

Public Service Commission of Wisconsin (PSC)

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COMMENTS FILED ELECTRONICALLY IN

Wind Siting Rules

1-AC-231

Commentor Information:

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Comment:

RE: Health Impact and Setback Guidelines for Wind Siting Council
Author: Herbert S. Coussos, MD
Please See PDF version for tables and diagrams

Introduction

Thank you for reading and considering my comments. I hope to explain in this document the problems related to noise and health. I have all of the original studies and can give you even more as I have read through many studies from the US, Canada, New Zealand and the whole of Europe that come to the same conclusions. Large industrial wind turbine developments do not belong in close proximity to locations where people live and work. I hope to show valid, accepted and reproducible data that put guide lines on siting distances. At 30-40dB measurable objective sleep disturbances are seen. At 40-55dB adverse health effects are seen. Above 55dB is dangerous to public health. Experience has shown industrial wind turbines cause noise that exceeds 40 dB when in close proximity. Noise deteriorates over distance. Allowing for proper distance will mitigate the noise levels both experienced and predicted by independent research and the wind industry. The safest minimum distance to protect the health and safety is to allow for less than 40dB which correlates to 0.5 miles or 2640 feet. The optimal distance in a rural setting would allow for no more than a 10dB increase in ambient noise which would correlate to just over one mile.

Background

As Wind Energy projects continue to expand across Wisconsin and as the need for energy independence becomes more urgent, controversy over siting regulations has become a dividing point in communities across the state. The recent applications for projects in northeast Wisconsin make safe siting guidelines the center of the argument. In local townships such as ours in Wrightstown, Holland, Morrison, and Glenmore, hours of emotionally charged meetings and conflicted town supervisors have lead to only more controversy. A vote of town`s members as slanted as 245-18 overwhelmingly does not support the Ledge Wind project. These same conflicts are seen world wide as wind energy projects develop. It is clear that studies are presented both supporting and refuting to notion that wind turbines harm people`s health. It is my opinion as a physician that the best evidence support that building large wind energy turbines in close proximity to humans has a negative impact on the health.

Medical Facts

Normal sleep is essential for health and well-being. The science of sleep study has established the population averages for the amount of time it takes to fall asleep. The number of awakenings during the night and the number of sleep arousals that are standard. (American Academy of Sleep Medicine 2005.)

Disturbed sleep is defined as problems falling asleep, excessive awakening, excessive sleep arousals, difficulty resuming sleep after awakening, and an overall lack of restorative sleep. Environmental sleep disorder is when outside factors such as noise cause sleep disturbance, insomnia, or results in

daytime fatigue. These problems result in deficits of concentration, attention and cognitive performance, reduced vigilance, malaise, depressed mood, and irritability. The effects are seen in all ages and both genders.

Long-term sleep disturbance has great influence on metabolic and hormonal function. C-reactive protein is an inflammatory marker associated with the development of atherosclerotic plaques in the coronary vessels and is associated with increased risks of strokes and heart attacks. CRP as a risk predictor of strokes and heart attacks increases as sleep disturbance increases. (Meier-Ewert et al., 2004)

Leptin is secreted at night and helps to regulate appetite and glucose metabolism. When humans are sleep deprived, weight gain and impaired glucose tolerance is seen.

Cortisol has also been studied as a separate marker of disease related to environmental sleep disturbance. Higher cortisol levels are seen in individuals that are sleep deprived. Higher cortisol levels lead to increased blood pressure and impaired glucose tolerance. In fact the risk of heart attacks is two fold higher in those with insomnia. (Hyyppa and Kronholm, 1989) Many other health hazards can be directly related to sleep disturbance, including decreased immunity and susceptibility to viral illness, and many other consequences related to daytime fatigue such as work injuries, poor school performance and auto accidents. It has been shown that fatigue may impair driving more than alcohol. Work injuries may be increased, and children suffer from behavioral problems and decreased school performance. Children have problems with learning, attention and memory. These are all substantiated medical facts that stand alone as they relate to sleep disturbances. Many causes of sleep disturbance such as shift work, sleep apnea and environmental have been shown to cause the same group of adverse health effects. In summary, the overall health impact is that death rates increase as sleep decreases (Patel et al., 2004; Tamakoshi and Ohno, 2004) And according to Kripke et al. 1979, reduced sleep may be a greater independent risk factor for death than smoking or hypertension.

Environmental factors

Noise disturbs sleep. Many studies over the last 30 years show there are physical responses to noise as it disturbs sleep. EEG changes, blood pressure and heart rate, body movement and restlessness, and awakening can all be measured in the common sleep study. Environmental factors such as airport noise, road traffic, railway noise, and neighbor noise have all been reported as sources of sleep disturbance. They all follow a similar curve in that as noise levels increase so do complaints of sleep disturbance. At 40 dB less than 5% of individuals show night time sleep disturbance. At 50dB about 6% have sleep disturbance. At 55dB up to 10% have sleep disturbance. At 60dB as high as 15% have sleep disturbance. (European Commission, 2004) The neighbor induced noise is worth a closer look as up to 20% of neighbors are disturbed by voices, water running, toilets, TV, radio and music as well as neighbors pets. This is important in consideration of siting wind turbines because most locations targeted for development are rural (though not sparsely populated in southern Brown County). These areas tend to be quieter at night than urban areas. The people that chose to live there do not have background ambient noise, making any additional noises more noticeable.

Experience is the Best Teacher

Wind Turbine noise is disturbing to those who live close to them. Planners of wind turbine developments need to take into account the noise complaints from existing sites and the real world examples of the noise disturbance caused by wind developments. Many of these sites have been in place for years and those that are in close proximity to people are rife with complaints, law suits and unhappy landowners. Proper siting away from people will prevent such complaints. (Hanning, 2009) Surveys of residents living in close proximity to industrial wind turbines show high levels of sleep disturbance and annoyance. In Kewaunee County 52% of individuals living within 2400 feet found noise to be problematic. 32% within 4800 feet and 4% greater than 1 mile were disturbed. 67% reported disturbed sleep if they lived within 1200 feet. (Kabes 2001) In Sweeden 2 studies yield similar results with complaints of disturbance rise as the noise levels increased from 32.5 dBA to 40 dBA. (Pederson and Persson 2007) Multiple other surveys from France, New Zealand, Canada, The United Kingdom, the Netherlands, Sweeden and others show similar results. The conclusion that industrial wind turbine noise is disturbing to people that live close to the developments is a fact. We should learn from others mistakes and not subject the people of Wisconsin to repeat the problems seen across the United States and the world. It is clear that proper siting by increasing the distance of the wind turbines from people will prevent the noise complaints. The deterioration of noise over distance is very predictable and several models exist for industrial wind turbines. (UK Department of Transport and Industry 2006; Kamperman and James 2008)

What is the Best Distance?

At least 14 published recommendations follow the same logic. Wind turbines cause noise. Noise disturbs sleep. Sleep disturbance has a bad effect on health. The conclusions of many sound studies show that the noise decreases as the distance from the turbine increases. (Theriault Acoustics, 2009 for Invenergy) Figure 9 "Predicted Noise Level Contours - Area" Shows that the entire Area shaded

red will exceed 40dB. To reach an ambient level of less than 35 dB a home must be at least one mile away from the nearest turbine. To the northeast of the Ledge Wind Project that distance exceeds 2 miles. This agrees with the 14 studies tabulated in Dr Hanning`s article "Sleep Disturbance and Wind Turbine Noise" (2009) Table 1 on page 33 summarizes these recommendations published between 1994 and 2009 by engineers, scientists, lawyers and physicians. The recommended setbacks vary from >0.62 miles to 1.55 miles with an average of 1.2 miles. At these distances the noise levels will be less than 45 dB. According to the WHO in their 2009 authoritative document on noise and sleep disturbance, levels between 32 dB and 42 dB will disturb sleep and noise levels of 50dB or higher have been proven to cause health consequences. The same study uses 21dB as a threshold for rural nighttime sleep.

According to Invenergy, the sample data from the Theriault study, the ambient noise in 8 locations in rural Brown county were measured. The highest noise recorded was an isolated 56 dBA and the predominant level of daytime noise was 32dB. The ambient nighttime noise averaged 25 dBA.

According to the WHO standards, between 32 and 42dB or a 10dB level above ambient sound will be disruptive. If we use Invenergy`s sound contour map, then a setback of one mile will be required to safely fall within these standards.

Best Choice

The council has a decision to make. With the known data on sound and sleep disturbance, with other wind farm failures by close siting, and with the wind industries predictions of sound in the wind farm - will the council make the best recommendation for the people living in Wisconsin and take steps to be conservative by placing a setback of one mile from where people live, work, and attend school? This is the best choice based on the current data to ensure the safety of those living within a development by keeping the noise levels less than 40dBA

Or will the council compromise the standards knowing that up to 50% people will experience disrupted sleep and 5% may suffer health effects if ½ mile is used? Or worse yet if 1250 feet is used, then up to 67% will complain of disturbed sleep and up to 15% will see adverse health effects.

TABLES

Table 1 From Hanning 2009; Recommendations for setback of residential properties from industrial wind turbines.

Authority Year Notes Rec`d miles Rec`d Kilometers

Frey and Hadden 2007 Scientists. Turbines >2MW >1.24 >2

Frey and Hadden 2007 Scientists. Turbines <2MW 1.24 2

Harry 2007 UK Physician 1.5 2.4

Pierpont 2008 US Physician 1.5 2.4

Welsh Affairs Select Committee 1994 Recommendation for smaller turbines 0.93 1.5

Scottish Executive 2001 Visual recommendation included 1.24 2

Adams 2008 US Lawyer 1.55 2.5

Bowdler 2007 UK Noise engineer 1.24 2

French National Academy of Medicine 2006 French physicians 0.93 1.5

The Noise Association 2006 UK scientists 1 1.6

Kamperman and James 2008 US Noise engineers >0.62 >1

Kamperman 2008 US Noise engineers >1.24 >2

Bennet 2008 NZ scientist >0.93 >1.5

Acoustic Ecology Institute 2009 US Noise engineers 0.93 1.5

Table 3 from World Health Organization 2009; Effects of different levels of night noise on the population`s health.

Average night noise level over one year Health effect observed in the population

Up to 30dB Although individual sensitivities and circumstances may differ, it appears that up to this level no substantial biologic effects are observed.

30 to 40 dB A number of effects on sleep are observed; body movements, awakening, self-reported sleep disturbance, arousals. The intensity of the effect depends on the nature of the source and the number of events. Vulnerable groups (elderly, children and chronically ill) are more susceptible.

40-55 dB Adverse health effects are observed among an exposed population. Many people have to adapt their lives to cope with the noise at night.

Above 55 dB The situation is considered increasingly dangerous for public health. Adverse health effects occur frequently, a sizeable portion of the population is highly annoyed and the sleep disturbed. There is evidence that the risk of cardiovascular disease increases.

Table 2 from Theriault 2009 for Invenergy; Summary of ambient noise levels in the Ledge Wind project assessment

Location Description 0600-0800 1200-1400 1800-2000 2200-2400

1 Blake Rd 26 26 24 19

2 Cooperstown 31 33 34 29
3 Mill Road 34 36 34 27
4 Dickenson Road 29 37 34 31
5 Morrison Road 29 34 29 28
6 Park Road 31 31 28 20
7 Refuge Road 35 36 56 27
8 Mill/Blake Road 31 32 28 23

According to subsequent predictions, the rise in ambient noise will be 15-24 dBA based on 1000 ft setbacks. This exceeds the WHO guidelines for absolute noise levels and relative rise in noise in noise levels. The solution to keep the noise levels within acceptable range is to increase the setback.

This Invenergy map supports the setbacks recommended in the chart and my opinions above. The goal is to have noise that disturbs sleep and impacts health eliminated. As you can see, all areas shaded red exceed 40 dBA. And all areas shaded Orange will exceed 35dBA. To be outside of the 40 dBA ring, one must live 2500 feet from the nearest turbine. To be outside of the 35 dBA ring one must live over one mile from the nearest turbine. This agrees with the summary in the Hanning paper.

In the chart below consider all of the homes in the areas of 45 to >50 dBA. Then consider the WHO statement on noise from 40-55 dBA "Adverse health effects are observed among an exposed population. Many people have to adapt their lives to cope with the noise at night."

Also consider the schools and businesses located in this area. Clearly the solution to this problem is in PROPER, SAFE siting. That siting guideline should include a minimum distance of ½ to 1 mile based on independent research and data from the wind industry.

"There is no medical doubt that audible noise such as emitted by modern upwind industrial wind turbines sited close to human residences causes significant adverse health effects. These effects are mediated through sleep disturbance, physiological stress and psychological distress. This is settled medical science."

An Analysis of the American/Canadian Wind Energy Association sponsored "Wind Turbine Sound and Health Effects An Expert Panel Review, December 2009." Peer reviewed and published January 2010.

Summary and Conclusion

Sleep is basic and important to human health. When sleep is disturbed, health suffers.

Noise disturbs sleep.

Above 30dB sensitive individuals complain.

At 30-40dB measurable objective sleep disturbances are seen.

At 40-55dB adverse health effects are seen.

Above 55dB is dangerous to public health.

Experience has shown industrial wind turbines cause noise that exceeds 40 dB when in close proximity.

Noise deteriorates over distance.

Allowing for proper distance will mitigate the noise levels both experienced and predicted by independent research and the wind industry.

The safest minimum distance to protect the health and safety is to allow for less than 40dB which correlates to 0.5 miles or 2640 feet.

The optimal distance in a rural setting would allow for no more than a 10dB increase in ambient noise which would correlate to just over one mile.

As a physician and resident of Wisconsin in an area targeted for large industrial wind turbines, I ask the committee to make the best recommendation for the people living in Wisconsin and take steps to be conservative by placing a setback of one mile from where people live, work, and attend school.

This is the best choice based on the current data to ensure the safety of those living within a development.

Or will the council compromise the standards knowing that at 2640 feet sleep complaints will develop? What percentage of residents is an acceptable compromise when action now by proper siting will prevent these problems?

Respectfully, Herbert S. Coussons, MD

I affirm that these comments are true and correct to the best of my knowledge and belief.
Herb Coussos, MD

NOTES FROM INTERVIEW
Harvey and Rita Freund
June 27th, 2009

Harvey and Rita Freund live in the north-central section of the Blue Sky/Green Field 88 turbine wind project, surrounded by turbines on all sides. The closest turbines appear to be approximately 1500 feet away, with at about 11 turbines which appear to be within a 2640 foot range of their home.

They've lived in their farmhouse since 1962, raising six kids. They are grand parents and great grand parents and their home is full of family photos.

They welcomed us with that Wisconsin mix of hospitality, friendliness and earthy humor that is one of my favorite things about people in this state. On the afternoon we spoke they were just a few weeks away from their 59th wedding anniversary.

Harvey greeted us from out in front of the house where he was greasing some machinery on a boat. He's 79 years old, has bright blue eyes, and an easy, open smile. He tells us he's hard of hearing so the turbine noise doesn't bother him as much as it bothers his wife. But he is bothered by the disappearance of wildlife from the area since the turbines went on line.

Harvey says, "We used to have so many ducks and geese around. They'd come over there to the pond to mate, and nest." Harvey says now the ducks are few and the geese seem to have abandoned their nests. There are fewer birds now than he's seen in the last 35 years.

"And we always had bats. Lots of bats." He says they're gone too. "These last two nights I've only seen but one."

He invites us inside to meet Rita.

Rita Freund is 77 years old. She has congestive heart failure and sits in a recliner with a walker near by. Her heart may not be in the best shape but her sense of humor is in top condition. She says, "When Harvey and me got married I told him, I'll cook for the first fifty years, then you cook for the next fifty years, and then the next fifty years we'll negotiate."

She's wearing a blue dress, which sets off alert blue eyes behind glasses. Her legs and ankles are swollen with the edema that typifies congestive heart failure, and her feet are resting on a towel. She has extreme difficulty getting around and is confined to an electronically adjustable recliner most of the day.

She spoke about severe shadow flicker from the turbines. "The first time it came in through the bathroom so bright and flashing I didn't know what it was. I was hollering for Harvey because I thought the house was on fire."

She says the flicker hits their house in the morning. It makes her feel sick and dizzy and she can't shut it out. When asked what she does about it she says she keeps a blanket near by. "I just cover up my head until it's over."

When asked how long the flicker lasts she says, "It lasts for quite a while. When the sun is out we get it every morning. Drives me crazy. They need to shut that turbine down."

She says the flicker is terrible but her biggest complaint is the buzzing sound in her ears, which began soon after the turbines, went on line.

"It started off sounding like a Slinky going down the stairs, you know? Then it turned into a buzzing with a beat. And now my head just buzzes all the time."

She has a history of stroke, and when she mentioned the buzzing to her doctor and he recommended she get an MRI. She did and it showed no problems.

The buzzing continued. "It has three different sounds. One has a beat, like a drum, you know? Then that slinky. Then that buzzing. It depends on the direction of the wind. I can be sitting here watching TV and inside my head it's just buzzing away."

She says a long-time neighbor from across the road also suffers from buzzing in her ears since the turbines went on line. One day they were visiting and talking about the turbine noise and shadow flicker and her neighbor says, "And that buzzing in my ears drives me up a wall."

"I said, 'me too'. That's how we found out it wasn't just me, we both had it."

Her neighbor has recently decided to move to the nearby town of Chilton because of the turbine troubles.

When asked if Harvey and Rita have complained to the wind company about the noise and shadow-flicker, Harvey shakes his head. He says he learned back when the mega-farms came in that complaining is useless.

"It don't do no good." He says, "I'm 79 years old. I have five maybe six years left. I ain't going to spend it fighting the wind company."

Public Service Commission of Wisconsin (PSC)

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COMMENTS FILED ELECTRONICALLY IN

Wind Siting Rules

1-AC-231

Commentor Information:

Name: Sandy Vercauteren
Address:
City:

Comment:

April 24, 2010

To Whom It May Concern,

RE: This is a formal complaint.

I have lived in the Fond du Lac/Dodge County Invenergy wind farm for 2 years so I feel I can list my complaints with fairness and rationality.

I have a turbine 1100 feet to the east from my back door and one 1500 feet to the south behind my bedroom. I experience noise in my house every day these things are turning. The worst at night! The one 1100 feet can often be heard in my living room with the TV on. The one behind my home (bedroom) is most disturbing as there is noise in my bedroom, windows open or not. The turbine on the east flickers throughout my house during the mornings in February and March. As my picture window faces east, one cannot stand being in the living area during these mornings.

I am also very aware especially at night of a low frequency "hum" in my house, not outside, but in my buildings. Trying to read, pray, fall asleep in my bedroom sometimes gets me to almost scream "someone help me stop this!" Could the substation about ½ mile from my home have anything to do with this noise? No one has an answer yet after having WE Energies at my home twice and yes I have seen a doctor (no it's not me). I'm assuming the "hum" is a vibration as my valences work their way out of the brackets and have been on the floor many times. Now every Saturday AM I check them and push them back into place. This "hum" is the worse and I am wondering what you would suggest to solve the problem.

Also I have noticed since the turbines have been "up and running" I have not seen a bat or a deer which I did before in my area.

In summary, I am appalled how others' actions are allowed to negatively impact one's home, health and life without any help solving the problems. As a health care professional, I am appalled at the health consequences many of my neighbors and I are experiencing even to needing mediations?! I am also appalled to find out about the decrease in the value/salability of our properties. Even real estate companies unwilling to list our homes. This speaks to me how unethical the wind turbine business is.

Please file as documentation of the negative impact of the wind farm on my life and home.

Sandy Vercauteren

I affirm that these comments are true and correct to the best of my knowledge and belief.

Sandy Vercauteren

Interview with Ann and Jason Wirtz
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”

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. "