Uplands Wind IMPACTED MUNICIPALITIES



Neighbors and Residents of Southwest and Central Wisconsin

Our newly formed organization is finding that too few people are aware that an International Corporation, *Pattern LLC*, is seeking signed contracts with landowners in Iowa and Lafayette counties (Wisconsin) with the hope of adding as many as 172, 650' high wind towers. The turbines they hope to install and own could be as large and as powerful as the 5.6 MW type now used far offshore in ocean settings. Even the proposed, super-sized, turbines at 3.5 MW would literally dwarf the size of the turbines near Cobb/Montfort and be visible from the outskirts of Madison to the Bluffs of the Mississippi River. The structures, larger than any building in Wisconsin, could be erected only 1250 feet from occupied homes and farms because outdated 2008 regulations did not anticipate turbines of such enormity and impact.



Not only would productive lands, now dotted with family farms, rural residences, cottage businesses and small towns be over-run with monstrous towers, there are known, severe, negative impacts on wildlife, local climate, property values, tax bases, tourism, housing and business development and concerns that powerful air concussions would stress and sicken a significant percentage of residents forcing some to abandon their homes.

Further, there is no need for added electric power. Analysis has shown that making efficiency and solar improvements to our homes and farms not only reduces CO2 emissions more cost-effectively, they don't create unwelcome, long-term debt that causes our electric bills to soar. The above graphic shows the proposed wind tower height and prospective project area. If you are concerned as we are, contact us and we can help and your neighbors learn about the importance of not signing contracts with *Pattern LLC*.

What is the Solution? Aim for Higher CO2 Emission Reductions!



- The Long View Alliance estimates electric customer costs for the ~170, 650' high wind turbine system at \$1.8 billion over 40 years.¹ We note that Wisconsin already has more power plants than we can use and that the demand for power is dropping. In 2021, Wisconsinites used 2.6% less power than in 2007-- and with 7% more households using power!² We don't need any kind of new power plants.³
- The Uplands developer claims the turbines would reduce CO2 emissions but our analysis shows that spending the \$1.8 billion, instead, to incentivize improvements to Wisconsin dwellings, appliances, equipment and on-site solar would reduce far more emissions. Our precious landscapes would not be permanently marred and customers would save many millions by avoiding unnecessary waste.⁴
- Below, are two, Alternatives to Uplands based on increasing Wisconsin's successful, Focus on Energy rebates. The \$1.8 billion invested, instead, to boost to the Focus on Energy program would reduce twice the emissions of Uplands and save about \$152 million per year. Alternatively funding 900,000 households with Focus on Energy solar incentives would reduce 4 times the CO2 emissions of Uplands while creating more than \$500 million in avoided utility power use per year.⁵

CUSTOMER INVESTMENT OPTION	Estimated 40 Year Costs to Electric Customers	Estimated Annual Avoided CO2 Emissions (Million Tons)	Estimated 40 Year Avoided CO2 Emissions (Million Tons)	Energy Savings
Uplands Wind	\$1.8 billion	1.5	58	\$2 Million Per Year?
Boosted Focus on Energy Benefits ALTERNATIVE	\$1.8 billion	2.8	110	\$122 Million Per Year
900,000 Added Home Solar Incentives ALTERNATIVE	\$1.8 billion	5.9	235	\$500 Million Per Year

NOTES: (1) <u>https://bit.ly/UplandsEstimates</u> (2) <u>https://bit.ly/WI-RetailSales2007-2021</u>; <u>https://bit.ly/WI-CustomerCount</u> (3) <u>https://bit.ly/WI-excess-plants</u> (4/5) Spreadsheet <u>https://bit.ly/Compare-FOE-Uplands</u> with sources and data.

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Fate of Second Largest Wind Power Plant in Midwest in Hands of Landowners

Canadian-owned, multinational corporation, *Pattern LLC*⁶ has salespersons on the ground asking landowners to sign lease agreements to give the company 50 years of land control and build about 170⁷

industrial-scale wind turbines across Iowa and Lafayette Counties. With heights of around 650 feet,⁸ the 250 square mile power plant permeate horizon views from the outskirts of Madison to the bluffs of the Mississippi River⁹

In addition to a 60+ page contract that legal consultants advise contain significant losses of rights, too few property owners stop to consider that today's turbines much larger and more invasive:



"Nobody knew they were going to be this loud, or hurt our property values or be this big. . . No one wants to build around these windmills so you just cut your economic activity down. . . I just want to see the countryside." ¹⁰ - Ida Grove, Iowa, Farmer Mason Fleenor.

Impacts from Declining Property Values

Independent studies estimate property value losses from the presence of turbines range from 15 to 45%.¹¹ State payments to help compensate for lost tax income are not likely to keep up with private and tax base losses as properties are sold at a loss and re-assessed. Losses are not restricted to properties with turbines; they extend to neighbors at near and great distance where the 650' high towers dominate views. How large could these losses be? If only 1% of impact area property is sold at a 10% loss per year, this would cause a \$100 million loss in property values over 40 years.¹²

Long View Alliance volunteers (TLVA) believe that few landowners would give away complete control of their land if they understood the limitations before signing the lease contract. Leasing land to a turbine could result in a net loss, especially if a landowner is forced to sell their land. Based on lease estimates for *Uplands*, the sale of a 95 acre parcel with turbine would result in a \$26,000 loss 20 years into the lease if the value of the property value dropped 29%.¹³

Study Author(s)	Avg. Loss %	Study Author(s)	Avg. Loss %
Lansink	-39%	Gardner	-25%
Sunak	-25%	Kielisch	-32%
Heintzelman Tuttle	-45%	Luxemburger	-15%
McCann	-25%	Lincoln Twp.	-24%
		Average	-29%

Negative Health Impacts

Turbine Noise

There is wealth of research concerning the noises produced by modern wind turbines and its ability to shatter the peaceful experience of natural soundscapes. The impact can be quickly grasped by watching video testimonials of persons who are living with it day and night.¹⁴ When adopted by county or town ordinances¹⁵, Wisconsin Codes¹⁶ define levels of noise that turbines are fully permitted to generate. In cases when these levels are exceeded, finding a remedy is extremely rare. Turbines can legally generate sound levels at residences of 45 dBA during night hours and a level of 50 dBA during the day. That amount of sound, often described as a "hovering airplane,"¹⁷ is about four times louder than sounds that comprise natural ambience.¹⁸ The welldocumented loss of sleep, nausea, disorientation and depression has



forced families in Wisconsin and in other states to vacate their homes and farms¹⁹ with turbines considerably smaller than *Uplands*²⁰ At present, Iowa and Lafayette County ordinances lack all protections for residents from noises that would be produced by ~650' high industrial electric generators.²¹

Infrasound Air Concussions

The violent churning of the wind turbine blades create powerful, sub-sonic, air concussions that can be very palpable to humans and other animals. Testimonial accounts of the ill effects on the web²² include severe nausea, dizziness, headaches, ear pain, and sleep loss. One of the leading researchers of the phenomenon, Dr. Robert Rand, personally experienced the ill effects when staying overnight at homes residents had vacated. His testimony before the Wisconsin Public Service Commission rattes:

"During testing, Mr. Rand again experienced some of the adverse health effects reported by the neighbors. [H]e had arrived the previous night feeling good, [but] on awakening on December 5, Mr. Rand felt nauseous (very unusual). Mr. Rand [also] encountered unusual negative health effects during the testing period when near the operating wind turbines, including, at various times: nausea, headache and dizziness. [The] symptoms persisted after the testing for about a week, relieved by rest away from the site."²³

Wisconsin law does not yet acknowledge these life altering impacts leaving landowners with no legal recourse to pursue remedy.

Shadow Flickering

In one of the video interviews with residents living with the *Blue Sky* - *Green Field*²⁴ wind system northeast of Fond du Lac, Wisconsin, Elizabeth Eberts²⁵ describes another impact of the 397 feet tall²⁶ turbines, *"My daughter has bad shadow flickering over her complete house because the wind turbine to the east of her is on a high hill. She can't go anywhere in her house where she can't see the shadow flickering. We made curtains for her, but the flickering still goes through. I mean, what do you put windows* *in your house for?*" In one of the *YouTube* documents of these experiences a father observes, "If your kids were flipping the lights on and off like this, you'd tell them to knock it off!"²⁷ Even if Iowa and Lafayette Counties act to update their ordinances to include the flicker protection, state code only limits the amount of flickering that is *allowed* at homes and community dwellings. Note that wind developers rely on computer modeling in placing turbines and there is no requirement to notify homeowners when impacts on their *homes*, are being evaluated. As a result, current state law forces landowners to experience the malady *before they can even gain attention from the developer*. Warns Eberts, "And what they say to you, don't believe them. I had this guy come into my house telling me he'd get back everything [the turbines] took away from me. And then, he shook my hand. You know what? They *can't* give it back."



Combining Negative Economic Impacts

It is paramount that landowners stop and consider the combined, long-term, economic ramifications of the property value and negative repercussions on quality of life. For every house barely avoided by shadow flickering, for every house forced to steadily endure 20 dBA of noise, for every landowner that sells with only a 15% loss in personal wealth, there are many acres of land that can no longer be used for new homes. An economic study funded by the Wisconsin Towns Association (WTA) concerning frac sand mining found that new homes added for retirement or recreation and new cottage businesses preferring natural settings, represent about one-third of new revenue for the Wisconsin rural economies they studied.²⁸

Community Divisions

It is *Pattern LLC* (not the residents raising questions about the proposal), that created the unfortunate confusion and controversy that made *No-Uplands's* appeal to the landowners necessary. Had *Pattern*



Video maker Jim Harmon with property owner, Alan Haas, describing changes in community relations after the addition of 88 wind turbines, three on his property in 2008, "Even sweet little, old ladies get angry as hell now; and that's no joke either."

made public understanding a top priority, instead of soliciting landowners, one at a time, for signatures, traditional public decision-making practices could have taken root. Tragically, landowners who do not like the proposal are signing-up because they fear they may have to live with turbines with no recourse to recover severe losses. *Pattern* could have included language in the contracts to allow "option agreement" signers to back out.

Wisconsin lawmakers are also liable. They are continuing to sanction a special class of utility developer in Wisconsin that uses the public grid but is not required to demonstrate need or CO2 reduction accountability. Why should these special utilities be allowed to ignore Wisconsin Energy Priority Law²⁹ that favors spending on conservation and energy efficiency above spending for new power plants? *Any* new, expansive land use is certain to perpetuate long-term community strife and division under non-transparent procedures where nothing is demonstrated to be in the best interests of the public.

Environmental Impacts

In its estimate that Iowa state wind developer, MidAmerica, submitted to the US Fish and Wildlife Service in 2018, the company estimated from 961,635 to 1,188,075 deaths would occur from songbird, waterfowl, raptor and bat collisions with its wind turbines.³⁰ Applying Wisconsin-specific estimates to the *Uplands study area* which overlaps with two *Important Bird Areas*,³¹ predicts that each turbine would kill 4,400 bats and 1,400 birds over the project's lifespan.³²

Property owners in the Blue Sky-Green Field plant in Fond du Lac County observe that deer populations have nearly disappeared.



In a video interview,³³ dairy farmer Kevin Ashenbrenner attests that turbines 1 mile from his operation in Glenmore, WI were responsible for deaths of 19 cows and 30 calves eventually forcing him to sell his entire herd. "When you walk into the barn in the morning you don't know what the heck you're gonna find. . . The hardest thing I've ever had to do was haul the cows down to be auctioned. It has put me in such a financial bind; it is just unreal." Kevin's daughters were forced to sleep at their grandparents house to avoid headaches and loss of sleep.

The enormous wind turbine blades must be replaced and disposed of about every 15 years. The 200 foot long fiberglass blades must be sawed into pieces onsite and trucked to the landfill. "If you're a small utility or municipality and all of a sudden hundreds of blades start coming to your landfill, you don't want to use up your capacity for your local municipal trash for wind turbine blades," warned decommissioning expert, Rob Van Vleet in an interview with National Public Radio.³⁴

Additionally, it has been documented that the long blades push heated air that has risen aloft back to the ground. After examining hundreds of sites across the US, a study³⁵ conducted by Harvard University concluded that ground temperatures at night in wind farm areas increase as much as 2.7 degrees. Extra degrees in summer are costly. One analysis estimates that 10-15% more energy is required per degree for air conditioning and the extra heat makes cooling by window ventilation considerably less effective.³⁶

Who We Are

This handout was researched and produced by unpaid volunteers at *The Long View Alliance.* We are a diverse group of more than 120 individuals primarily in Southwestern and Southern Wisconsin. We are in the process of obtaining non-profit status.

To receive updates from *The Long View Alliance*, please provide your name, your full US mail address and your email address to:

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If you would like to make a donation, please make the check payable to *The Long View Alliance*.

To learn what you can do to help us keep Wisconsin focused on community compatible energy projects instead of large and unnecessary impositions like *Uplands*, call us at 608-935-3236.

This handout can be accessed with operative footnotes at <u>https://bit.ly/uplands-m</u>





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- 1 <u>https://bit.ly/UplandsEstimates</u>
- 2 EIA Data: https://bit.ly/WI-RetailSales2007-2021 Customer Count: https://bit.ly/WI-CustomerCount
- 3 <u>https://bit.ly/WI-excess-plants</u>
- 4 <u>https://bit.ly/Compare-FOE-Uplands</u>
- 5 <u>https://bit.ly/Compare-FOE-Uplands</u>
- 6 Pattern LLC financials: <u>https://investors.patternenergy.com/financial-information</u> See also: <u>https://www.prnewswire.com/news-releases/pattern-energy-enters-agreement-to-be-acquired-by-canada-pension-plan-investment-board-300950682.html</u>
- 7 According to Pattern's filing to the Federal Energy Regulatory Commission in 2020, the Uplands wind system would be 600 Megawatts (MW). <u>https://bit.ly/FERC-ER21-30-000-20201005</u> The estimated minimum number of turbines in this article was determined by dividing this number by 3.5 MW, assumed to be the size of the largest, modern turbines. (600 MW / 3.5 MW = 171.4 turbines)
- 8 The developer has not informed the public of the expected heights of the turbines. The estimate of 650 feet is based on the 698 feet height of the turbines for *Red Barn*, a 100 MW power plant in Livingston / Montfort adjacent to *Uplands*' study area. See spreadsheet listing by the Federal Aviation Association: <u>http://bit.ly/RedBarn698</u>
- 9 Viewed from highland-located properties and road, objects that are 650 feet high can be seen for 38.7 miles by line of sight. <u>https://planetcalc.com/1198/</u> Nocturnal visibility from highland locations would extend more than 30 miles based on lights mounted at a rotor height of 410 feet. For reference, the smaller, 2 MW wind turbines at Quilt Block in the Town on Seymour in Lafayette County can easily be seen from Montfort, Wisconsin, 24 miles away.
- 10 Quoted from a video interview by Zach Boyden-Holmes with Mason Fleenor (Ida Grove, IA) from the *Des Moines Register* article, *"Is wind power saving rural Iowa or wrecking it?" by* Donnelle Eller, and Kevin Hardy, April 20, 2017 http://bit.ly/WindWreckingIowa_DesMoinesRegister
- 11 See comparison of utility-funded and independent studies of wind turbine impacts on property values collected by McCann: <u>http://bit.ly/WindTurbinePropertyValueImpactKielischMcCann</u> Utility studies pose there are modest negative impact on values while those conducted by independent evaluators show very significant range of losses from 15-45% with an average of 29%.
- 12 See summary Table, "Diverted State Tax Dollars For Local Compensation compared to Property De-Valuation Estimates." of spreadsheet at <u>https://bit.ly/Uplands-StateTaxPayment_v_PropertyDevaluation</u>
- 13 See *Tab 1 Adjusted Lease Income With Property Devaluation* at bottom of spreadsheet at <u>https://bit.ly/Uplands-StateTaxPayment_v_PropertyDevaluation</u>
- 14 Specific to Wisconsin, there highly informative set of video interviews with a variety of impacted residents at https://bit.ly/WI_Wind_Interviews One search of "wind turbine noise interview:" https://www.youtube.com/results? search_query=wind+turbine+noise+interview
- 15 At the time of this writing, Iowa, Lafayette and Grant County Wind Siting Ordinances do not include the noise protections for large wind turbines.
- 16 PSC Code 128.14(3) https://docs.legis.wisconsin.gov/document/administrativecode/PSC%20128.14(3)
- 17 See Elizabeth Eberts interview at 1:54 <u>https://bit.ly/WI_Wind_Interviews</u>
- 18 This assumes rural background ambience at night is about 25 dBA and daytime ambience is 30 dBA. State law under PSC Code 128 allow night and day levels of 45 and 50 dBA, respectively, permitting wind turbine sound levels to be 20 dBA louder than natural background ambience both day and night. The turbine noise being heard as four times louder is based on each 10 dBA step-up being perceived as a doubling in loudness. <u>https://www.quora.com/How-many-dBdecibels-represent-a-doubling-or-halving-of-the-sound-volume?share=1</u>
- 19 Wisconsin Wind Turbines Declared Health Hazard First of its kind ruling; similar to Michigan situation, By Jack Spencer, November 8, 2014, Michigan Capitol Confidential <u>https://www.michigancapitolconfidential.com/20690</u>
- 20 The Shirley power plant turbines where health hazards were determined are 2.5 MW compared to 3.5 MW for Uplands.
- 21 Iowa County is currently considering updating its Wind Ordinance. The draft additions, underlined in red start on pdf. p. 68 <u>https://evogov.s3.us-west-2.amazonaws.com/meetings/107/attachments/9206.pdf</u> Iowa Co. Supervisor Districts: <u>https://www.iowacounty.org/media/Districts.pdf</u> Iowa Co. Supervisors contacts: <u>https://www.iowacounty.org/departments/countyboard/county-board-members</u> or call 608-935-0398 , or write Iowa County Planning & Development 222 N. Iowa St. Dodgeville, WI 53533 Lafayette County can be encouraged to do the same by contacting Planning and Zoning Committee: 626 Main Street, Darlington, WI 53530, 608-776-3836 Lafayette Co. Supervisor Districts: <u>http://lafay.maps.arcgis.com/sharing/rest/content/items/2c8f689496e3499aaea639ffd2fac00d/data</u> Lafayette County Supervisor contacts: <u>https://www.lafayettecountywi.org/bos</u>
- 22 Again, the interviews with Wisconsin residents are pertinent at <u>https://bit.ly/WI_Wind_Interviews</u> and one may search You Tube and the web with the terms, "wind turbine infrasound" such as <u>https://www.youtube.com/results?</u> search_guery=wind+turbine+infrasound+
- 23 See pdf p. 37 and notes p. 42-44. in A Cooperative Measurement Survey and Analysis of Low Frequency and Infrasound at the Shirley Wind Farm in Brown County, Wisconsin, https://apps.psc.wi.gov/pages/viewdoc.htm?

docid=178200

- 24 WE Energies' installation can be sen on this map: https://eerscmap.usgs.gov/uswtdb/viewer/#10.52/43.8836/-88.3084
- 25 <u>https://bit.ly/WI_Wind_Interviews</u>
- 26 See description of the facility: https://en.wikipedia.org/wiki/Blue_Sky_Green_Field_Wind_Energy_Center
- 27 Cited video, https://youtu.be/14okAlCY5fI Others: https://www.youtube.com/results?search_query=shadow+flicker+
- 28 See pdf pages 40-51, *Economic Benefits and Costs of Frac-Sand Mining in West Central Wisconsin*, 2013, https://www.wisctowns.com/documents/2013 05 30 fracsandmining f.pdf
- Wis State Statute §1.12 State Energy Policy (3)(a)- (4)(d)3: (3) Goals. (a) Energy efficiency. It is the goal of the state to reduce the ratio of energy consumption to economic activity in the state. (b) Renewable energy resources. It is the goal of the state that, to the extent that it is cost-effective and technically feasible, all new installed capacity for electric generation in the state be based on renewable energy resources, including hydroelectric, wood, wind, solar, refuse, agricultural and biomass energy resources. (c) Afforestation. It is the goal of the state to ensure a future supply of wood fuel and reduce atmospheric carbon dioxide by increasing the forested areas of the state. (4) Priorities. In meeting energy demands, the policy of the state is that, to the extent cost-effective and technically feasible, options be considered based on the following priorities, in the order listed: (a) Energy resources; (cm) Advanced nuclear energy using a reactor design or amended reactor design approved after December 31, 2010, by the U.S. Nuclear Regulatory Commission; (d) Nonrenewable combustible energy resources, in the order listed: 1. Natural gas; 2. Oil or coal with a sulphur content of less than 1 percent; 3. All other carbon-based fuels. <u>https://docs.legis.wisconsin.gov/document/statutes/1.12(4)</u>
- 30 Data from .pdf page 155, Table 5.4-1; http://bit.ly/BirdBatTakingsPermit_MidAmerica
- 31 Wisconsin Important Bird Areas, "IBA's have been officially adopted as key components of the North American Bird Conservation Initiative (NABCI), the North American Waterbird Conservation Plan (NAWCP), the U.S. Shorebird Conservation Plan (USSCP), and the Partners in Flight (PIF) Strategic Plan. An Important Bird Area (IBA) is a site that provides essential habitat to one or more species of breeding or non-breeding birds. Sites may vary in size, but are usually discrete and distinguishable in character, habitat, or ornithological importance from surrounding areas." http://www.wisconsinbirds.org/iba/about-ibas/
- 32 Calculations based on data in, Post-Construction Bat and Bird Fatality Study at the Blue Sky Green Field Wind Energy Center, Fond du Lac County, Wisconsin, pdf p. 3. July 21, 2008 – October 31, 2008 and March 15, 2009 – June 4, 2009 PSC Wisconsin document: <u>https://apps.psc.wi.gov/pages/viewdoc.htm?docid=126370</u> Uplands estimate uses maximum figures from the study done in the common place location due to Uplands ' proximity to Pecatonia River Prairie and Gov. Dodge State Park IBA's: 40 year max bird fatalities for 600 MW = 238,560 birds / 170 turbines = 1,403 birds per turbine. 40 year max bat fatalities = 597,720 bats / 170 turbines =4,380 per turbine.
- 33 Shirley Wind Victim Update: Ashenbrenner, Aug 13, 2013, https://youtu.be/gYZuggVPU3I
- 34 Unfurling The Waste Problem Caused By Wind Energy, Christina Stella, September 10, 2019, National Public Radio, All Things Considered, <u>https://www.npr.org/2019/09/10/759376113/unfurling-the-waste-problem-caused-by-windenergy</u>
- 35 Large-scale wind power would require more land and cause more environmental impact than previously thought http://bit.ly/HarvardHeatStudyOverview "Harvard University researchers find that the transition to wind or solar power in the United States would require five to 20 times more land area than previously thought, and if such large-scale wind farms were built, would warm average surface temperatures. . . Keith and Miller established a baseline for the 2012-2014 U.S. climate using a standard weather forecasting model. Then, they covered one-third of the continental U.S. with enough wind turbines to meet present-day U.S. electricity demand. The researchers found this scenario would warm the surface temperature of the continental U.S. by 0.24 degrees Celsius, with the largest changes occurring at night when surface temperatures increased by up to 1.5 degrees C. This warming is the result of wind turbines actively mixing the atmosphere near the ground and aloft while simultaneously extracting from the atmosphere's motion. . . the warming effect is predominantly local to the wind farm." Complete study is linked in the overview.
- 36 Set Up A Few Degrees For Significant Savings, "In the Midwest area you could save about 10 percent to 15 percent per degree, for the first few degrees you set up from 75 degrees." <u>https://www.achrnews.com/articles/94014-set-up-a-few-degrees-for-significant-savings</u>