

Testimony before the Ohio Senate Public Energy Committee Ñ January 23, 2008

Gloria Findley, PhD

I live in Logan County, home of castles, bat caves, Mad River Ski area, and one of the most beautiful places to live in rural Ohio. In 2004, wind turbine companies showed up there in force, just as they have in other poor, rural parts of our nation. They showed up with no regulations whatsoever and their greed for our taxpayer dollars was the impetus to encourage the enactment of unsafe zoning in our communities.

I got involved in the wind turbine issue facing my community as a responsible citizen and research scientist. At the very first board of trustees' meeting that I attended in 2007, I asked to see the wind company data reports. The trustees advised that they had nothing. I replied, "well that's not very fair is it?" Subsequent public records requests to the Monroe Township zoning board and board of trustees requesting reports or documents have generated nothing- the officials have received nothing- and have requested nothing! No data! I ask, "what do you think they are basing their decisions upon then?"

In fact, the only piece of information that has been provided to some in our community is a little brochure that focuses on wind turbines in Ohio. It was sent by mail from Everpower Renewables (yes, that's the wind company Governor Ted Strickland gave a \$3M grant to--for investigating wind potential in Logan and Champaign Counties). This little Everpower brochure doesn't contain much of anything and what is there are lines fed to communities to gain their trust and their millions upon millions of tax-payer dollars. In the brochure, the following Q/A is posed:

Q: "Can I hear the turbines?" A: "You'll have to listen carefully. A wind turbine 800 feet away is as quiet as a kitchen refrigerator. Standard practice places turbines no closer than 1,000 feet from a home, school, or business." So I must ask, if the noise is so benign, why are there so many complaints being voiced by citizens? Communities are complaining about noise and the misrepresentation of it's magnitude by the wind companies.

This \$3M given to Everpower effectively placed a "price on the heads" of all of us living in Logan and Champaign Counties. Now we are fighting unsafe zoning for wind turbines and even the right to vote on wind turbine zoning! In a meeting held in Logan County, Mr. Jung relayed that Governor Strickland wasn't placing a set amount on how much energy must be generated by wind, rather the market was going to decide that. How is giving \$3M to a wind developer letting the market decide? How are subsidies paid for wind turbines realistic of true markets?

It's no small wonder that we are now threatened with the possibility of having wind turbines that could be sited dangerously near our homes. Zoning in my township was created without any regard for the health, safety and welfare of our citizens. This permissive zoning was created in 2005, by officials with a **financial interest and recorded contracts with wind companies**. Sadly, our 2007 citizen's proposal for safe zoning was rejected. One official even said that if a discussed setback was imposed (on other word, a safe setback) he wouldn't be able to have wind turbines on his land.

Wind turbines are giant industrial machines that produce LFN noise, and if they are placed in our community, we will be faced with the same potential negative health effects as those subjected to working near industrial machinery. Many call these installations "wind farms", but I stress that these are not "farms." These are large, industrial operations that make large-scale, industrial noise. Often wind turbine noise is described as the noise as that of "jet engines". Given that these wind turbines operate 24/7, that's a jet engine that doesn't go away and which you (we) may have to live with 24/7.

Clearly, the impact of infrasound and the manner in which sound is propagated is far beyond my township officials' comprehension. After all, they've stated that they have been to see the wind turbines and they didn't hear any noise.

According to a 2006 report by the Department of Defense entitled, "The Impact of Windmill Farms on Military Readiness", wind turbines of the megawatt (MW) class are typically considered to be "bulk-power utility scale" units that **create seismic and infrasound noise**. The seismic noise is at a primary frequency related to the frequency at which the turbine blades pass in front of the support post of the turbine. This frequency covers a broad range from about 0.5Hz to about 10Hz and can be detected at distances greater than 10km (6.2 miles) from the turbines. Wind turbines also produce infrasound. Infrasound is below the limit of human perception (sound below 20 Hz or cycles per second). Infrasound travels farther than higher frequencies and may be perceived as a tactile sensation or feeling of pressure. It travels above

and below ground. Dr. Peter Styles’ research on ground vibration was cited in the above DOD report. From his report, he further stated, ‘we have clearly shown that wind turbines generate low frequency sound (infrasound) and acoustic signals which can be detected at considerable distances (many kilometers) from wind farms on infrasound detectors and low frequency microphones’. There are health implications of living near improperly sited turbines.

In “Human Body Vibration Exposure and its Measurement”, G. Rasmussen reported body vibration exposure at frequencies of 1 -20 Hz , which included:

Symptoms	Frequency		Symptoms	Frequency
General feeling of discomfort	4-9 Hz		Chest pains	5-7 Hz
Head symptoms	13-20 Hz		Abdominal pains	4-10 Hz
Influence on speech	13-20 Hz		Urge to urinate	10-18 Hz
Lump in throat	12-16 Hz		Influence on breathing movements	4-8 Hz

Gordon Whitehead, a retired audiologist with 20 years of experience from Dalhousie University in Halifax, consulted on wind noise and provided...’low-frequency noise can affect the balance system of the ear, leading to a range of symptoms including nausea, dizziness and vision problems. It’s not perceptible to the ear but is perceptible. It’s perceptible to people with very sensitive balance mechanisms and that’s generally people who get very easily seasick.’ His data was similar to the government’s however he reached a different conclusion, “they’re viewing it from the standpoint of an engineer; I’m viewing it from the standpoint of an audiologist who works with ears’.

Focusing only on audible sound ignores the harmful impact that low frequency noise, vibration and associated factors such as pulsation, that when combined exacerbate the full impact on our body’s organs. Current wind turbine siting practices (which are solely industry-driven) disregard public health. Monroe Township provides a glaring example of how wind turbine siting has been manipulated by those with monetary interest to enact zoning that clearly benefits the wind companies. Hypothetically, which scenario would be more profitable, being able to site 4 turbines on your land or 11? The supervision of the legislature—of this committee—is needed to create siting standards to protect the citizenry. Strong focus on the human health effects is warranted; the state needs to step up to the plate in terms of regulation including siting of wind turbines, as further evidenced by what is being questionably pushed though by township officials as safe. **Subsidy for wind turbines without regulation equals a disregard for our health and safety.**

Currently, there is an “octopus effect” going on when citizens ask, who is responsible for various wind turbine issues(see arms flailing wildly pointing at someone else). **The National Academy of Sciences advises 2,600 feet setbacks for wind turbines in its 2007 “Environmental Impacts of Wind Energy Projects”.** Zoning that provides for careful placement of turbines is crucial to the health, safety and welfare of our citizens, but in an area as populated as Logan County, the question of safe setbacks would likely result in the project *not being viable*.

One of Dr. Phil’ s (McGraw) sayings makes a point that fits this whole industrial wind turbine noise issue, “the best indicator of future behavior is past behavior”. Will Ohio citizens be forced to live through this heavily flawed wind turbine experiment? Ohio should not be forced to repeat the wind turbine siting mistakes that others states (PA & MA) are now dealing with.

The World Health Organization’s (WHO) recognition of “noise as a *serious health hazard as opposed to a nuisance* is a recent development and the health effects of the hazardous noise exposure are now considered to be an increasingly important public health concern”. The WHO’s Guidelines on noise include:

Prolonged or excessive exposure to noise, whether in the community or at work, can cause permanent medical conditions, such as **hypertension and ischaemic heart disease** (ref. WHO Guidelines p. XII).

Noise can **adversely affect performance**, for example in reading, attentiveness, problem solving and memory. Deficits in performance can lead to accidents (ref. WHO Guidelines p. XII).

A link between community noise and **mental health problems** is suggested by the demand for tranquilizers and sleeping pills, the incidence of psychiatric symptoms and the number of admissions to mental hospitals (ref. WHO Guidelines p. XII).

“The potential health effects of community noise include hearing impairment; startle and defense reactions; aural pain; ear discomfort; speech interference; sleep disturbance; cardiovascular effects; performance reduction; and annoyance responses. These health effects, in turn, can lead to social handicap, reduced productivity, decreased performance in learning, absenteeism in the workplace and school; increased drug use; and accidents. In addition to health effects of community noise, other impacts are important such as *loss of property value*.”

As a side note, **noise affects property values**. In a report of home sales in Wisconsin, the inspector's sales data revealed that sales within 1 mile made *prior* to the wind farm installation were 104% of assessed value and properties selling after the wind farm introduction in the same area were 78% of assessed value (Report of the Township of Lincoln Wind Turbine Moratorium Committee, Kewaunee Wisconsin 2000-02). What will happen to our property values in scenic Logan and Champaign Counties?

In her testimony on the impact of wind turbine noise on public health before the New York State Legislature Energy Committee on March 7, 2006, Dr. Nina Pierpont provided the following highlights:

‘ Describing and documenting symptoms is the province of physicians. So is research on the causes of diseases. Deciding whether people have significant symptoms is not within the expertise of engineers or specialists in acoustics, even when the symptoms appear to be caused by noise. We physicians appreciate the noise data which engineers provide, but this data has nothing to do with whether people have symptoms or not. One....acoustics expert...outrageous in this regard, insisting that people “can’t” have symptoms because turbines “don’t,” ...produce low frequency noise...he’s not trained to distinguish whether people are making up their complaints, or to know about the range of physical, psychiatric, and neurological symptoms people might have....symptoms related to the brain....’

Common sense dictates that if you or a family member were forced to live in close proximity to an industrial wind farm and as a result became ill, you would seek advice from a qualified medical professional you wouldn't rely upon an engineer or your town officials to tell you that you are not sick because of wind turbine noise! As described by Pierpont and other doctors on what has been called the ‘Wind Turbine Syndrome’, the same sets of symptoms are noted:

- 1) Sleep problems: noise or physical sensations of pulsation or pressure that make it hard to go to sleep and cause frequent awakening.
- 2) Headaches which are increased in frequency or severity.
- 3) Dizziness, unsteadiness, and nausea.
- 4) Exhaustion, anxiety, anger, irritability, and depression.
- 5) Problems with concentration and learning.
- 6) Tinnitus (ringing in the ears).

These symptoms (and more) are commonly documented in scientific peer-reviewed journal articles that discuss research on the effects of LFN (low frequency noise) on health. See 3 articles on noise-related health effects listed below:

Noise-Induced Endocrine Effects and Cardiovascular Risk, *Noise Health* 1999; 1(4) 37-48.

Stress hormones in the research on cardiovascular effects of noise. *Noise Health* 2003;Jan-Mar5(18)1-11

Effects of low frequency noise on man; a case study. *Noise Health* 2004 Oct-Dec 7(25) 23-8.

Clearly, more research is needed on the full impact of wind turbines including their economic viability as well as the social and health consequences that may emerge.

TESTIMONY FOR HOUSE ENERGY BILL 221 JANUARY 23 2008

Members of the Ohio State Legislature and guests, I am Diane McConnell from Union Township in Champaign County. I represent a group of residents and citizens called Union Neighbors United who are neighbors of Industrial Wind Turbine project lease holders.

I want to state that we are not against wind energy. We are for safe setbacks for the siting of wind turbines and we are also for land use plans that establish wind overlay districts. These would be areas of low population density that would allow turbines to be easily placed with the minimum of adverse effects to the area and adjacent neighbors.

We are against 100 or more whirring, flashing, thumping 500 foot structures only 1,000 feet from our homes with no permitting or noise monitoring deemed necessary.

Our township trustees have passed an extremely lenient Wind Turbine Zoning Amendment on Jan 17, 2008. It allows these 500 foot structures (taller than the Riffe building) to be cemented in only 1,000 feet from our homes. This distance has no basis in science and will not protect us from harmful noise levels, shadow flicker, or fragments thrown from a shattered blade.

The National Academy of Science has done extensive research on Wind Turbines and suggests that a ½ mile or 2,640 foot set back from a residence will alleviate most of the above mentioned problems. The French Academy of Medicine and the World Health Organization recommend a one mile set back from homes until further studies of the health effects of wind turbine noise on the human body can be evaluated. At least two European Countries have called a halt to further turbine placement near people and are only allowing offshore development

Noise measurement before and after installation of wind turbines is required in almost all zoning world wide. Union Township's ordinance has stated that we must comply with the Ohio regulations for wind turbine noise. This is meaningless because there are no State of Ohio regulations that govern noise from wind turbines.

Our ordinance allows turbines to be sited anywhere in the township with no site specific review. Even gift shops, vet clinics, homes and cell towers go through a site specific process in Union Township. Why wouldn't a 500 foot industrial structure (previously only used in the ocean and not on land) have to follow the same standards.

Why should we as citizens have to pay tens of \$1,000s of dollars for litigation to force our elected officials to give us the protection of life and property that they once pledged to give us, and on which we based our decision to reside here.

Our tax dollars are already being used to heavily subsidize the Wind Industry and its foreign backers. To make this an even sweeter deal for foreign interests we need to look at The Ohio Department of Development's Energy Conversion Facilities Sales Tax Exemption found on their web site. It states that the exemption is 100%. "Ohio exempts certain property from real and personal property taxation and, the state's sales and use tax and the state's corporate franchise tax where applicable". Eligible technologies include solar-thermal and wind systems. If this is the case it certainly negates the huge monetary windfall reported to the media by our county auditor and encouraged as the truth by members of the farm bureau and the wind developers.

In addition citizens in our area have been led to believe that the Township and County will somehow receive some of the power or have their electric bills reduced when the turbines come in. This is hardly the case since the power goes into the grid to be sold probably to New York State. If the state of Ohio mandates a strict renewable energy portfolio in this energy bill our energy costs are likely to go up not down.

Meanwhile because of lack of regulation and the overwhelming visual impact of these enormous industrial structures next to our homes our property will be devalued and in many cases rendered unsaleable.

What happens to an elderly couple that has sunk all their savings into a beautiful retirement home on our scenic ridge? What happens when they have to sell to downsize or move into an assisted living facility and their house cannot be sold or they lose a substantial amount of the value? How will they live? For that matter what will happen to younger people who have to leave the area and can't sell their homes? How will the devalued property affect home loans and future county taxation?

Union Neighbors United requests actually we expect the legislature to adopt Best Practice Standards for the Wind Industry at the state level such as those set out by the National Research Council's document "Environmental Impacts of Wind Energy Projects".

Ohio needs to establish Wind Overlay districts that would help stream line Wind Industry growth in areas of low population. In addition we need the state to develop noise standards and testing guidelines for wind turbines.

We need well thought out regulation designed by independent experts. We suggest that the state's tax exemption and incentives be offered only if a Wind Company follows Ohio's Best Practices and noise testing guidelines.

If the state of Ohio does not have a Best Practices standard in place very soon and you encourage wind development by mandating a certain percentage of wind energy and benchmarks in this bill it will most certainly be a disaster for Champaign County and the State of Ohio.

Thank you for you allowing me to speak to you.

Chris Anderson

I am a stay-at-home mom with 2 kids. My family owns land in Jefferson Township Logan in County. I became involved in the wind turbine issue in my community because I doubted the economic viability of this type of renewable energy. After reading up on turbines my doubts continue.

I came here today because I have many unanswered questions regarding wind energy. Just like many others in my community, I am concerned about HB221 and how the renewable portfolio standards in it will affect the rural nature of Logan and Champaign Counties.

Here are a few of my questions:

- 1) Why are we seeking to put wt in Logan and Champaign Counties, which are classified as “marginal” on the NREL’s 70meter wind resource maps ?
 - a. To follow-up with above question, Lake Erie has been identified as the most viable area for wind productivity in the state of Ohio, but environmentalists are arguing against that.
- 2) How many homes per square mile is too many?
- 3) Size. Wind turbines started off much smaller, say about 100-150 ft in height. Now they are reaching 400-500 feet in height and are less efficient. How is that Other technology today is reducing size and increasing efficiency. So why for wind turbines.
- 4) Cost. The same question applies. I am concerned about the cost and the efficiency of these wt. As a taxpayer, I am entitled to have the opportunity to vote on this at the local level. It is part of our system for citizens to be able to question unrealistic costs that will be eventually be passed on to us. We, the citizens, will have to pay for this. Because we the taxpayers are paying for the subsidies and tax credits that the wind companies are
- 5) Why is the energy committee reviewing an economic development bill, this based on Dr. Shanahan’s comments during the hearing on January 9th.
- 6) Why is the electricity being shipped away
- 7) Based on zoning in other areas, the wind companies are forced to pay for road repair for the damage incurred during construction, yet our zoning does not provide for
- 8) Is it true that explosives are used in excavation of the wind turbine site? Doesn’t , blasting potentially change the terrain and could cause several major problems:
- 9) If explosives are used and my home damaged, who will pay for my repairs?
- 10) Did you count the extra attorney jobs, as the main source for new jobs? How many attorneys does it take to clean up a wind turbine mess.
- 11) Why is it that the wind companies are not giving the public any information??
- 12) Lastly, do I have to foot the bill to sue my own township, Jefferson Township, given the conflicts of interest and lapse in performing their statutory duties?

In all that we have seen so far, even given the litigation the we have been involved with to date, we have yet to receive a plan or any information from the wind companies.

It's absurd that the citizens of My township, are paying county a to fight off foreign owned wind companies after our federal tax dollar. If you are unaware, presently a case involving our right to vote on wind turbine zoning is before the Supreme Court (see case 2008-0059).

Why is our state rep, Tony Core, stonewalling the concerned citizens and wielding his signature in support of wind turbines at the local level?

If I lived in your district, could I count on your unbiased representation on the wind turbine issue?

Ladies and Gentlemen of the Committee, Chairman Hagan, thank you for allowing me this time. My name is Joe Roberts and my humble credentials are that I am a Flooring Contractor, (I can relate to your former work as an electrical contractor Mr. Hagan). A 4th generation land owner in Rushcreek Township, Logan County, Ohio, and the Zoning Inspector for the same. I have held this position for 20+ years. I am very blessed to have been raised here on a large dairy farm by two wonderful parents who taught me integrity, common sense, and duty. I took on the zoning inspector job when asked because I felt it was my duty to serve the township that I grew up loving.

In those 20 years as a zoning inspector I have tried to do my duty with integrity. I have often been asked, "Where does this money go, what is it for?" And my answer has always been to protect you and your property against anything that might want to come here that would have an adverse affect on your health, safety, and or welfare. I have also instructed new homebuilders that agriculture has some rights not commonly enjoyed by others. Example: They can put up barns and silos with out permits and can run their operations unchecked as in hauling manure. This past spring the 1st person to contact me about wind turbines was a concerned citizen who brashly asked; Well, I suppose your going to let them put Wind Turbines on you. And my 1st thought was yeah! That would be all right. Maybe they could put one up at the school to cut down on some of my tax dollars there. He then said you better study up on this before you make any decisions. And so I began a journey, which has taught me many things, and has brought me here today.

Common sense (the third characteristic that my parents gave me) has been a key tool in seeing the Wind Industry for what it is. Almost every new house to our community has contacted me to find out what they needed to do to comply with our rules way before they did anything. Common Sense tells me these people will make good neighbors. I have never been contacted by the Wind Industry, which is courting the landowners or have signed leases. I went to a neighboring township meeting where a representative from the industry was there to explain all the questions we had. I watched as a large group of locals became nervous then testy as we waited 30-45 minutes past the set time for the gentleman to arrive. When he did he was preceded by 5 people carrying large boxes of propaganda and then said he was sorry he thought he was just meeting with a handful of farmers. Common Sense tells me this man is a liar. Incidentally he never answered one question with a yes or a no.

I have traveled to three wind farms: Tug Hill, New York, Fenner, New York, and Bowling Green, Ohio. I have talked to people from there and Wisconsin. Common Sense has shown me that all these areas have suffered by the wind farms presence.

Bowling Green, as you know, is the only one of these farms which is owned by their own cooperative and after being touted as Ohio's premier wind farm, with the expectation of adding 29 more turbines, these people have elected to not and invest in a conventional plant to produce "base load energy" they can count on.

All we have to do to see our future is to look into these places past. What I find more deplorable than the lack of production with no coal burning plants shutting down, more than the destruction of our wooded hills, roads, and fields, is the loss of community pride and cohesiveness that follow these farms.

People in Tug Hill told me that they thought it was the patriotic thing to do to allow these monstrosities into their neighborhood and now with remorse in their hearts they speak of families and neighbors torn apart by the "GREED" of easy money and the lack of caring what others think. Attached is an article (1) from a farmer from Wisconsin, which mirrors the sentiments of many people around these installations.

I have read every piece of literature I can find both pro and con on Wind Energy. And common sense has made me a "NIMBY". The Reuters article (2) attached doesn't take much sense to see how this industry is failing. I am proud to be a "NIMBY". The greatness of this country is based on "NIMBYISM", where would we be if we didn't tell England, not in my back yard? This deception that we all must be politically correct is just one more way that we are made weak.

We have made sacrifices in our township. Eminent domain allowed large transmission lines to come across our farm in the late 60's. We didn't want these towers but we had to accept them and live under their buzzing lines still today. Eminent Domain forced us to allow a gas line across the farm in the early 70's. We didn't want a clear/cut swath thru our woods, but we live with it today. Eminent Domain has allowed the Cherokee Run Landfill to become the highest point in Ohio. And every night I look out and see one of two torches burning off methane gas at a rate of 1200 cubic feet per minute!!! Which could be bottled or used to turn a turbine to produce electricity. Attached: article (3). And now as I watch this wasted energy go up in the air, I must say, "NOT IN MY BACKYARD" with useless wind turbines. Will we be forced to allow these private corporations to tear up our ground to connect to the grid?

My hope has been buoyed, by seeing this board in action and I can see that you don't take any of this lightly. I also feel that you know better than me how fortunate we are to be sitting on 500 years of coal reserves having a 30% surplus of energy and some of the (if not the) lowest utility prices known.

I ardently ask you to not place benchmarks on this bill, which would force the power companies to invest in the technology that these wind turbine companies have now. There is no incentive for these companies to come up with anything better. Without the benchmarks they will have to come up with something better.

Ohio is poised to do one of two things with this Bill. We can follow the example of all the other states that have adopted a renewable energy portfolio by spending millions on technology that will never produce any more than single digit percentages of our needs. This saps away valuable tax dollars, increases our rates and does not make a seductive climate for new businesses. The deception that if you put up wind farms in your state; wind turbine developers will put factories here is like Honda asking us to buy Hondas before they built their factories here.

Ohio has another option. They can stand way out from the crowd and be honest and say "We see that what other states have done is not solving the problem". We recognize that our wind levels are much lower than most of the states pursuing this technology. We also realize that our population density will not allow this present technology. We put much more value on our citizens than this. We also recognize that because of this population which is bolstered by our technological training industrial proficiency and networking abilities, that we can pursue even more advanced forms of energy which will propel us past the 25% goal in 2025.

This is not just wishful thinking. There are several great innovations just waiting to be pursued by the right people, any and all vertical axis turbines especially the maglev, attachment (4) hydrogen, biomass, geothermal, solar, & energy storage and more.

What a legacy you will be creating for future generation Ohioans by stepping out of the box and being an independent leader in energy development. You may ask what if we can't come up with anything better? We can go back to what every one else is doing. But what if you do? How then will your names be written?

January 23rd, 2008

Testimony before Ohio House Public utilities Committee

Thank you, Chairman Hagen, Committee members, for this public testimony opportunity. I am Mike Stolly, a lifetime resident of Logan County. I have a small excavation business I started in 1989. New housing projects help feed my family. So could digging turbine foundations and grading permanent access roads between them. But I think there is a trade off, at least in our area. Jefferson Township, for example, has 32 homes per square mile on average today. Spaced evenly they'd be about 1,000 feet apart. Is that too close to put windmills in between?

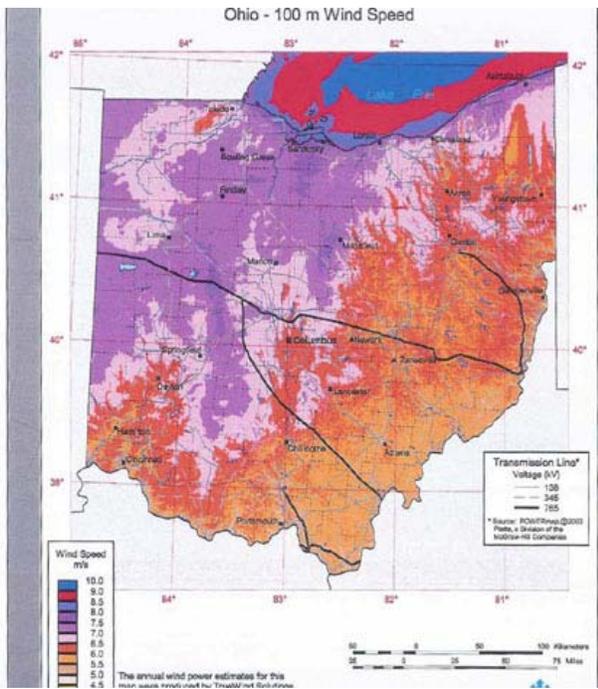
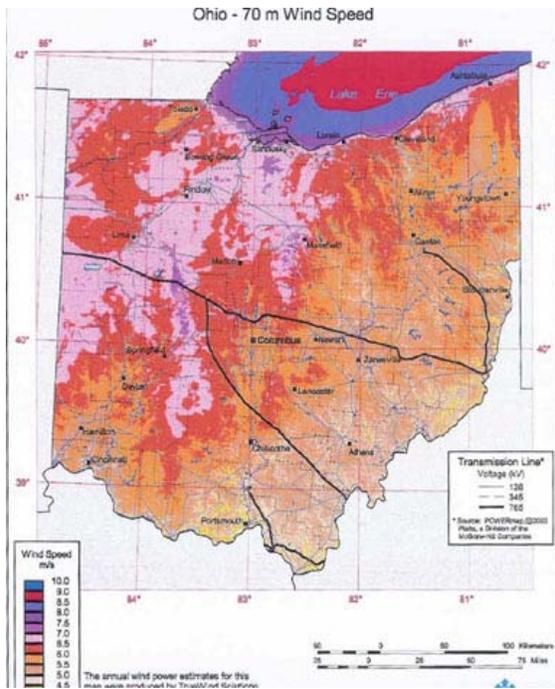
I know why most of these houses are here. It has something to do with peace and quiet, with natural surroundings and the rolling wooded hills so unique in otherwise flat western Ohio. Maybe that's just tough luck for people who built here, but I believe there would be bad decisions behind that luck. You see, those homeowners all pay taxes. And there's room for many more homes for people who choose to live rurally. But the deployment of hundreds – even just dozens - of wind turbines would substantially change the character of the region and the values that attract new housing here. Regardless of slick studies by wind power hirelings, it is obvious to me that many property values of existing homesteads would suffer with this change of land use and industrial imposition in the sky.

I know coal and nuclear plants have tall stacks, too. But wind power's presence is felt fifty times more than traditional fuel plants - per unit of generation. That alone doesn't make wind power bad, but it is definitely worth considering.

I have read about windmill efficiency, too. I have attached the 70M and new 100M wind resource maps made from models at NREL. I am skeptical, though of the 100M map. It is just another formula tacked onto a model. And a 100M hub implies a 150M tall turbine – almost 500 ft. tall. Wow. Picture thousands of Riffe Center height objects spinning in the country skies across Ohio. Maybe they need to be added to the Great Seal. Maps based on models that guess at wind speeds are one thing. The real data from AMP Ohio's Wood County Landfill turbines (1.8MW and 400 ft. tall) proves them to produce at 21% efficiency, or more than \$9.5M per realized MW capacity. ($\$2M \text{ for } .21MW = \$9.5M/MW$) And that generation comes when the wind blows, not when we need power.

What they say is, since the wind doesn't always blow when we need more electricity, that the wind turbines can never replace a single traditional power plant – not close one that's old and not replace one we need in the future. So the cost is all extra cost, is that right? I also hear that when you get a lot of wind turbines, the electric lines have to be bigger if you want all the energy produced on the windiest days to be used. Is that true, too? If it is, how are those costs allocated to wind energy's true costs? It all seems very inefficient to me to add bigger wire everywhere for a few blustery days a year.

Wind turbines are fascinating. They are engineering marvels. That doesn't mean they get the job done. They make good monuments, though. Monuments that symbolize a response to the global warming cries and our imported oil predicament. The problem is, their value is in their symbolism, not in the power they produce. Pretty irresponsible spending, I'd say. It looks like the only thing green about wind turbines is what they cost. And from watching my friends and neighbors hate and even sue each other, the cost goes far beyond money.



TESTIMONY FOR HOUSE ENERGY BILL 221 - JANUARY 23, 2008

Members of the Ohio State Legislature and guests – I am Linda Gordon, and I live in Champaign County, Ohio in Union Township. I am currently employed as Accounting Manager for a research/production firm in Dayton, Ohio. I graduated summa cum laude from Wittenberg University in Springfield, Ohio with a Bachelor's Degree in Organization Management. I have played an active role in labor contract negotiations; I participated in obtaining a grant for my employer which yielded Clark County's first successful Enterprise Zone Tax Abatement project; I've managed payroll, budgeting, and financial statement preparation; and I presently manage a variety of intercompany finance and accounting activities between multiple international entities around the world.

My husband and I have lived for 5 ½ years in a home situated on 19.331 acres of rolling farmland, with 16.4 acres dedicated to farm crop production through a cash-rent arrangement with an area farmer. The property was intended to be our retirement "dream" which would be passed-on to our son and future generations so they may also enjoy the lifestyle of country living. My husband was born and raised in the area, and the land we live on was sold to us as a parcel from a larger farm owned by a family member of mine, so we were both prepared for the risks and opportunities of country living – or so we thought.

My husband and I regularly attend Union Township's twice-monthly Trustee meetings. I am very familiar with the topics of regular discussion at these meetings, which can be confirmed by the official/written meeting minutes produced by the Township's Fiscal Officer. These topics include: the removal of junk cars due to neighbors' complaints; road maintenance, including snow removal and Summer chip & tar activities; maintenance of the cemeteries located in the Township; and maintenance of Township grounds, equipment and vehicles.

A number of meetings by our township's zoning committee have been held since late Spring/early Summer 2007 to discuss the establishment of zoning associated with proposed wind turbine generator facilities in our township. These meetings are open for citizens to observe, but there is no input - or even questions of clarification - allowed from the general public. Occasional questions at these meetings have been directed by the zoning commission to wind turbine company representatives, who have been asked to speak in response to the commission's questions. Comments and questions to the Zoning Commission must be presented at Public Hearings. At these hearings, speakers are limited to 5 minutes of speaking; any questions asked must be rhetorical, because the Zoning Commission refuses to answer questions at these hearings. If they refuse to allow input/questions at their planning meetings and they refuse to answer questions at the hearings, any communications for clarification must be done in-person and off the record – and this is acceptable and justifiable government?

At the last public hearing of the Zoning Commission, I asked the commissioners how they made their decision to establish 1,000 foot setbacks from a primary structure in their zoning proposal. I reminded them that during early Summer-

2007, their discussions were of 1,500 foot setbacks from a primary structure. (By the way, they have never defined in writing what a primary structure is; there was a general discussion that a primary structure is a habitable dwelling, but only time will tell whether or not they eventually provide a written definition.) I recalled for the audience a bus trip that an area group took to an Illinois wind farm which was highly-touted by the local newspaper, the attendees, and area politicians as being a wonderful place. I also reminded them that according to information stated by a Zoning Commission member at one of their meetings, the turbine setbacks at that site are 1,500 feet from a building – any building – not only homes but also barns and outbuildings. Another speaker that evening made the point that cows in Illinois had better turbine siting protection than people in Ohio's Champaign County/Union Township. During that hearing I asked the zoning commissioners to explain to me what science, or studies, or technical body of knowledge was used by them as township decision-makers to determine that a 50% farther setback in Illinois is too far away from a dwelling, and why a 1,000 foot setback is more relevant for our area. I reminded them that our Champaign County Prosecutor had stated during the first meeting held in the county's community center on the topic of wind turbines that the golden rule of zoning is to protect the health, safety, and welfare of all citizens. No answer was given to me at the Zoning hearing – no response whatsoever. No nods, no mumbles, no eye contact, did they not comprehend my question? Is the answer private? No, it isn't.

During a discussion at the 1/7/08 Union Township Trustees meeting, I asked the three Trustees the same question. The quick response I received from the president of the group was that the answer to my question is in a box of documents provided to an attorney for a local 'responsible-wind' group, and he told me to go look in there to find it. Well, I did look in that box – and I didn't find it.

At yet a third public meeting – on Thursday 1/17/08 - I asked – and was specific that my question was for the record – for a member of Union Township government – any township trustee or zoning commission member – to explain to everyone in attendance at that meeting – what basis was used to arrive at 1,000 foot turbine setbacks from a primary structure? I want to know what scientific study or technical data or body of knowledge – and not the sales pitch from a wind turbine salesman or public relations giant or sales brochure – I want a Union Township government official to explain what basis was used to determine the setbacks in the Zoning Commission's proposal that the Trustees were to vote on that evening. To them – and to you in attendance here today – I declare that I have the right to have the government of the people, by the people, and for the people explain the basis for the setback used in a pending zoning law in the township where I live. If the evidence used for this component of the Zoning Commission's proposal cannot – or will not – be explained or substantiated, I asked the Township Trustees to reject the zoning proposal as arbitrary and wait until such time as the Zoning Commission can provide the explanation; or until the Logan/Union/Champaign wind study group, or the Champaign County wind study group, or the Ohio Wind Working group can provide guidelines that are based on scientific study or technical justification that Union Township Government can understand and describe to its citizens. That evening – without

responding to my question – the Township Trustees voted to approve the Zoning Commission’s proposal for 1,000 foot setbacks of a wind turbine generator from a primary structure. I will continue to ask my question.

I have also explained in public statements to Union Township Zoning Commissioners and Township Trustees that setbacks should be from a property line since setbacks from a primary structure take away property rights. Let me give you an example: the currently-approved setbacks to a primary structure mean that a home we may have planned for our son in an area between our existing home and our property line cannot be built since construction in that space would fall within the 1,000 foot setback and would violate zoning laws approved last Thursday, making that future home too close to a turbine. During discussions with individual Township representatives, this concern was blithely rejected as ‘you’re only one family.’ The REAL fact of last week’s zoning approval is that if this zoning becomes law, the rights of everyone who lives in Union Township have been changed, whether they are aware of it or not. Wake up Ohio Government – wind turbine generator setbacks MUST be from a property line to ensure that NO ONE has their land-use rights taken away. If a turbine project participant chooses to waive/sell his rights, that’s fine - he/she is being compensated for the loss of these rights. But many more people in Union Township cannot or choose not to have a turbine placed on their property. The taking of land-use rights from Ohio citizens is unconscionable; it is reality that by insisting that their property rights and their rights to health, safety and welfare be honored they have been chastised and accused by their neighbors and local officials as radical.

I’m assuming you all have seen pictures of a wind turbine farm, am I correct? Haven’t you seen the pictures of a home and how small it appears surrounded by 2-3-4 or more of the giants? Does anyone really comprehend – except the homeowners who live (not just visit) there – whether there is noise or not? Does anyone really comprehend – except the homeowners who live (not just visit) there - whether the flicker is or is not a nuisance? And even homeowner answers vary depending on whether or not they are being paid to waive their rights to quiet, and non-visual disturbances. Think about the size of these behemoths – think realistically, honestly - about whether or not the distance between a turbine and a non-participant’s adjacent property line makes a difference to turbine performance or the amount of electricity a turbine can generate. Let me repeat for clarification – think about it using an unbiased, reasonable-person view: Does the distance from a non-participant’s adjacent property line and a turbine - in the interest of health, safety, and welfare - make a difference to turbine performance? Think about the current frenzy to make Ohio “green.” Is it so important that Ohio run with the herd today, or this week, or this month instead of waiting until state-wide “best-practices” that are in-process by groups such as the Champaign County Wind Study Committee, or the Logan/Union/Champaign Wind Study Committee, or the Ohio Wind Working Group are finalized? These are all groups comprised of people from a variety of perspectives who are working very hard to come up with unbiased, comprehensive turbine guidelines.

As you go about your business of developing and adopting rules and regulations related to the wind industry, think about the thousands of citizens who will be living in the many miles of Ohio's countryside co-mingled with literally hundreds of gigantic wind turbines. Remember, each turbine's rotor diameter is approximately the size of a 747 airplane, which makes total turbine height to the rotating blade tips over 500 feet tall. Can you imagine being surrounded by and living under 8 or 10 of them? Ohio has already granted subsidies to the wind industry. Benchmarks and the set-aside renewable portfolio standard are not yet established. But out in the "trenches" where the turbines will be placed – in the midst of many unknowing Ohio citizens, in the midst of still others who know that leases have been signed and who are attempting to enlighten their neighbors and to enlighten government officials – zoning laws are being pushed full-steam ahead. It has taken a lot of courage for me to speak to you today. As compared to a huge industry with lots of state and federal incentives; that's hired a big/fancy public relations firm; that glamorizes their "green" products and services and ignores the trail of litigation that follows its every project, I am certain I appear weak – perhaps even puny. Be assured that I am not. It is for the resolve of people who speak of what they believe in that you should be grateful – we possess the guts and spunk to stand in front of you and insist – not beg – for our rights. Be advised – today, not all is well in Champaign County's Union Township.

Thank you very much for giving me the opportunity to address you today.

Chairman Hagan, House Committee Members, thank you for this opportunity to testify on the bill 221 today. I am humbled by the small impact our human property rights issues represent in the scope of energy, economic and environmental policy in Ohio, as part of the United States. I listened closely to Senator Boxer battle with voices of reason including George Voinovich in the Climate Change Bill now before the Environment and Public Works Committee. I see the proposed set aside figure in that bill of 1.2 trillion, nine times that of our country's proposed economic stimulus package. If the climate bill becomes law, I hope it stimulates, as it suggests it will, much more than just the air temperature.

I am Tom Stacy, a small business partner in an industrial machinery rep firm, husband and father, native Ohioan from Piqua and a Logan County resident of 18 years. I am just a regular guy with his first political concern. By contrast, you are all elected officials of Ohio. Congratulations, sincerely, to all of you for earning your office, and thank you for your commitment to Ohioans. I can't imagine the pressures you each must balance on many fronts.

Today you are serving on a committee with an important responsibility to make proper, long-lasting decisions. What I'd like to remind – myself - is that we are all just people. I am one like you, and you are each one, like me. Maybe that will help, because I am nervous even as I type this!

A self proclaimed human being, I think most of us would be grateful to just leave it at that when it comes to autobiography. But as a person – as a human of the Earth in the 21st century – I think I can speak for all of us in saying that none of us want:

To be responsible for inaction that lead to any species becoming extinct (except possibly mosquitoes).

To see our – or anyone’s – oceanfront home become a scuba diving attraction from rising sea levels.

Or to turn this miraculous marble into an unbearable sauna and then leave our children and grandchildren to simmer through as we grow old and say goodbye to them.

It’s an emotionally charged desire to leave the right legacy, isn’t it? And I’ll bet legacy has something to do with the career all of you have pursued. Am I right?

But where are we today, really, with our knowledge of climate and our effect on it either way? What can wind power in places where the wind doesn’t blow, do to make a difference? Are windy days or calm days more prone to concentrating coal plant airborne toxins at ground level?

I received a report from the US Senate Committee on Environment and Public works a few days ago. It lists 400 scientists who do not agree with the Kyoto, IPCC, Al Gore and the premises of their bill at hand.

<http://epw.senate.gov/public/index.cfm?FuseAction=Minority.SenateReport>

And where are we today, really, with renewables technologies and big media being balanced about their pros and cons? And even if they are fantastic, promising, significant, clean and good citizens to power supply reliability, are windmills appropriate *everywhere* in rural Ohio? How prudent is wind energy deployment across the Ohio valley country sides, whether at 4.7 cents or some higher cost per kWh?”

Should we consider a more cautious approach to the notion that we have our hand on the global thermostat, knowing the mysteries of climate are far from solved, and that the cost benefit relationship of wind energy is not yet colorfast?

Please – keep your minds open to these questions today.
So is the time right to mandate wind power across Ohio?

The Ohio department of development thinks now is the time, and at a subsidy rate of \$12.00 per MWH, and exemption from taxes for starters. It is a conscience lightening idea, indeed, to encourage new industry that potentially pollute less, while hoping for thousands of new jobs in the state. I respect where the governor and that agency have good intentions. But the execution to date has opportunities for improvement.

The Ohio Consumers Council, which was likely created to aid and defend consumers, is the strongest and most vocal proponent of wind energy I have heard yet. And frankly, I am having a difficult time marrying the department's mission with Ms. Migden-Ostrander's January 9th testimony other than that she feels wind energy can, all things considered, replace coal energy and at a lower cost. And we are, of course, all consumers of breathable air. I have know emissions from coal extraction and burning generation facilities adversely impact air quality and human health (in exchange for well over half our electricity and possibly more so on calm weather days, I might add.)

But I am not really on the same page on the two points from that testimony – wind actually replacing coal or at a lower price. Including subsidy, wind developers make \$91 per MWH according to John Calaway of Babcock&Brown, an Australian based developer and active participant in Logan County's siege. Does that include the 1.2 cents per kWh offered by our ODOD? If not,

that brings the “price” (not “cost”) to 10.3 cents, not 4.7 cents. Of course there is a (guaranteed) profit margin in the price.

If I’m wrong about wind and it really can close coal plants, then are there not “old” jobs that will be lost which will offset at least some of the “new” jobs the renewables lobby and development department predict? Maybe the policy studies do address that, I do not know. After all, a renewables charge could create 850,000 new jobs according to testimony from the senate committee on Environment and Public Works. It is my understanding that Senator Voinovich believes energy prices influenced by environmental policy will drive jobs out of the state, and out of the country.

The 4.7 cent per kWh assertion we heard two weeks ago was footnoted as “including subsidy.” Cost is cost, whether it is passed through government treasury first or hits the consumer in the monthly budget. I know in Ohio right now the PTC costs are two cents from Washington and one point two cents from ODOD. That’s three point two cents right there, and Calaway says another two cents comes from other types of federal subsidy such as depreciation allowances and loan deals. If that’s true, the four point seven cent costs are more than offset by subsidy alone, at least for the term of the subsidies.

I recommend the web site www.savewesternOH.org and feel it contains very accurate information about industrial wind power’s limitations and drawbacks, especially in contrast to some other web sites affiliated with the technology. At SWO.org, our credibility means everything to us. The site contains editorial as well as substantiated fact, just for the record. And also for the record, Save Western Ohio has received zero dollars and zero cents from the oil, coal, nuclear, geothermal, solar, E-83, residential real-estate groups or any other organized concern, and specifically nothing from Exxon Mobil, as THAT is apparently grounds for

Environment Ohio to discredit the testimony of James Taylor of Heartland Institute you hear on January 9th. I submit the attached letter from Heartland's Director, Mr. Joe Bast, and my letter to Environment Ohio responding to their recent newsletter as further comment.

No, Save Western Ohio doesn't get money from business or environmental interests at all. We just represent homesteaders in rural-residential regions who do not wish to hang a welcome sign on their doors to business interests insensitive to our property rights and values. We exist to ask you for siting regulations for industrial wind energy every dollar of the way. Without regulations married to inducements, rural America is being effectively zoned industrial without due process.

By developers' own public admissions (FPL's representative at a recent California summit on wind energy), wind energy projects are not driven by any philanthropic or environmental motive, rather by profit potential alone. Potential that would not exist without the most generous subsidies available for any energy source when measured against demand fulfillment.

Given this, it is exasperating to witness the developers cowering behind a swell of self professed consensus on global warming alarmism and propaganda filled with exaggerations and simplifications, making the case for their ability to reduce oil consumption and reverse climate patterns.

Yet our federal government unwittingly supports the industry's ruthless siting practices by lack of meaningful regulation to accompany the windfalls. And as with all publicly traded businesses, absentee shareholders claim no moral responsibility whatsoever until threats such as media reversal or class action cause a sell off, instantly absolving them of further responsibility. Is this what Mr. Jung meant when he told Logan County Coop

members “Wall Street and our legal system would take care of the details?”

Congresspersons, you are in a position to call a halt to further spread of an illusory swindle the likes of which rural America has never seen. I submit the letter from Buckeye Power President, Anthony Ahern to all coop members, which I think he was really writing to all of you:

Our society faces major challenges when it comes to providing the energy needed to power our economy and lifestyle. These challenges include declining production from U.S. oil and natural gas wells, our nation’s increased dependency on imported energy from unfriendly places, high prices for all forms of energy, a growing energy demand nationally and internationally, and our nation’s aging energy infrastructure.

The number of energy challenges we face is daunting enough, but the interconnectedness of so many of them makes the challenges even greater, similar to the way that squeezing a balloon often makes it pop out somewhere else.

Our leaders and policymakers certainly need to have the pulse of what the citizenry thinks about the challenges. But our society will not be well served if their analyses are limited to what the polls say. In other words, they should resist the temptation to “tell us what we want to hear.”

They need the boldness to tell us “what we need to hear” instead of just “what we want to hear.”

The facts surrounding alleged benefit to our schools and communities are not borne out, as indicated on the ODOD web site where tax abatement is promised to developers, and even if PILOT

or other means of direct local benefit are successfully negotiated after the fact (good luck), I contend rural America must not be sold into industrial use on this vast scale for the token and unpredictable spurts of meaningful power windmills offer.

Just because the vast majority of the urban public is not keen to the complexities of energy systems nor climate trends and factors, and are instead staunchly seated in their armchairs watching The Discovery Channel dramatize theory as fact and simplifying a complex issue into summary sound bites, this is not just cause for any politician to ride that wave of public folly through the next election. Indeed it necessitates that you, the informed, the leaders, through your policy decisions, give the public what they need – not just what the TV tells them they want. The declaration of 221's economic development motive being primary, as Dr. Shanahan shared on January 9th points to the truth of this matter. I think we all know economic development doesn't belong in an energy bill, and that the RPS with "50% in state manufacturing" strings attached don't really make for an irresistible welcome sign to companies who might locate here – or in China.

You have a choice, and to vote for this state RPS may be a wise political move indeed. Governor Strickland has many assets and potentially a bright political future. And believe me – I am not insinuating there is anything wrong with wanting to be re-elected or advancing to a higher office. But please recognize the duty before you as pivotal. We hope you will scrutinize these very creative policy ideas more carefully, and attach appropriate regulations – not soft recommendations - to any and all inducements. Protect lawful residents of rural Ohio. We trust you to do so.

To do otherwise would be an act of blind cruelty as communities tear themselves limb from limb over the land they love and the land that supports them. Otherwise, to Environment Ohio, The

Ohio Wind Working Group and the Ohio Department of Development, - I say don't forget to add the new litigation attorney jobs to the job creation figures in your predictions. These are certain and well paying jobs that will fill real needs of rural Ohioans being treated unfairly by the irresponsible use of their very own tax dollars.

I have a few closing questions and answers:

#1. Am I a NIMBY?

YES, proudly. . . and I say to all rural Ohioans "Next It Might Be You"

#2. Am I anti-renewables for Ohio?

NO. I do, however, think there are better economic development incentives with a more direct relationship to job creation than those in SB221. I favor renewable energy initiatives that are presented fairly with open admission of their limitations and drawbacks, their actual contributions, that are economically feasible, benefit the local communities where they make their next home, and provide unexaggerated stable, dispatchable power that truly and measurably replaces polluting and non-renewable fuel generation facilities.

But we aren't there yet, are we?

I believe that the federal subsidies in place through 2008 are too generous already - without Ohio tax dollars offering a portfolio of inducements to further pad the profits of wind energy developers.

I think R&D to improve clean generation and storage is worth funding with many of those misdirected dollars

No I am not anti-renewables. I am anti-waste and anti property rights revocation.

#3. Have you read the FAQ in the ODOD web site?

<http://www.odod.state.oh.us/cms/uploadedfiles/CDD/OEE/FAQ%202007.pdf>

Why does it ask in two sequential questions what details will remain hidden from the public?

#4. Why does that program offer subsidy without regard for appropriate siting?

<http://www.odod.state.oh.us/cms/uploadedfiles/CDD/OEE/2007%20Wind%20%20Incentive%20Boiler%20Plate%20Grant%20Agreement.pdf>

Again, we are asking you.

#5. Am I adamant about regulations accompanying renewables incentives?

Absolutely. I believe it is utterly *irresponsible* to incent deployment of wind energy facilities such that it brings Vorys, Sater, Seymour and Pease to Jefferson Township, Logan County, Ohio to try to silence its voters.

http://www.supremecourtofohio.gov/clerk_of_court/ecms/resultsbycasenumber.asp?type=3&year=2008&number=0059&myPage=searchbycasenumber%2Easp

I feel for your situation here. And I hope you each better understand our perspective and feel for our situations, too. Please show us that you do with the policy decisions you make. Please, in the face of these complex realities, please heed the words of Anthony Ahern that were read earlier. Be thoughtful – be prayerful – that you make decisions based on what this state, this country, this civilization need – not just what they wish for. TY.