School.

FACT 10: The Seneca East School Board voted unanimously to intervene in the Seneca Wind project.

FACT 11: There will be unintended consequences where the people bearing the

Organization's recommendations, which are stricter. Just because the OPSB is behind in getting it rules in line with the WHO does not mean its requirements are "safe." In fact, it means just the opposite. The WHO came out with its recommendations to help such agencies as the OPSB get their rules in proper order. Just because sPower satisfies the current OPSB requirements does not make it safe for nearby homes or at the Seneca East School location which is surrounded by turbines. In fact the WHO says those locations will have "sound levels associated with adverse health effects."

Further, the wind projects proposed for Seneca County will cost the people of the county more than the value of the tax and land lease payments and maintenance jobs they bring in. Studies on the effects of wind turbines on bat populations (science.sciencemag.org/content/332/6025/41) show tremendous hits to agriculture as a result.

From a practical standpoint, if Seneca County's 258,000 acres of cropland require just one more application of pesticide as a result of the lowered bat population, it would be a cost of over \$3 million per year. It is hard to put a dollar amount on the effects of increased pesticide use, both to the environment and to our health, but it definitely comes with a cost. Add to those health costs the adverse health effects mentioned by the WHO for sound levels. And, there will be a decrease in value in homes located close to the turbines. Even the oft-quoted study the

burm of the wind turbines won't support future tax levies.

FACT 12: Commissioner (Shayne) Thomas testified to a Senate committee to reduce the setbacks which would move the turbines closer to homes.

FACT 13: A pro-wind lobbying group wrote and submitted a testimonial letter in your name without your approval to the Energy & Natural Resources Senate Committee.

FACT 14: Seneca County has a population density of 100 people per square mile, while sPower's other two wind projects in Utah and Wyoming have less than 3 people per square mile.

FACT 15: The commissioners had the opportunity to stop the approval of the PILOT (payment in lieu of taxes) for both the Republic Wind and Seneca Wind projects, but yet chose to do nothing.

FACT 16: The PILOT funding is based on 2011 dollars and does not adjust for inflation over the life of the project.

FACT 17: Eight out of 10 townships in the two project footprints have voted to intervene against the project with the Ohio Power Siting Board.

FACT 18: Per the Ohio EPA, the specific area where the Republic Wind and Seneca Wind projects are both located is designated as a "Drinking Water Source Protection Area with a High Susceptibility to Contamination and Water Quality Impacts." So the quality of our well water is at risk per the EPA's own document.

FACT 19: Windpower is highly subsidized with taxpayer money and inefficient in production of energy.

FACT 20: There are an average of 3,800 blade failures every year. We will have blade failures in Seneca County.

FACT 21: For turbine projects greater than 5MW, state law overrides any local zoning protections.

FACT 22: You have not rescinded the AEZ (alternative energy zone) which allows additional projects to come into the county without any local control.

Commissioner Stacy, you have chosen to ignore these facts as well as many others since you've been blinded by the wind company's money. You are turning your back on the majority of the citizens who have the least to gain and the most to lose. You should be ashamed of this and this will be your legacy in the history of Seneca County.

*Greg Smith,  
Bloomville*

wind companies use acknowledges that, but dilutes the results by including the vast majority of homes in the study, which are up to 10 miles from a turbine. The same lack of motivation to live close to turbines will also have the effect of reduced population growth in the eastern half of the county and therefore reduced home construction with its associated tax revenues.

With the income to the county from the two projects combined (including PILOT payments, land leases and maintenance jobs) being less than 45 cents per day per person in the county, it becomes clear that the dollars lost vs. dollars gained will be a net loss. Why would we want to pay out of pocket for the privilege of living next to 143 spinning by day and blinking by night machines 650 feet tall? If it really did help the environment, then we would be getting something for our money. But instead, we will be paying money, causing more CO2 by burning more gas, taking a hit to our quality of life, damaging our environment and health from increased pesticide use, and putting the safety of the children attending Seneca East School at risk. And the list goes on.

There is just no way this makes sense once all the details are brought into the open. Fully comprehending all the effects of a wind project takes a lot of time and effort. Decisions are being made without full understanding. Those decisions benefit only the wind industry and not the environment, the quality of life, or the finances of Seneca County.

**This foregoing document was electronically filed with the Public Utilities**

**Commission of Ohio Docketing Information System on**

**12/17/2018 4:29:35 PM**

**in**

**Case No(s). 17-2295-EL-BGN, 18-0488-EL-BGN**

Summary: Public Comment electronically filed by Mr. Matt Butler on behalf of Ms. Diane Hudok