

McCann Appraisal, LLC

June 8, 2010

Mike McLaughlin, Chairman
Adams County Board
Adams County Courthouse
507 Vermont St
Quincy, IL 62301

Re: Wind Turbine setbacks

Dear Chairman McLaughlin
and Members of the Adams County Board:

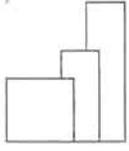
On behalf of my clients and as a real estate valuation advisor to the elected officials of Adams County, I am hereby submitting my written testimony as a professional real estate appraiser. Having been sworn in prior to expert testimony numerous times, I am quite familiar with the serious nature of giving my oath, and you may consider this written document to be a sworn affidavit. My opinions are also certified pursuant to Illinois Appraiser Licensing law and requirements.

I understand the County is considering a 1,000 foot residential setback requirement for wind turbines, and I have read that certain committee members are contemplating a recommendation increasing that to a 1,500 foot minimum. My testimony will address the adequacy of such setbacks, based upon a synopsis of widely known, reported and/or studied effects of living in close proximity to utility scale wind turbine projects. My testimony also includes results of my own independent study of property value impacts, and my professional opinions, recommendations and supporting illustrative comment are included along with supporting data I and other appraisers and researchers have developed as well.

Finally, I have projected the likely or probable impact to residential property values in Adams County, on the basis of what independent market research indicates. When considering an ordinance for setbacks from residential lots, as well as schools and other occupied dwellings or non-industrial land uses, I believe that my specialized expertise and experience as an appraiser familiar with wind farm issues is a relevant consideration for the policy-makers in Adams County.

Introduction

First and foremost, I understand very well that consideration of industrial scale wind energy projects is a unique situation for virtually every jurisdiction considering applications or requests from developers to build and operate such projects. They are intensive, large-scale projects with a decidedly industrial character, and most projects in



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Illinois are proposed to “overlay” existing mixed-use residential and agricultural areas. This type of overlay is also sought in Adams County.

This is significant in the evaluation of land use compatibility or typical zoning standard compliance, since it is virtually impossible to introduce such a large scale project among existing low intensity residential uses without dramatically changing the character of the neighborhoods that will be encompassed by the turbine’s land use overlay.

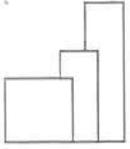
These large scale projects affect thousands of acres, and are far different than “typical” zoning variation or land use approval requests, such as a drive-through lane at a restaurant or bank, or a request to construct a gas station with a car wash. When the prudence of reviewing requests for smaller-scale, single uses is required to insure the new development does not adversely affect neighboring people or land uses, the immense scale and intensity of wind energy project development and operations demands even greater scrutiny and expert evaluation, which is often not financially feasible for smaller, rural counties.

My written testimony incorporates substantial experience with wind energy projects gained over the last 5 years, and 29 years experience as an appraiser. I have been qualified and testified in hundreds of contested and litigated land use matters, in zoning hearings, state and federal courts, and other public forums. I have been formally engaged to evaluate potential real estate impacts for 8 wind energy projects in Illinois, and have consulted with concerned citizens on a pro bono basis for several other projects throughout the United States. My qualifications and experience in this and numerous other impact studies, zoning compliance evaluations and property value damage claims is summarized within my professional biography included herein.

The **Appraisal Institute** has developed methodology and techniques for evaluating the effects of environmental contamination on the value of real property. The three potential effects that contamination can have on real property: cost effects, use effects, and risk (stigma) effects. All three effects are recognized as being present with utility-scale wind energy projects, as summarized in my written testimony.

Cost effects can include neighboring owner costs to attempt to mitigate against sound intrusion, shadow flicker, medical costs to deal with sleep deprivation related conditions, as well as, in some instances, the cost to rent substitute housing and potential legal costs incurred to protect individual owner’s property rights, etc. For Agricultural property, there can be increased costs due to the loss of ability to retain aerial spraying services, which can result in increased cost for ground spraying methods and/or decreased crop yields.

Use effects include the loss of peaceful use and enjoyment of their homesteads for many turbine neighbors, and there is evidence that livestock has been adversely impacted by the noise from turbines, ranging from death (*goats in Taiwan*) to reproductive disorders (*See Wirtz case in Wisconsin*) and behavioral changes and



irritability of horses and cattle. These may also represent cost effects, in some cases, or other forms of financial impact.

Stigma effects can range from loss of aesthetics, diminished views and character of neighborhoods, to fear of health issues and noise disturbance, etc. This effect is often manifest in the lack of marketability of homes in the “footprint” and nearby properties most impacted by active turbines, and to varying degrees the known and unknown cost and use effects are also contributing factors to stigma effects.

My opinions are also based on use of the recognized and generally accepted methods for valuing contaminated properties – paired sales analysis (*i.e. Appendix C*), environmental case studies analysis (*i.e. Appendices B, D, E and F*) and multiple-regression analysis. (*i.e. Appendix D*). I have also reviewed studies conducted by other appraisers, which yield similar indications of property value impacts.

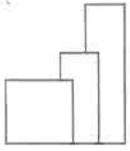
In the Adams County matter, my evaluation of the proposed wind turbine setbacks is conducted from a real estate valuation perspective with a land use impact focus, since every land use has some impact upon neighboring land uses and residents. The impact can be substantially positive, negative, or so minimal as to be immeasurable in terms of property values. As I understand it, governmental policies and land use decisions are intended to prevent “significant” negative impacts on property values and the peaceful use and enjoyment of existing property by area residents.

Further, I believe the majority of my written testimony, and supporting basis thereof, is applicable to other locations characterized by residential uses interspersed with historically compatible agricultural land uses.

In order to be perfectly clear, I must also state that I have developed no professional opinion or conclusions as to the validity of the need for, or effectiveness of, industrial-scale wind energy projects for their intended purpose: the creation of renewable energy. While my research has disclosed considerable controversy on these topics as well, I leave those conclusions, opinions and corporate or governmental decisions to experts on electric utility issues and those technical aspects of these projects.

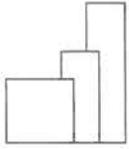
Thus, as a professional appraiser, I focus on the concept and reality of property value impacts. In order to understand the basis for any potential impacts, I have researched, collected, reviewed, studied and considered the same type of information available to anyone with an internet connected computer, which comprises the majority of the home-buying public in modern countries like the United States. I have also researched property values and value-related trends in larger wind energy project locations, to investigate whether industry claims are true or whether the neighboring citizens of such projects have valid claims regarding property value impacts.

Briefly stated, there is much to be concerned about as officials in Adams County whom are responsible for protecting the public health, safety and welfare, as well as the use and enjoyment of property and its underlying value.



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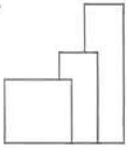
As the balance of my written testimony and the supporting documentation indicates, I have developed a summary of professional expert opinions and wind energy project impact mitigation recommendations, which includes nine (9) primary opinions and ten (10) recommendations, as follows:



SUMMARY OF OPINIONS & RECOMMENDATIONS

Opinions

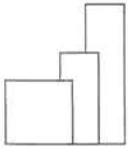
1. Residential property values are adversely and measurably impacted by close proximity of industrial-scale wind energy turbine projects to the residential properties, with value losses measured up to 2-miles from the nearest turbine(s), in some instances.
2. Impacts are most pronounced within “footprint” of such projects, and many ground-zero homes have been completely unmarketable, thus depriving many homeowners of reasonable market-based liquidity or pre-existing home equity.
3. Noise and sleep disturbance issues are mostly affecting people within 2-miles of the nearest turbines and 1-mile distances are commonplace, with many variables and fluctuating range of results occurring on a household by household basis.
4. Real estate sale data typically reveals a range of 25% to approximately 40% of value loss, with some instances of total loss as measured by abandonment and demolition of homes, some bought out by wind energy developers and others exhibiting nearly complete loss of marketability.
5. Serious impact to the “use & enjoyment” of many homes is an on-going occurrence, and many people are on record as confirming they have rented other dwellings, either individual families or as a homeowner group-funded mitigation response for use on nights when noise levels are increased well above ambient background noise and render their existing homes untenable.
6. Reports often cited by industry in support of claims that there is no property value, noise or health impacts are often mischaracterized, misquoted and/or are unreliable. The two most recent reports touted by wind developers and completed in December 2009 contain executive summaries that are so thoroughly cross-contingent that they are better described as “disclaimers” of the studies rather than solid, scientifically supported conclusions. Both reports ignore or fail to study very relevant and observable issues and trends.
7. If Adams County approves a setback of 1,000 feet, 1,500 feet, or any distance less than 2-miles, these types of property use and property value impacts are likely to occur to the detriment of Adams County residences and citizens for which the nearest turbines are proposed to be located.
8. The approval of wind energy projects within close proximity to occupied homes is tantamount to an inverse condemnation, or regulatory taking of private property rights, as the noise and impacts are in some respects a physical invasion, an



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easement in gross over neighboring properties, and the direct impacts reduce property values and the rights of nearby neighbors.

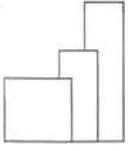
9. A market value reduction of **\$6.5 million** is projected for the residential property located in the footprint and within 2-miles of the pending Prairie Mills project located in east Adams County.



Recommendations

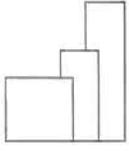
Therefore, if the County Board should choose to adopt the industry requested minimal setbacks, or some other setback of less than 2-miles from residential uses or occupied dwellings or structures such as schools, churches and nursing homes, I have developed a series of recommendations that would at least partially mitigate the widely experienced impacts prevalent with industrial scale wind turbines developments, as follows:

1. A Property Value Guarantee (PVG) should be required of the developer(s), significantly similar to the PVG attached hereto as **Appendix A**. A County-controlled fund or developer bond should be required to guarantee no undue delay in PVG payment(s) to legitimately affected homeowners, and/or to buy out homeowners located within 2-miles of any turbines if they elect to relocate away from the turbine project(s) and cannot sell for the pre-project market value of their properties. Such a guarantee is nominal in cost, relative to total project costs, and are used to condition high impact land use approvals such as landfills and even limestone quarries, as well as other wind energy developments (*i.e. DeKalb County, Illinois, etc.*)
2. An alternative to the bonding element of Recommendation # 1 would be to require that the developer(s) obtain a specialized insurance policy from a high-risk insurance carrier or legitimate insurer, such as Lloyds of London, if they will even insure against such impacts. If Lloyds was unwilling to provide such insurance, however, that should be compelling to the County that professional risk-management actuaries find such projects too risky for even them to insure. Under those possible circumstances the burden of risk is fairly placed with the developer, rather than the residential occupants who are being surrounded or otherwise directly impacted by close proximity of the projects.
3. If Adams County decides to permit projects, the limited evidence of impacts beyond a 2-mile setback would mitigate against the need for a PVG as cited in recommendation # 1.
4. If Adams County decides to permit projects, I recommend that the County require developer funding and a plan to constantly monitor not only sound levels in decibels, but also in low frequency noise emissions from the turbines utilizing the best available technology, or at least homeowner reports and logs. There is significant evidence and personal accounts confirming that low frequency sound/noise is "felt" by nearby occupants, and, as I understand it, cannot be measured by decibels as audible noise is typically measured. Disclosure of the owner's actual experience to prospective buyers is necessary from both an ethical perspective and, I believe potentially under the Illinois Real Property Disclosure Act, as a "known" defect or detrimental condition. Thus,



documentation should be created at the cost of the developer(s), to insure that appropriate disclosures can be made to any prospective buyer(s) of homes within the 2-mile zone.

5. Appropriate devices should be installed at the developers expense at all occupied dwellings and property lines within a 2-mile distance of any turbines, and the County should retain the ability to immediately enforce the shut-down of any turbines exceeding a level of 10 decibels or more above ambient background noise levels from any property/home experiencing that exceeded noise level. The proximity of constant or frequent noise sources is an adverse impact to the use and enjoyment of a residential property, and indicates a basis for loss of property value.
6. An alternative to recommendation # 5 would be to place a limit on hours of operation, requiring turbines within 2 miles of any occupied (non-participating) dwelling be shut off during normal sleeping hours (*i.e. 10 p.m. to 7 a.m.*).
7. If the County finds that the wind energy projects are desirable from a economic development goal or perspective, or for the "public good", I recommend that "footprint" and 2-mile distant neighboring homeowners (measured to lot line from the furthest span of turbine blades) be afforded the opportunity to sell to either the developer or the County, with possible use of eminent domain powers employed by the County, on behalf of and at the expense of the developer(s).
8. The financial assurance for decommissioning and reclamation of wind turbine pad sites, *i.e.*, a bonding requirement, is also recommended as a County condition. To demonstrate solvency companies should pay the bond requirements before starting construction. It's basically insurance in case the company goes bankrupt or otherwise abandons the wind project without taking down the turbines and reclaiming the land. Coal mines, quarries, landfills and drilling companies have similar bond or financial assurance requirements.
9. An aesthetic landscaping requirement for wind project developers to plant mature trees or groves to shield the view between residential properties and turbines. Evergreens planted along property lines and/or other types of trees strategically planted between residential windows and turbines would partially alleviate aesthetic impacts from turbines.
10. The County should consider a moratorium on wind energy project development(s) in Adams County, until such time as:
 - A thorough and complete Wind Energy Ordinance is developed and adopted by the County, which incorporates all the protection and authority of zoning, building and health codes.

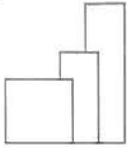


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- Appropriate Conditional or Special Use standards are developed and adopted, to insure wind developers carry the burden of their for-profit projects rather than the hosting jurisdiction(s) and/or neighboring property owners.
- The actual experiences of numerous existing turbine neighbors is documented thoroughly by an impartial group of professionals with appropriate qualifications in the various relevant fields of expertise, i.e., acoustic engineers, medical sciences, valuation professionals, etc.

The preceding recommendations are not intended to be all inclusive or to address all wind energy project issues and impacts. They are intended to address issues that affect the public health, safety and welfare of area residents, as well as their property values.

The following pages summarize portions of underlying support for the preceding opinions and recommendations.



General Impact Issues & Comment

Several issues are relevant considerations to property value impacts. As the real estate market becomes more aware of complaints and problems attendant to living near turbines, a stigma is becoming common. Stigma issues are inextricably intertwined with property value trends, and the general public has varying but increasing levels of awareness of underlying issues and conflicts with wind energy projects.

The most measurable impact on home values is the distances from the industrial-scale turbines. The categories of impact that my research discloses as most typically related to distance include:

- Noise and “vibro-acoustic” effect.
- Aesthetics & compatibility.

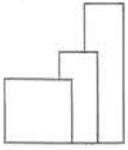
Wildlife impacts, i.e., bird & bat kills, road damage, tax & fiscal impacts are also issues attendant to wind farms, but have little or no identifiable correlation to property value impacts, and are only mentioned in passing.

The following comments, excerpts and attachments attempt to summarize a representative sample of these issues, industry claims, market reactions and responses by McCann Appraisal, LLC.

First, as a part time Florida resident and homeowner, I am quite concerned about the ultimate impacts of the ongoing and catastrophic oil spill in the Gulf of Mexico. I mention this man-made disaster because I note certain parallels between the goals, claims and realities between the Gulf situation and the wind energy development trend.

One might argue that man-made disasters like the Gulf oil spill are part of the justification for pushing full steam ahead on wind energy projects, yet the parallels remain between off-shore oil drilling and wind turbine projects:

- Both project types seek to provide independent energy needs for the United States.
- Both are extremely large scale types of projects, notwithstanding the invisible & noiseless infrastructure of oil rigs to most citizens, i.e., no neighbors at sea.
- Both industries have gone on record with claims that their projects are “safe”, will have very minimal impact on the environment, and include many “trust us” type statements, messages and public relations campaigns.
- Both have considerable evidence accumulated of “anecdotal”, but nevertheless serious negative impacts that are long-term and affect a relatively small percentage of the population.
- Both have historically had influence on political and legislative decision makers.
- Questionable “science” is cited and utilized by the energy industry to support their PR claims and approval requests, with respect to property values and health



issues emanating from noise, and primarily the sleep interruptions. As an example, Exxon was able to obtain a written opinion that the Valdez spill did not damage coastal property values, despite the nearly complete destruction of the local fishing-based economy and the extensive environmental degradation from the oil spill.

- With accidents like the Valdez spill and now the BP Gulf catastrophe, and against the growing anecdotal list of impacts from industrial-scale wind turbine projects, it is justifiable to enforce the assurances and responsibilities of the energy industry, overall, and to place the cost of mitigating their impacts on the corporations who develop, own and operate the energy projects.

Further, when the term “**Green Energy**” is used, I perceive an implicit claim by the wind energy industry and even governmental policy goals that creation of such energy is (*intended to be*) of low or no impact on the environment. I consider impacts on people and their property values to be included in the term “environment”.

There is however a considerable body of evidence that clearly shows there are in fact many circumstances where this intention does not match the reality, and is affecting many people, livestock, lifestyles, sleep and health issues, and the related underlying property values of wind turbine neighbors.

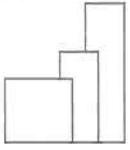
The Adams County consideration of a setback requirement is tantamount to a “zoning” ordinance, as it affects land use and compatibility with existing and neighboring land uses.

Zoning is defined in similar ways as:

- Dividing an area into zones or sections reserved for different purposes such as residence and business and manufacturing, etc.
- Legislative action for the purpose of regulating the use of property and the construction of buildings, facilities or structures within the area under the jurisdiction of the legislative body concerned.
- An exercise of police power by a municipality to regulate and control the character and use of property.
- Governmental authority over land use, intended to protect the public health, safety and welfare, while creating or preserving compatibility between land uses.

Most Zoning Ordinances require as a condition for approval of a special use, such as a wind energy generating project, that the “**proposed use will not be injurious to the value of neighboring property**” and/or “**will not prevent the use and enjoyment of neighboring property for uses to which it is already used or zoned**”.

Despite the consistently reported effects on neighboring people, a typical developer’s answer to this is: **There is no “scientific” evidence of health issues.**



My response to that is there has been no legitimate study by the wind industry to determine what, if any health effects are linked to proximity to turbines.

To my knowledge there are no scientific studies that prove bricks falling from a high rise scaffold will cause injury or worse to people walking below, but there is enough "anecdotal" evidence over time to warrant building codes and ordinances that require effective barriers to **protect the public health, safety & welfare** (*which is exactly what zoning and other ordinances are supposed to accomplish*)

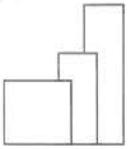
According to the website for Adams County, the Division of Health Protection's Environmental Health Section responsibilities include:

- reduction of food borne illnesses through restaurant and food stand inspection
- assurance of safe drinking water through private and non-community water well system permitting and inspection
- regulation of proper wastewater disposal through on-site wastewater system permitting and inspection
- permitting and annual inspection of tanning parlors
- investigation of nuisance complaints relating to the above-mentioned areas of responsibility as well as rodents and trash
- annual surveillance of mosquitoes and birds for the presence of West Nile Virus

From a land use policy perspective, which is directly related to the use and impact on homes from turbines, I anticipate the County may need to increase staff to deal with nuisance complaints from turbines located closer to homes than cited in recommendations #3, #4, #5 & #6.

To my knowledge, there are no scientific studies that prove there are **no** ill health effects either. The recent (December 2009) AWEA/CWEA report is merely a literature review that reads more like a "disclaimer", in its conclusions regarding review of other studies, and claims there is no scientific proof of adverse health effects. In fact, research has disclosed one of the Doctor/authors of that industry funded report has directly contradicted his prior sworn testimony regarding low frequency sound impacts so, to my mind, the report is wholly unreliable.

I may add that If citizens parked a vehicle in front of County Board member or developers homes with an audible or physically perceptible "thump-thump" low frequency beat emitted all night, with an occasional gear screeching or jet engine noise for good measure, there is little doubt that the local law enforcement department would be called with a disturbing the peace complaint. This complaint would also no doubt be enforceable, even if the vehicle was not actually parked on the complainant's property.



While the preceding remarks are perhaps as glib as industry claims that there are no adverse health, noise or property value effects, it is still an appropriate use of police powers of government bodies to **prevent** such disturbances.

But after the fact of a setback or other ordinance is approved, the noise generator has the authority of an ordinance approving the use to stand behind, and the local residents must either endure the disturbances, relocate or incur thousands of dollars in legal expenses just to be heard in a forum where the complaint is given new consideration, namely, in Court. This growing trend is costly for all involved, and can include the governmental body, participating land owners/lessors, as well as the developers and the innocent by-stander homeowners.

The alternative and, sadly, growing trend is for people to give up trying to deal with the problems of large turbines being developed in their midst, and abandon their homes (*See Wirtz family case in Wisconsin, etc*).

As a real estate appraiser with 25 years experience in evaluating zoning matters, I am unaware of any other land use in the 20 States in which I have worked that is permitted to cause such a nuisance that a property owner's rights are completely disregarded and protection of their property values marginalized to the point of meaningless and non-existent protection, via inadequate separation of incompatible uses based on industry-preferred setbacks.

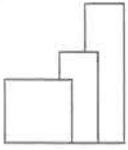
I also suggest that when the governmental goal is economic development and tax revenue as the foundation for approval of these large-scale projects, they would be well advised to build in to their equation not only the cost of attorney fees to protect governmental decisions, but also the lost tax revenue from abandoned houses, potentially higher medical costs and injury claims from neighbors, road damage, and other ancillary costs that developers do not advertise, much less typically admit.

See the Canadian Hydro case for a group of neighboring homes bought out by the developer to eliminate certain vocal noise/health complaints, and note that those are not the first or last homes demolished as a direct impact of a wind energy project. Much can be read on the internet, and a summary of buy-outs is attached in **Appendix B**.

Adams County Background

Per Wikipedia, as of the census of 2000, there were **68,277 people** (66,234 residents projected for 2010), 26,860 households, and **17,996 families** residing in the county. The population density was **80 people per square mile** (31/km²). There were 29,386 housing units at an **average density of 34 per square mile**.

The median income for a household in the county was \$34,784, and the median income for a family was \$44,133 (Median Household Income projected for 2010 was \$42,880). The per capita income for the county was \$17,894. About 7.40% of families and 10.00% of the population were below the poverty line including 12.00% of those under age 18



and 8.90% of those aged 65 or over. 78% of county households earn less than \$75,000 per year, leaving limited relocation options available to the majority of people in the Adams County.

Median Home Value for 2000 was \$73,090 rising in 2005 to \$106,059 and by 2010 had reached \$132,445.

Property Value Impacts

Several physical factors, perceptions, stigma issues and concerns are reflected in the market trends used to measure property value impacts. The market trends include increased marketing time, decreased marketability and lower values for homes in relatively close proximity to new wind turbine projects. The negative factors typically include:

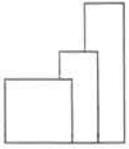
1. Audible sound and low frequency sound.
2. Health concerns and widely reported adverse affects at numerous project locations.
3. Sleep deprivation, which is sometimes also linked to health affects.
4. Aesthetic impacts due to introduction of large industrial-scale turbines into the immediate neighborhood, and which affects perceptions of compatibility and views from residential property.

The Appraiser has not attempted to isolate the level of value reduction related to each separate stigma issue, but has considered the sale price data to incorporate market awareness of these potential factors as a whole. Although the impacts vary from property to property, individual tolerances vary, and the distances between sale data and turbines also vary, adequate data exists to indicate that close proximity to turbines has a measureable and significant negative impact on residential property values.

I refer to **Appendix E** for a small sample of relevant sound and health concern research articles and reports, to assist the reader of this testimony in understanding the type of information still being developed regarding wind turbine noise. This sample is by no means complete or exhaustive as to the number of articles available to the general public on the internet, but it accurately reflects the trends and reported circumstances encountered by wind project neighbors.

Health concerns and impacts documented by Dr. Nina Piepont, the World Health Organization, and medical professionals from the United States, France, Canada, etc., link health impacts to noise issues primarily, and while not commonplace, there are reports of noise being heard or "felt" as far as 2-miles from the nearest turbine to residences.

Aesthetic impacts or amenity factors, while more subjective and personal, have a well established relationship to property values. An attempted objective measurement of



amenities represented by property sale data with vistas ranging from premium to poor is contained in **Appendix D, Figure ES-2**. This data was derived from the 2009 United States Department Of Energy (DOE) funded study, prepared by researchers affiliated with an acknowledged advocate of wind energy development, thus, it is not subject to being categorized as an “objector’s study”. Nevertheless, it is demonstrative that poor vistas (views) typically yield property sale prices **21% lower than homes with an average vista**, and approximately **34% lower than homes with a premium vista**.

Similarly, Figure **ES-4 in Appendix D** indicates measureable declines in property values over time, with reductions beginning after announcement of wind energy projects within a mile of home sales, and even steeper declines after the turbines have been operational for several years.

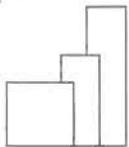
Finally, and despite the executive summary conclusions of the DOE funded study excerpted in **Appendix D, Figure ES-1** clearly shows a **5.3% to 5.5%** lower property value for homes within 1-mile of turbines, and a measured decline out to a 2 mile distance, as compared to the base-line home sales located more than 5-miles from turbines.

It is noted that this study analysis used regression analyses developed by the authors, and which has been subject to professional peer review criticism for the application of regression techniques and arguably incomplete or improper variables. Thus, this study may tend to minimize the actual impacts, as the carefully crafted language in the report’s executive summary appears to indicate is the case.

What is clear is that there is a simple correlation or appropriate comparison between the data represented by Extreme Views of turbines and the Poor Vista views, as shown in the photograph appendices (D & E) within **Appendix D**, and the Poor Vista data shows a **21% lower than average value** for homes.

Appendix C contains data derived from Lee County Illinois Assessor records, and has in fact been used by an appraiser in Illinois for several different wind project developer zoning applications in Illinois and Wisconsin. After performing statistical analysis of select data with certain data excluded from the analysis, the appraiser was able to conclude that there was no measurable and statistically significant difference between home sales in zones within 2 miles and more than 2 miles from the nearest turbines of the Mendota Hills project.

However, there was also a 10% deviation from the mean, which indicates the conclusions are only valid beyond that deviation. In my opinion, discounting effects that lie within a 10% deviation is not indicative of appropriate consideration of value losses, as a 10% loss of home value is a significant loss to most people in the marketplace, and goes well beyond typical price reductions of negotiated sales. Regardless, both the near and far data is presumably reflective of typical negotiations, yet only the pattern from the nearby property sales shows even further declines in average sale prices.



I have analyzed the same data, as shown in **Appendix C**, on the basis most similar to how the market views residential property. On its face, the data reflects a **25% lower average** sale price per square foot for homes located within 2-miles of turbines, as compared to homes outside the 2 mile zone.

My findings are consistent with other non-industry retained appraisal studies of property values near wind turbine projects, and I submit copies of those studies as supplemental documentation to this written testimony.

Appendix F contains a partial list of wind turbine neighbor complaints which are mostly unresolved. However, when combined with the sample of developer buyouts caused by noise/health effects shown in Appendix B as well as other reports of home abandonment, rental of replacement housing by neighbors, and the non-anecdotal data contained in Appendices C and D, there exists adequate data to indicate market support for Recommendation 1 (Appendix A) to Adams County.

Property Value Impact Projection – Adams County

The pending Prairie Mills (PM) project located in east Adams County has been disclosed to the degree that a number of turbine leases are known to exist in certain sections of Clayton, Concord, Columbus and Camp Point Townships.

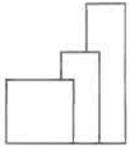
Via review of reported turbine lease location information and comparison with Farm Plat Maps for the preceding Townships, it has been estimated that approximately 143 homes are located within the “footprint” of the project, and Forty seven (47) Sections are identified as locations for at least one (1) turbine in each Section, which represents a 47 square mile or 30,000+ acre “footprint” for the PM project. This indicates an existing residential development density of just over 3 homes per square mile. Based on an additional 47 sections for each surrounding/abutting square mile, the 2 mile impact zone is estimated to contain approximately 94 square miles with 282 homes.

(94 square miles X 3 homes per square mile = 282 homes)

According to Adams County demographic data researched, the median home value was \$132,445 for 2010; say \$130,000. Thus, aggregate residential home values in the probable impact area for the PM project, prior to development of the project, is estimated as follows:

Footprint homes:	143 X \$130,000 = \$18,590,000
2-mile zone:	282 X \$130,000 = <u>\$36,660,000</u>
Aggregate value:	\$55,250,000

Further review and disclosure of locations may increase the number of homes within the 2-mile zone, as it may incorporate higher density communities. I also recognize that the most severe impacts are realized by homes in the footprint, and those with the shortest



setbacks from turbines outside the footprint. Those at the furthest points or with more effective screening afforded by topographic and landscaping features are not as likely to experience the maximum value impact. As a conservative check on the impact projections, I will utilize the 25% loss factor for homes in the footprint, and only a 5% value diminution factor as an average in the 2-mile zone. On this basis, property value losses projected due to the PM project are calculated as follows:

Footprint homes:	$\$18,590,000 \times 25\% = \$4,647,500$
2-mile zone:	$\$36,660,000 \times 5\% = \underline{\$1,830,000}$
Aggregate value reduction:	$\$6,477,500$ or \$6.5 million

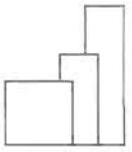
Thus, if each and every residential Property Owner within the footprint and the 2-mile zone elected to move and sold for the appraised value, and the developer in turn sold each home for the post-project reduced value, the developer would incur a cost or loss of about \$6.5 million. This is equal to the cost of 2 to 3 turbines, and is essentially a "contingency" category in their financial pro-forma, but clearly not a cost-prohibitive factor that warrants or requires abandonment of the project.

On balance, if the typical developer claims are true, then no homeowners will be disturbed to the degree that they will seek to move away from the project, and the value impact cost that is fairly absorbed by the project developer can be viewed as an unlikely worst-case scenario. However, if the market data supported basis for projecting value losses should materialize to the full extent of the projected estimate, then the developers gain should not be at the financial expense of existing homeowners and families.

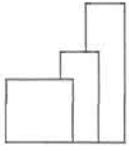
Further, at least one other wind energy project is proposed for Adams County, the Rock Creek project proposed for Ellington, Mendon South, Mendon North and Ursa Townships. Rumors of a third project have been discussed to some degree, but the Appraiser does not have adequate data to evaluate the level of impact probable in the latter two projects.

A somewhat meaningful projection of the impact of 2 or 3 projects, however, can be simply calculated by doubling or tripling the value losses projected for the Prairie Mills project, and refined at a later date on a pro-rata basis when the number of proposed turbines is known and the number of affected residential properties counted more accurately.

Further, based on the residential density of Adams County, overall, with an average density of 34 homes per square mile (also equal to 18.8 acres per home average), the number of homes in the footprint is estimated without projecting value losses into nearby towns or villages.



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Closing Comment

I trust that the preceding written testimony is useful to helping the Adams County Board in understanding better some of the issues that are commonplace with hosting wind energy project developments, and that complaints of neighbors are not just typical comment from people who don't want anything to ever change in their surroundings. There are real, tangible and discernible negative impacts and "stigma" associated with far too many wind projects to simply be an overly vocal minority.

When people react to the negative influences in ways that would normally seem extreme, such as filing lawsuits or selling their properties for steep discounts from what they should be worth on the open market, or give up on marketing attempts completely and end up abandoning homes, it is not a minor impact or "refrigerator noise" that triggers such market reactions. Those comparisons often made by wind energy representatives are disingenuous, based on virtually everything I have researched.

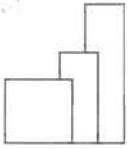
Market sale data analyzed not only by me, but also by proponents and highly paid consultants to the wind industry, can not hide the fact that these effects become measurably manifest in dollar terms, even if that is just one component of negative impacts.

To be sure, not every neighbor experiences the identical effects or has identical reactions, but the negative reactions are clearly widespread enough to warrant special measures, consideration and conditions to be placed on wind energy project developers, and use of setbacks that are well outside of industry preferences appears to be the single best way to avoid or minimize impacts.

I understand that my recommendation of a 2-mile setback exceeds most of the setbacks required by other communities, but then again it is not my goal to win favor with wind energy developers or to march in step with the typical community setback requirements. My setback recommendation also is fairly consistent with independent medical expert recommendations, which they have based on real-life experience in treating people suffering from closer proximity to turbines.

If it is Adams County's goal to avoid as much conflict as possible, the 2-mile setback, in my professional opinion, has the best chance of accomplishing this goal. However, if the County wants all the benefits promised by wind energy, developers will likely indicate that their projects are not feasible with that kind of requirement. I believe that my recommendations in the event of shorter setbacks are reasonable, economically justified and feasible, and will help to keep "whole" the residents who would be the real hosts to the turbines, by having them as neighbors day and night.

Wind developers are running against the clock to get the funding and tax benefits via expediting their projects as quickly as possible while it is still available, and it is reminiscent of the wild-west pioneering days of this country. Yet, we all know how that turned out for the natives of the land used for expanding the nation. It is my belief that



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orderly and controlled growth will be better in the long run for the economic health of host communities and their residents, and Adams County is in a position to guide this trend in such a manner by adopting reasonable low or no impact setbacks, and/or adopting the recommendations that will reduce social and financial impacts of utility scale wind energy projects proposed in Adams County.

My best wishes to the County in this difficult decision making process.

Respectfully submitted,

McCANN APPRAIISAL, LLC

A handwritten signature in cursive script that reads "Michael S. McCann".

Michael S. McCann, CRA
State Certified General Real Estate Appraiser
License No. 553.001252 (Expires 9/30/2009)



Wind Energy Production: Legal Issues and Related Liability Concerns for Landowners

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Updated June 20, 2011
- by Roger A. McEowen*

Overview

Farmers have long used the wind. Beginning in the 1800's, farmers in the United States installed several million windmills across the Midwest and Plains to pump water and (later) generate power for lights and radios. Those windmills fit nicely into the existing landscape and generally did not create problems for others. Today, however, the wind energy industry is using the wind in a different manner by virtue of large-scale aerogenerators¹ that have a tremendous impact on the visual landscape and the rural culture.² In some communities, wind energy development has raised issues between neighbors, between private landowners and wind energy development companies, and between local officials and development companies.³

Some farmers and other rural landowners have entered into long-term agreements with wind energy companies for the placement and operations of aerogenerators on their property. Generally, those agreements are drafted in favor of the wind energy company and require negotiation and modification of numerous provisions to make them fair from the landowner's perspective.

In this article we provide a historical background behind the current emphasis on wind-generated electricity, address taxpayer subsidies that support the wind energy industry and detail the legal issues surrounding wind energy production and landowner agreements.

Current Emphasis On Wind-Generated Electricity

In large part, the current push for wind-generated electricity (and other forms of "renewable" energy) is based in environmentalism.⁴ Concerns over the environment began to be raised in the U.S. during the 1960s and the 1970s. These concerns have had a profound impact on the political debate surrounding the belief by some in "global climate change."⁵ Proponents of wind energy claim that wind generated electricity reduces emissions of carbon dioxide, which they claim (contrary to a scientific study by the U.S. National Academy of Sciences) is a significant contributor to "global warming."⁶

Note: The National Research Council of the National Academies concluded in a 2007 study that even under the most optimistic conditions, the U.S. carbon dioxide savings by 2020 will be approximately 1.755 percent – a trivial amount. Specifically, the authors of the report estimated that by 2020, wind energy will offset approximately 4.5 percent of the carbon dioxide that would otherwise be emitted by other electricity sources. In 2005, electricity generation accounted for 39 percent of the nation's total CO₂ emissions. Thus, 4.5 percent of 39 percent is 1.755 percent.⁷

Coupled with (and substantially aided by) the politics of "renewable energy" was a wind industry push for the utilization of wind energy

refused to expand nuisance law to cover actions for aesthetical impact that causes emotional injury, determining that such an extension was beyond the purview of an intermediate appellate court.¹⁰¹

In a significant federal case from Northern Illinois, the plaintiff brought a federal case against 42 defendants involved in the development of a wind power station on land adjacent to the plaintiff's land.¹⁰² The case was based on twelve theories of recovery couched in state and federal constitutional law and on common law tort theories. The court upheld the lower court's determination that federal court was not the proper forum to resolve the plaintiff's claims. The court also affirmed the trial court's denial of the defendant's motion for a stay of administrative proceedings, and that the plaintiff was free to pursue its claims in state court.

Criminal Liability for Fraudulent Conduct

While most liability disputes relating to wind energy projects are handled in civil court according to contract or property law, criminal violations are possible. This is particularly the case because of the possibility for various tax credits tied to wind energy production. For example, in September 2007, the pioneer of Minnesota's wind energy development initiative was charged with participating in fraudulent conduct in the Federal District Court in Minnesota.¹⁰³ Allegedly, the wind developer overstated the amount of power being produced by wind generators in operation for 2003 and 2004, amounting to nearly \$388,000 in overcharges assessed to the energy purchasing company.¹⁰⁴ The amount of wind energy produced in the state of Minnesota significantly increased from 25 megawatts in 1994, to almost 900 megawatts in 2007, making Minnesota the fourth largest wind energy producer in the nation.¹⁰⁵ The wind developer, owner of a family-owned company with hundreds of community and private investors across southwestern Minnesota, vehemently denied the criminal charges, stating that the last thing he would want to do is defraud his purchasers.¹⁰⁶ However, a 2005 search warrant uncovered

evidence of the overstatement in billing. A contributing factor in the Federal charges was the additional billing of nearly \$176,000, in 2003 and 2004, to the Minnesota Commerce Department for state wind energy incentive payments.¹⁰⁷ In late 2008, the developer was sentenced to 21 months in federal prison.

Valuation Issues

A wind turbine impact study for Dodge and Fond Du Lac Counties in Wisconsin that was completed in 2009 showed that property sales within the influence area of an aerogenerator were at a lower value than those outside the area, and that sales within the area were more sluggish. The average drop in value was 30 percent.

Note: The study was sponsored by the Calumet County Citizens for Responsible Energy and was conducted by the private firm Appraisal Group One who was protected against influence from the sponsor by having complete independence to gather facts, data and other related material. Appraisal Group One had complete control over the appraisal process and reported their findings on an impartial basis.

The study notes that the main influences on value are view, peace and serenity and the rural environment in general. While those are negatively impacted by a wind power station, the study notes that prices tend to remain steady or rising for those properties receiving an income stream from the aerogenerator lease income.

The impact on value is particularly significant if the area, before development, has particular beauty or is a tourist area. Two studies conducted in Nantucket, Massachusetts, for example, determined that a wind power station with 130 aerogenerators would decrease tourism enough to cause the elimination of 2,500 tourism-related jobs. The same study found that local property values would decline enough to constitute a loss of \$8 million in annual tax revenue.

grant of a zoning permit to a developer to operate a wind power station.¹²² The Zoning Hearing Board has initially the developer's request, so the county commissioners amending the applicable zoning ordinance to allow the development of wind power stations in certain districts. The developer then filed an application for a zoning permit and the permit was granted. The plaintiff challenged the validity of the amendments on the basis that the amendments allowed a use that had previously been judicially determined in special exception proceedings to be detrimental to the health, safety, and welfare of the local community. The plaintiff also claimed that the use that the amendments allowed was unreasonable, arbitrary and capricious and contrary to state law. However, the court upheld the amendments and determined that the doctrine of collateral estoppels didn't apply because the developer's special exception request was not identical to the issues that the plaintiff presented in its challenge to the validity of the amendments.

In another late 2009 case from Pennsylvania, a property owners' association filed a land use appeal challenging a township's zoning hearing board's issuance of a zoning permit to a homeowner for construction of a 55-foot aerogenerator.¹²³ The court rejected the association's argument that public approval was necessary before the zoning permit could be approved because the ordinance's requirement of public comment and/or approval related to conditional uses or special exceptions. That wasn't involved in the case. Instead, the homeowner sought a permit for an accessory use, and the court held that the zoning board did not err in its determination that an aerogenerator was an accessory use. In this case, however, the aerogenerator was for private residential use, and the court reasoned that the use was similar to solar collector panels which were considered accessory uses. In addition, the proposed use was determined to satisfy applicable setback requirements.

In early 2010, the Supreme Judicial Court of Maine, upheld a state law that streamlined the permitting process and appeal process for wind power projects in certain areas of the state.¹²⁴

The law had been challenged constitutionally, but the court said the law was rationally related to a legitimate state interest - that of facilitating the rapid development of alternative, renewable energy sources.

In early 2011, the Pennsylvania Commonwealth Court was involved in a case where a township zoning hearing board revoked a wind power station developer's zoning permit to develop a wind power station upon the appeal of neighboring landowners within one-half mile of the power station.¹²⁵ The court held that the landowners had standing to appeal the initial granting of the zoning permit, and that the developer did not have a legally protected right in the zoning permit.

Community Issues

A New York case¹²⁶ illustrates the tension between landowners seeking additional revenue from wind turbines and adjacent property owners that place a high value on aesthetics. A town enacted a ban on the development of commercial wind farms. Supporters that voted for the ban included owners of second homes. However, the votes of the second-home owners was challenged by supporters of wind farm development on the basis that the owners were not residents of the town as defined by New York election law. The defendant agreed, but the court reinstated the voter registrations of the second-home owners - they had demonstrated significant and genuine contacts with the town such that their choice of the town as their residence for voting purposes should have been honored. Six of the eight second-home owners had homes in the town, but lived and worked in another city during the week. In addition, each second-home owner didn't vote anywhere else and listed the town as their residence on their driver's license.

On October 30, 2009, a unanimous Kansas Supreme Court upheld a Wabaunsee County ordinance banning commercial wind farms in the county.¹²⁷ The Court determined that the county had properly followed state statutory procedures in adopting the ordinance, and that the ordinance was reasonable based on the

county's consideration of aesthetics, ecology, flora and fauna of the Flint Hills. The county held numerous public hearings on the issue with the overwhelming majority of the public expressing lack of support for commercial wind farm development in the county. The Court cited the numerous adverse effects of commercial wind farms including damage to the local ecology and the prairie chicken habitat (including breeding grounds, nesting and feeding areas and flight patterns) and the unsightly nature of large wind turbines. The Court also noted that commercial wind farms have a negative impact on property values, and that agricultural and nature-based tourism would also suffer. The Court, however, ordered the parties to submit additional briefing and prepare for oral argument on whether the ordinance constitutes a "taking" of plaintiffs' property rights without just compensation, and whether the ordinance violates the Commerce Clause by discriminating against interstate commerce. Those issues are set to be considered in early 2010.

The Kansas court is not, however, the first court to consider the validity of moratoriums on the development of wind power stations at the local level. Earlier in 2009, the Wisconsin Court of Appeals ruled on a county's moratorium of further development of aerogenerators and a "wind turbine ordinance" that restricted all wind energy systems uniformly based on a system's classification as a large or small system.¹²⁸ A property owner wanted to build aerogenerators on their property, and challenged the ordinance as ultra vires on the basis that the county exceeded its authority under state law. The trial court ruled for the county, but the appellate court reversed noting that the state legislature had not delegated legislative powers to localities. As a result, the "one-size-fits-all" ordinance violated the requirement that localities had to examine each wind project to determine whether each particular project conflicted with public health or safety. So, the case was remanded to the trial court for a reconsideration of the owner's declaratory judgment action.

Contractual Issues

In a recent New York case, the plaintiff bought the defendant's farm (including the residence) and sought to have the sale contract rescinded based on the seller's alleged fraud and misrepresentations for not disclosing that plans were in the works for the construction of large wind turbines on an adjacent parcel.¹²⁹ The plaintiffs submitted the affidavit of a neighbor of the defendant who detailed two conversations with the defendant that occurred months before the defendant put his farm on the market during which the wind farm development was discussed.¹³⁰ The defendant, at that time, stated that the presence of commercial wind turbines on the adjacent tract would "force" him to sell his farm.¹³¹ When the plaintiff sought to rescind the contract, the defendant claimed he had no duty to the plaintiff and that the doctrine of caveat emptor ("buyer beware") was a complete defense to the action.¹³² The court denied summary judgment for the seller and allowed the case to go to trial.¹³³

The Public Trust

The Public Trust doctrine holds that certain resources are preserved for public use, and that the government is required to maintain those resources for the public's reasonable use. The Public Trust Doctrine was involved in a recent case brought against an owner/operator of a large-scale wind farm.¹³⁴ Under the facts of the case, an environmental group claimed that wind turbines at the Altamont Pass Wind Resource Area in Alameda and Contra Costa counties had killed tens of thousands of raptors and other birds since the 1982. The Alameda County Board of Supervisors was in the process of considering applications to extend and consolidate existing 20-year permits to operate the wind turbines when the plaintiffs sued. The plaintiff claimed that the operation of the wind farm violated state and federal law, including the public trust doctrine – a doctrine which holds that certain resources are preserved for public use, and that the government is required to maintain those resources for the public's reasonable use. But, the trial court dismissed all claims except for the alleged public trust violation for lack of standing.