

Acoustic Ecology Institute

Wind Farm Noise: 2009 in Review

In the most extreme cases, families are forced to move from their homes to escape the effects of the ongoing noise disturbances. These are not necessarily people living extremely close to turbines; such unlivable situations have occurred from 1000 feet to over a half-mile from the closest turbines. Some wind farm developers have actually bought out neighbors that were especially impacted, though most are left to make the best they can with a piece of property that will be difficult, if not impossible, to sell. I have not seen any comprehensive listing of residents who had to move, but such reports are becoming more common in the US, Canada, and the UK, totaling perhaps three to six per year.

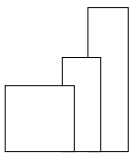
Oregon wind farm ruled too loud: six months to find fix

[Human impacts](#), [News](#), [Wind turbines](#) [No Comments](#) »

The Morrow County Planning Board ruled this week that the Willow Creek Energy Center, an 80-turbine wind farm, is producing noise levels that violate Oregon's noise limits, and gave Invenergy, the wind farm's owner, [six months to get the turbines into compliance](#). The wind farm began operating in January 2009, and by March, [several neighbors within a half mile had raised serious concerns about the noise](#) ([see this article for details](#)), [including regularly having difficulty sleeping](#). Noise monitoring then took place, and in January of this year, the Planning Board received the results, which showed that noise levels at four homes sometimes exceeded the limit of 37dB. There was [some contention at that meeting](#), as neighbors had hired independent noise monitoring consultants, whose records showed more consistent violations than those of the Invenergy-hired consultant; the differences were pegged to the fact that the Invenergy consultant did not record in high wind speeds, contending that the noise gets no louder above wind speeds of 9m/s. It is unclear from initial news reports whether the wind farm will be required to comply with the noise limits based on the Invenergy sound monitoring protocol, which found excess noise just 10% of the time at one house, and less frequent slight violations at three others, or whether they'll use the more comprehensive techniques used by the local citizens, which found violations more consistently at two homes (one just over the limit, the other often over 40dB), with one home experiencing excess noise on 22 out of 37 nights.

Carla McLane, Planning Director for Morrow County, noted that while the commission did rule the wind farm was violating state regulations, it found the turbines only crossed the noise threshold at certain times of day and under certain conditions. "Some would want to view it in black and white and if it's a violation then you have to shut them down," McLane said. "Others would want to view it in terms of shade of gray and say it's not an ongoing and continuous violation. It's an intermittent violation."

"I'm not sure how someone can say this is an unusual, infrequent event," said Kerrie Standlee, one of the neighbors' noise consultants. ["To me, 59 percent \(of nights with excess noise\) is not occasional or unusual."](#) Standlee's noise study also went beyond Invenergy's in that he gave the residents a sheet of paper to log their experiences with time and date. He then overlaid those comments on the data and showed that when the residents reported high noise, the wind was blowing from a particular direction or at a particular speed. This last bit of information may offer Invenergy some direction about when they might shut down turbines if they want to avoid the worst of the noise issues, during the six months they have to get into compliance.



The Planning Board struggled with the conflicting approaches, according to the the East Oregonian ([article archived here](#)). "I have a very hard time coming to a concrete conclusion on which study I feel is accurate," Commissioner Pamela Schmidt said. "I'm not a licensed engineer in acoustics myself and there's been so much information I can't make a decision." Invenergy claimed that the background ambient noise varies, so that in higher wind periods, it should be allowed to exceed 36dB; yet, in its permit, it used the 26dB ambient standard, which is the state's default if measurements are not made ahead of time. Complicating matters more is the fact that, as the [East Oregonian noted](#), "the rule does not direct agencies on how to administer the rule or decide conflicts such as the one between Invenergy and its neighbors. The agency that originally enforced the rule, the Oregon Department of Environmental Quality, has since defunded and destaffed its noise program."

It's worth noting that the noise issues seem to be quite pronounced even at sound levels of 40dB. Oregon's 36dB limit is among the most conservative in the country; it's based on being 10dB above average night time ambient noise levels, which have been measured at 26dB. It appears that noise issues may well be present even when the measured sound levels are at or very near 36dB; this is in synch with reports from elsewhere, which suggest that people accustomed to quiet rural night time soundscapes are quite easily disturbed when turbine noise becomes one of the loudest local sounds, even when absolute noise levels are not extreme. In general, **acousticians consider a sound to become readily audible when it is 5dB above ambient, with disturbance considered likely when it reaches 10dB above ambient.**

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Clifton Maine considers 4000 foot setbacks for wind turbines

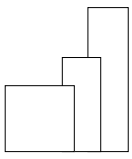
[Human impacts](#), [News](#), [Wind turbines](#) [No Comments](#) »

A private landowner in Clifton, Maine, is hoping to erect four commercial wind turbines on a small ridge known as Pisgah Mountain, and sell the energy to the local utility, Bangor Hydro. Hearing of negative experiences in other Maine towns, including Mars Hill and Vinalhaven, some local residents are concerned about noise impacts and effects on wildlife. **The town of Clifton has drafted a new ordinance that sets 4000 feet as the minimum distance between a turbine and a neighboring house; this ordinance will go before voters on June 8. In both other towns, affected families live within 3500 feet of the local turbines.**

"What we have on this site is setbacks to the closest residence of a little over 4,300 feet," says Paul Fuller, who owns the 240 acres where the turbines would be built. "I think we could boast that that is the farthest setback of any wind farm in the state of Maine at this point." Several other homes are within a mile to mile and a half of the location.

If this project moves ahead, it would be one of the first to do so with regulatory setbacks of over 1500-1700 feet, which are commonly used in Maine and elsewhere in the US, as developers aim to reach a 45dB limit at homes.

The ordinance allows sound levels of up to 50dB during the day and 40dB at night; past experience would suggest that at this distance, these sound levels are unlikely to be reached, though it is entirely possible that the turbines will be somewhat audible up to a mile or so away at times (**night time noise levels in rural areas can be as low as 20-25db**). Some community advocates **urge setbacks of a mile or mile and a quarter**, to more surely eliminate



audible noise issues; this project would be a valuable “guinea pig” for the helping answer the crucial question of where the proper balance lies between wind development and respecting the rural soundscape of small towns.

[Read more and see a news clip at WLBZ2.com](#)

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UK addresses challenges in assessing wind farm noise

[Human impacts](#), [News](#), [Wind turbines](#) [No Comments](#) »

England’s primary environmental agency, the Department for Environment, Food, and Rural Affairs (DEFRA), has commissioned a study to improve techniques for assessing wind farm noise. “There is a possibility that **local authorities are not currently investigating complaints about noise from wind farms due to the absence of any formal technical guidance,**” an internal document reads. “Defra wishes to let a contract to **provide local authorities with a methodology by which to investigate noise from wind farms, to support local authority enforcement of statutory nuisance legislation.**” [According to the Telegraph](#), the report is due out later this year, and should make it easier for local councils to respond to noise complaints. [A recent survey](#) suggests that about one in seven UK wind farms have spurred noise complaints; noise campaigners contend that **many people who are bothered do not file formal complaints, since they are rarely acted upon.**

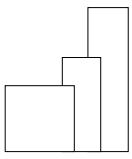
Meanwhile, also in the UK, the [Bradford Planning Inspector upheld a ruling by the city Council to deny a permit](#) for building a single large turbine at a factory in town. The applicant had appealed the denial, since its noise studies showed that that the turbine would be in compliance with the federal noise code ETSU-R-97, which is the only code named in the statutes. However, the investigating Bradford Council Environmental Health officer used several other noise level methodologies when he visited a similar turbine in Norfolk. Using World Health Organisation and British Standard guidelines and codes of practice, as well as ETSU-R-97, he came to the conclusion that the Princes Soft Drinks turbine would cause a noise nuisance for nearby residents. The [Planning ruling noted](#) that even according to the company’s modeling, “for some dwellings under certain conditions, the emitted turbine noise is likely to lead to complaints. Furthermore, **according to WHO standards, there would be times when this noise could result in sleep disturbance, or prove to be a serious annoyance to residents. I find this to be unacceptable.**”

Councillor John Ruding said: “I am delighted that the inspector agreed with the local community and their voices have been heard. **“These proposals were an experiment on people’s lives which was not acceptable.”** Earlier, [at the time that the company appealed the initial denial](#), another Councillor, James Cairns, had noted, “The Council has done its best. Its officers didn’t believe it was feasible in the area. Bradford is not against wind turbines - if you go up onto the moors, you will see them. But turbines of this size have not been tried and tested in urban areas.”

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Third of a mile setback doesn’t prevent wind turbine noise issues in Falmouth

[Human impacts](#), [News](#), [Wind turbines](#) [No Comments](#) »



When the town-owned wind turbine began operating at the Falmouth, MA wastewater treatment facility in March, most townspeople saw it as the most striking example of the town's far-reaching commitment to sustainability.

Since then, it's generated about a third of the town's electricity needs, and a second turbine is being readied for installation nearby this summer. As noted at a [forum on the town's many energy-savings initiatives](#), in discussing the second turbine: "The special thing about the site is it's remote. The nearest home is about 1/3 mile away, which is important in terms of noise and appearance." (This is just under 1800 feet, or 600 yards.)

But **over the few weeks since the first turbine began operating, residents are finding the noise much more disruptive than they'd imagined.** [According to the Cape Cod Times](#), **some neighbors who live in the sparsely populated, wooded area around the treatment facility were horrified when they heard the noise.** "It's destroyed our capacity to enjoy our homes," Kathy Elder said. Elder said the noise surrounds her residence, alternating between a jet's whine, thunder and a thumping that sometimes can be felt.

The town has received formal complaints from six residents, one of whom, Annie Hart Cool, **has gathered over 40 names of people within a mile or so who say they are affected.** She notes that her husband enjoys working in their yard after work, "but when he comes back inside and his head is hurting, you know something's wrong."

Assistant Town Manager Heather Harper says that the town has asked Vestas, the turbine manufacturer, to come check whether there are any mechanical issues that may be causing elevated noise levels, and is asking residents to compile records of when the sound is worst, to help the town figure out how to respond. "This has been a community project from the beginning," Harper said. "We're genuinely concerned and we take the complaints very seriously." At the same time, Harper noted that "We didn't expect no sound, but it should meet all governmental standards." This is, indeed, often the issue: **governmental noise standards, which tend to range from 40-50dB, are not always sufficient to avoid negative impacts on the nearest neighbors.**

UPDATE: [Another local newspaper covers the brewing controversy.](#)

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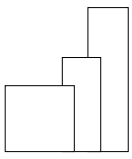
South Dakota residents fail to get half-mile wind farm setbacks

[Human impacts](#), [News](#), [Wind turbines](#) [1 Comment](#) »

An excellent [3-part series](#) on [wind farm development](#) ran [this week](#) in the Bismark Tribune. It has a good balance of the excitement and economic benefits that attract farmers to the industry, and well-stated concerns from those who want **larger setbacks in order to protect neighbors from noise.** The grey area around health impacts is navigated quite well, with a **well-grounded emphasis on sleep disruption**; and most strikingly, the piece includes acknowledgement that there is individual variability in how easily people can adapt to a new and potentially intrusive noise source.

Interestingly, there are repeated indications that in this community, as in others, a half mile setback was seen as the "sweet spot" that could accommodate both industry and neighbors; in initial community meetings, **there was significant support for a one-mile setback**, while a general consensus emerged that a half mile would be tolerable to most people. Nonetheless, the county decided to go with a third of a mile (1750-foot) setback, which has some community members concerned that the turbines will be audible enough to be disruptive at times.

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Maine towns keep wind farms at arm's length as state looks to far offshore sites

[Human impacts](#), [News](#), [Ocean](#), [Wind turbines](#) [No Comments](#) »

“As goes Maine, so goes the Nation?” While this old political truism has faded in recent decades, the State of Maine is currently blazing trails in carefully considered wind power development. At the local level, **small towns continue to pass moratoriums and strict setback standards. Most recently, [Thorndike became the third town to set a one-mile setback](#)**, with the neighboring town of Dixmont taking up a similar ordinance at this week’s town meeting. Meanwhile, two more towns, Avon and New Vineyard, joined four others who have hit the pause button on any wind farm developments by [adopting moratoriums on any permits](#). **These actions come in the wake of three projects that have generated significant noise issues for neighbors out to as far as 3000-3500 feet; thus, half-mile setbacks are being seen as not enough to avoid risk of disrupting rural lifestyles.**

While these towns see the state as being overly aggressive in supporting ridgetop wind farms (abetted by the fact that a former Governor is one of the state’s leading wind developers), when it comes to offshore wind development, the state’s goals will be much more welcome for most coastal communities. Instead of opening Maine state waters to windfarm leasing, the legislature’s Committee on Utilities and Energy is [redrafting controversial ocean windfarm bill LD 1810 to do the very opposite](#). Under changes to be finalized today at the committee’s 2nd worksession on the bill, “An Act To Implement the Recommendations of the Governor’s Ocean Energy Task Force” will focus Maine instead on constructing floating deepwater windmills on land, and then **deploying them at locations ten miles offshore and further**, where wind speeds are higher and more consistent and fisheries are less impacted.

The plan received an enthusiastic response from the Maine Lobstermen’s Association, which has been very concerned about the impacts of any traditional bottom-mounted wind turbines on their activities near shore.

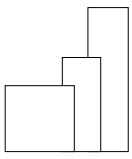
Habib Dagher, who leads the [University of Maine’s offshore wind project](#), offered a timeline for getting deepwater wind energy going off Maine. “Our goal is build our first demonstration floating turbine - a third-scale turbine about 120 feet above the water - next year, and place it in the water the year after in the Monhegan site,” Dagher said. “In 2013 we would build the first 4 or 5 megawatt unit, In 2014 and 2015, a 25 megawatt farm.” He predicted that offshore wind would keep growing: “The next phase is development of a large scale 500 to 1,000 megawatt farm. We have at least one developer interested to do that and have it operational in 2020”

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UK: Noise complaints at 37 of 255 wind farms

[Human impacts](#), [News](#), [Wind turbines](#) [1 Comment](#) »

Here’s a bit of news that might be spun either way, depending on your predilection. **Jane Davis, who was driven from her home by wind farm noise**, has been compiling information on English wind farms and noise complaints; she has found that 37 wind farms have spurred some sort of noise complaints nationwide. This amounts to about 1 in 7 UK wind farms, in contrast to an oft-repeated mantra that “only four” UK wind farms had noise issues, and they’d been “resolved.” The new numbers could support those cautioning that wind farm noise issues are more widespread than generally acknowledged, AND those who claim that noise issues are the exception rather than the



rule; it certainly reinforces AEI's theme that we need to acknowledge that a minority of people are affected by noise around wind farms, and that we must come to grips with how to address this.

[This article in the Telegraph](#) details some of the information shared at a gathering of wind farm noise campaigners, WindCon2010. **Gillian Haythornthwaite, who lives near the wind farm in Askam with her partner Barry Moon, said it has been a "devastating" experience. "It is a dreadfully irritating whoosh, whoosh noise," she said. "It is unbearable to be outside in the garden when there is the noise."**

[Read the rest of this entry »](#)

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Ontario wind tech and health research chair named-background is solid in tech, weak on health

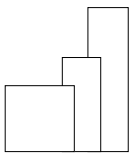
[Health](#), [Wind turbines](#) [No Comments](#) »

Electrical engineer [Siva Sivoththaman](#) has been named to the newly-created Ontario provincial Research Chair in Renewable Energy Technologies and Health. Local activist groups that have raised concerns about the effects of wind farm noise on neighbors had hoped that this position, created as part of Ontario's new Green Energy Act, would take the lead in formally investigating the negative health effects some neighbors of wind farms have reported. However, the choice appears to be more oriented toward the technology aspect of the Chair's responsibilities. As noted in the [request for proposals](#): "The Chair in Renewable Energy Technologies and Health will focus first on emerging science and technology related to wind turbines, and then will explore the potential health effects from renewable energy."

According to a [news release](#), "Dr. Sivoththaman will bring focus to multi-disciplinary activities in renewable energy technologies and health, ensuring that health and safety are top priorities in the induction of new technologies.

His research program will develop new technical approaches and will provide guidelines in setting standards to ensure health and safety in the manufacturing, use, and end-of-life phases of renewable energy technologies." [Sivoththaman's research](#) centres on silicon-based crystalline and thin-film photovoltaic devices, and he serves as director of the Centre for Photovoltaic Systems and Devices, which occupies much of the photovoltaic research building beside Matthews Hall. His interest extends to nanocrystalline semiconductors, and he was the first director of the University of Waterloo's nanotechnology engineering program when it was launched in 2004. Two leading Ontario wind activist groups expressed their disappointment with the choice; [Wind Concerns Ontario](#) said "We have no faith in any meaningful body of evidence being produced on health effects from wind turbines by this government-funded non expert and Ontarians will suffer for it," while the [Society for Wind Vigilance](#) chair Dr. Robert McMurtry said the choice missed the mark in that "the lead and expertise of this Research Chair would more appropriately have been a clinician scientist. We strongly encourage the new Chair to seek the appropriate collaborators as the research program is established."

It is as yet unclear what the Chair's timeline will be in addressing the dual (and quite distinct) topics he is charged with overseeing. Given the widespread concern about health effects, and the role this concern is playing in the wind development process in Ontario and elsewhere, we hope that the two topics will be pursued simultaneously. And indeed, as McMurtry suggests, it is clear that the Chair will need to bring in some experts in health and



acoustics to effectively address the health aspects; in the spirit of collaboration and inclusiveness, we can also hope that his research/investigative team draws from qualified experts who have expressed concerns about wind noise, as well as those who have previously worked on reports that found few health effects.

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Vinalhaven begins month-long “experiment” in reducing noise issues

[Human impacts](#), [News](#), [Wind turbines 4 Comments](#) »

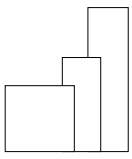
The Fox Islands Electrical Cooperative on Vinalhaven, an island off the coast of Maine, has begun a month-long experiment as a first step in trying to come up with a local solution to noise issues from three wind turbines that began operating in November. **About two dozen people within a half-mile of the turbines have reported annoying levels of noise, with six property owners claiming that their lives are severely impacted.** Others in the same area who can hear the turbines are not particularly bothered by the noise.

Shortly after the turbines started operating, and some residents (including some who were excited about the wind farm, and some who had been skeptical) reported unexpected noise issues, neighbors began noting the times that the sound was most troublesome, in an effort to identify what wind directions or atmospheric conditions might be most to blame. At its January meeting the Board of the electric coop decided to conduct a month-long “experiment” during February, in which the turbines would be slowed down in random patterns. Sound measurements will be made throughout the month, and the 38 households within a half-mile are being asked to log their sense of the noise on a regular basis (half these households are summer people, so are unlikely to be participating). In a letter to coop members, the board said the experiment “will enable us, as a community, to figure out what to do and come to a solution that works, as well as possible, for everyone.”

A [very detailed article in The Working Waterfront](#), a local paper, features a variety of comments from a locals about the process that is underway to find a community-based solution to the noise problems. Some find that the noise is moderate enough to be tolerable, easily drowned out by other sounds such as the TV or a car passing by, or being no more bothersome than a dishwasher running in another room; one person remembers the noisy generator that used to provide power to the town in the 60s and 70s, which people got used to. Some who have been disturbed share their perceptions, as well; Ethan Hall notes that “I’ve never heard anything in my life that sounds like it.” Both he and Lindgren (another neighbor being affected) believe that current sound measurement standards do not take into account the complexity of turbine noise and its true impact. **“The nature of the sound is so unique, that to try and quantify or qualify it with a strict dBa [decibel] measurement is an entirely inadequate way of describing the effect on people and surroundings,”** Hall feels. An hour-long radio interview with Hall and others being affected, recorded this past December, is [available on the WERU website](#).

The Acoustic Ecology Institute

May 31, 2010



Lawsuits begin to crop up, challenging nearby wind farms

In recent months, several lawsuits and formal complaints have been filed, claiming unlawful nuisance and/or impacts on property values and quality of life near wind farms. Most recently, sixteen residents sued the Michigan Wind I wind farm and its developers, laying out a series of complaints, including (as [detailed in the Huron Daily Tribune](#)):

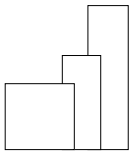
- Private nuisance from, among other things, sustained and highly annoying audible noise and amplitude modulation in both audible and sub-audible frequencies
- Negligent design of a wind farm, including a noise assessment that estimated only audible noise levels within the dBA range, and did not consider low frequency noise or impulse noise
- Negligent misrepresentation, claiming the wind companies made false representations in board of commissioner and planning commissioner meetings and public hearings when company representatives said the wind farm's operations would not result in a noise nuisance or cause adverse health effects to adjacent landowners. "(The defendants) were negligent in making these misrepresentations because, as the parties seeking approval to construct a wind turbine farm in Huron County, they had a duty to use reasonable care to provide Huron County and its citizens with both accurate and complete information," the lawsuit states. The plaintiffs claim the wind companies provided inaccurate and/or incomplete information about the audible turbine noise levels, and no information about low frequency noise, infrasound and/or impulse noise emitted from the turbines.

In Pennsylvania, the Allegheny Ridge Wind Farm [settled out of court this](#) week as a lawsuit brought by Todd and Jill Stull was moving toward a jury trial in July. The suit alleged that [the company misrepresented the noise levels that would be generated by assuring residents the noise would be minimal](#). The agreement is bound by confidentiality, so no details are available. See [earlier coverage of the lawsuit here](#).

Meanwhile, in neighboring Wisconsin, a [family that abandoned their home near the Forward Energy Wind Center, is assessing their options after the state Public Service Commission dismissed a complaint they filed, seeking compensation from the wind developer for business losses from their alpaca farm, health impacts and property value losses](#). The PSC determined that they did not have jurisdiction to consider the complaint, and recommended the family seek relief in circuit court. [Read more on this in the Milwaukee Daily Reporter](#).

In Maine, neighbors of the Mars Hill wind farm [filed suit in August](#), seeking compensation for what they say is a resulting [drop in their property values along with emotional and physical distress](#).

In 2006, residents near a Texas wind farm were [rebuffed by courts in their region](#), which ruled that [noise issues were aesthetic claims](#), and did not qualify for relief under nuisance laws. There, [turbine noise averaged 28 dBA at](#)



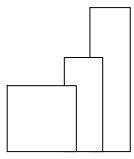
McCann Appraisal, LLC

a distance of 1.7 miles from the wind turbines, and 44 dBA at 1,700 feet; it's worth noting that night time ambient sound levels are likely between 20 and 30dB in this ranch land.

Across the pond, a court in France responded to a noise complaint by ordering 8 wind turbines shut down from 10pm to 7am.

And, while not a court challenge, residents in Massachusetts have asked the state public health commissioner to assess the health and well-being effects of living near wind farms. Since a single turbine began operating in Falmouth, over forty nearby residents have struggled with noise issues; one, an air traffic controller, is concerned that sleep disruptions he's experiencing will affect his job performance.

<http://aeinews.org/archives/926>



McCann Appraisal, LLC

Interview with Ann and Jason Wirtz
N1157 Hwy YY
Oakfield, WI 53065
902 960 5246
Dodge County, Wisconsin
Conducted on the evening of May 2, 2009 by Lynda Barry

WIND TURBINE NOISE FORCES WISCONSIN FAMILY TO ABANDON HOME

TOWN OF OAKFIELD- While lawmakers in Madison consider a bill which will override local government and give the Public Service Commission of Wisconsin siting authority for wind farms throughout the state, one Dodge County family already living in a wind farm approved by the PSC has decided to abandon their home due to turbine noise.

Ann and Jason Wirtz have a pretty Wisconsin farmhouse near the Town of Oakfield. It's the kind of place that had people stopping by to ask if the family would consider selling it.

"They'd just pull into our driveway," says Ann. "There were people who said if we ever decided to sell it, we should call them."

Although turn-of-the-century house needed a lot of work when they bought it, they didn't mind. The Wirtz family planned to stay. They both grew up in the area and wanted to raise their children there.

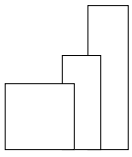
"I thought we were going to live here for the rest of our lives," says Ann, a mother of four. "I thought one of our kids was going to live here after us."

This was before 86 industrial wind turbines went up around their home as part of the Forward Energy wind project which began operation in March of 2008. The **closest turbine is to the Wirtz home is less than 1300 feet** from their door.

"Last night it was whining," said Ann. "It wasn't just the whoosh whoosh whoosh or the roaring. It was a high pitched whine. And I don't just hear them, I can feel them." She describes a feeling like a beat in her head, a pulse that matches the turbine's rhythm.

"Last night was really bad," she said.

She says she knows which nights are going to be loud by which way the turbine blades are facing, and her family dreads the nights when the wind is out of the west. "That's when they are the loudest."



Jason said he found out there was a wind farm planned for his area from a neighbor he ran into at the post office. “He asked me if I knew anything about the turbines coming in. I didn’t.” Jason came home and mentioned it to Ann.

“When I first heard about it I wasn’t that alarmed.” says Ann, “People were saying how bad they could be, but I just didn’t believe them at first.”

She assumed the turbines would be sited much further away from her home, unaware of the controversy over the setbacks approved by the Public Service Commission of Wisconsin which allows turbines to be sited close as 1000 feet to the homes of people like the Wirtzes.

“All those orange flags they put in were way back there. I was thinking it wouldn’t be too bad. And then when that access road started coming in so close I said, ‘what the heck is going on?’

Meanwhile, Jason had been attending town meetings and learning more about the project. The more he learned, the more worried he became. **Five months before the turbines went up, the Wirtz family decided to sell their house.**

They called people who had let them know they’d be interested in buying it. **“When they found out about the turbines,” said Ann, “They weren’t interested anymore.”**

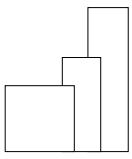
Wirtz family prepared the house to put on the market. In November of 2007, the home, sitting on eight acres, was appraised for \$320,000. But this once sought-after property could find no buyers. “As soon as people found out about the wind farm coming in,” says Ann. “That was it. And once they started building the roads to the turbines, forget it. They’d ask what that road was for, we’d tell them and we’d never hear from them again.”

After the turbines went up, interested buyers stopped showing up altogether.

“We tried to find another realtor,” said Ann, “They’d ask ‘is it near the wind turbines?’ and when they found out it was, they wouldn’t even bother to come out to the house to look at it. One realtor told me **it wasn’t worth her marketing dollars to even list it because if it was in the wind farm she knew she couldn’t sell it.** I mean have you ever heard of a real estate agent turning down a chance to sell a house?”

Another realtor said they would have to price it well under \$200,000 to get anyone to even look at it. “At that price we were going to be \$50,000 worse than when we started,” said Ann. “And that didn’t include the 12 years of work we put into the place.”

But the Wirtzes were increasingly anxious to get away from the turbines. While Jason, who works nights, wasn’t having much trouble with the turbine noise, it **was keeping Ann and her children from sleeping well at night.** They were tired all the time. They were **also getting frequent headaches.**



And there was trouble with their animals as well. The Wirtz family raise alpaca and have a breeding herd. Ann says the Alpaca became jumpy the first day the turbines went on line. “Normally they are so calm. But the day the towers started up, they seemed to panic. They were on their back legs right away.”

Ann says the herd had always been docile and healthy, with no breeding problems. Since the wind farm started up, their temperament has changed and none of the females have been able to carry a pregnancy to full term. “They’re nervous all the time now. I can’t prove anything but I do know my animals. And I really felt something was wrong. All the years we’ve had them we’ve never had a problem.”

At night herd shelters in the large metal shed behind the Wirtz home. When the turbines are loud, Ann says the sound echoes inside the shed and the metal vibrates and hums. “The noise in here gets just unbelievable. When the tin starts to vibrate in here, they can’t stand it. I have to find them a better home. This is torture for them.”

The same turbine noise has driven Ann out of her own bedroom “I can’t stand to be in that room anymore. I don’t sleep at all. My sleep has been terrible.” Instead she sleeps on the couch where a fan on their pellet stove helps counter the turbine noise. “My number one complaint is how tired I am all the time,” says Ann, “I never had that before, ever.”

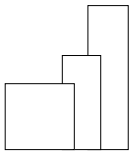
Says Jason, “We don’t have air conditioning, we didn’t want it and we didn’t need it. In the summer we just opened the windows and let cross breezes cool the house. But the first summer with the turbine noise we had to shut the windows and turn on the fan. We couldn’t stand it.”

After one of the children was recently diagnosed with a severe stress-related illness, the Wirtzes decided they’d had enough. They decided the health of their family was more important than keeping their home, and they are abandoning it.

“Now, after all the trouble we’ve had living here” said Ann, “If a family showed up and wanted to buy the place and they had kids, I don’t think I could sell it to them. Knowing what I know about living here, I just don’t think I could put another family through this.”

They are now looking for a place in a nearby village. “We were born and raised in the country but we’re thinking of moving to Oakfield because they aren’t going to plop a 400 foot turbine in the middle of the village, says Jason. “And I know I’m going to have to drive by this place every day on my way to work. It’s going to make me sick to see it, but I can’t stay here anymore.”

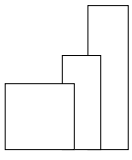
Ann adds, “I say we move near whoever it is that decides on the setbacks because you know they’ll never have a turbine by their place”



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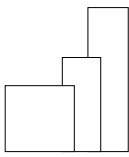
Jason and Ann sit at the dining room table and point out the elaborate woodwork they'd stripped and re-finished by hand. Jason holds a picture of the farmhouse from happier times. Earlier that day they'd met with the people at the bank to let them know they were giving up their home.

Jason says, "At least we're young enough to start over. My mom, she doesn't have much money and now she has turbines around her house. She said, 'This house was my retirement,' Her and my dad put everything into that house. Now I don't know what she's going to do." Jason says, " **The quality of life we had here is just gone.** I grew up here and I loved it here. But I don't anymore. "



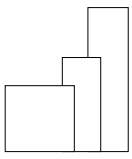
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Appendix F



Representative Sample of Neighbor Complaints

Name	State	Project	MW	Turbine Setback	Notes
Rene Taylor	IL	Twin Grove	396	1500	sued over substation near home; suit dropped but can be brought again
David & Stephanie Hulthen	IL	Illinois Wind		1500	complained
Patty Spalding	MA	Newburyport			complained; worked to get ordinance changed
Sharon Eddy	MA	Falmouth			complained
Todd Family	ME	Mars Hill	42	2500	sued town and company
Carol Cowperthwaith	ME	Mars Hill	42	2500	sued town and company
Phil Bloomstein	ME	Freedom		1000	no action
Ethan Hall	ME	Vinalhaven		2500	threatening suit. Wind company claims they are trying to fix the problem
David and Sally Wylie	ME	Vinalhaven		2500	threatening suit. Wind company claims they are trying to fix the problem
Art and Cherly Lindgren	ME	Vinalhaven	42	2500	threatening suit. Wind company claims they are trying to fix the problem
Fletcher Family	ME	Mars Hill	42	2500	sued town and company
Boyd Family	ME	Mars Hill	42	2500	sued town and company
Harris Family	ME	Mars Hill	42	2500	sued town and company
Burtchell Family	ME	Mars Hill	42	2500	sued town and company
Gene Champagne	MI	Harvest Wind Farm			registered complaint
Charlie Porter	MO				sued wind company; case dropped
Daniel & Carolyn d'Entremont	Nova Scotia	Pubnico Point		1000	abandoned home
Tim Yancey	NY	Maple Ridge			filed complaints
Jessica	NY	Sheldon Wind			no action
Jim and Judi Hall	NY	Cohocton Wind			filed complaints
Hal Graham	NY	Cohocton Wind		1000	has turbine on land; came out against wind company
Colette McLean	Ont			1000	developer purchased her home
Barbara Ashbee-Lormand	Ont.			1000	abandoned home
Dale Rankin	TX	Horse Hollow			sued but lost in court
John Ruggiero	TX	Barton Chapel		2500	complained to county
Tom Shea	VT	Searburg		1000	complained; asked for property value reduction
Larry Wausch	WI			1500	complained
Gerry Meyer	WI	Forward Wind		1100	complained
Ann and Jason Wirtz	WI	Forward Wind		1000	abandoned home; filed suit
Tony S. Moyer	WI	Cedar Ridge		1320	complained
Barbara Aper	IL	Rail Splitter		1500	sued; settled; sold at reduced price. Horizon wind guaranteed property value
Todd and Jill Stules	PA	Allegheny Ridge		2000	sued over noise; case accepted in court and pending



Why did the people who once lived in this house have to abandon it?



The home in the photo above was made uninhabitable by wind turbine noise and vibration. The family who once lived here were forced to abandon their home in 2006. Three years later, it remains empty and unsold. [To read more about this story, http://www.windaction.org/news/3003](http://www.windaction.org/news/3003)