

# **Public Comments on the Draft Environmental Impact Statement (DEIS) for Windfarm Prattsburgh LLC**

## **Summary**

A careful and objective reader of the DEIS will conclude that it frequently overstates the potential benefits of this project while minimizing, ignoring, or misconstruing the actual costs and risks. Even accepting the data as presented, a quantitative analysis of costs vs. benefits demonstrates that the project has no net positive economic value but will actually result in a net economic loss of more than \$123,000,000. Thus, the project fails to meet the Renewable Portfolio Standard's primary objective of "stimulating economic development". On this basis alone, Windfarm Prattsburgh LLC must not be allowed to proceed.

Following a thorough and scientific examination of the DEIS and other relevant source documents, it is our conclusion that the DEIS is a fraud, intentionally perpetrated by the developers through a group of consultants who work for the wind industry. The DEIS is not fair, accurate, scientific, or complete in its examination of the complex and serious environmental impacts of this project. We expect that Labella Associates PC will provide a fair, accurate, scientific, and complete examination of the real environmental impacts to the Steuben County Industrial Development Authority. We further trust that the Authority, in its stewardship capacity as Lead Agency, will reject the DEIS in its entirety and put an end to the corrupt entity known as Windfarm Prattsburgh LLC.

It is unfortunate, though understandable, that the developers chose to use only wind energy consultants. Had they been interested in a fair and honest DEIS, there are many legitimate third-party experts that could have been employed. Cornell University, Rensselaer Polytechnic Institute, Rochester Institute of Technology, SUNY Buffalo, and other nearby schools have the expertise and objectivity to design and carry out scientific studies to accurately identify and evaluate the true environmental impacts of this project. An independent oversight committee could have been established to manage these studies and to act as a buffer between the developers and the researchers. Such an approach would ensure that the best interests of all parties were fairly protected. Additionally this approach would fully comply with the letter and the spirit of state and federal environmental regulations.

## **Potential Project Benefits**

1. **Clean, renewable energy.** The DEIS states that this project will produce a substantial amount of electrical power, 197,000 MWh annually. Their calculation is: 75MW (nameplate capacity) X 30% availability X 8,760 hours/year. Unfortunately this formula contains several errors. While the DEIS often refers to a nameplate capacity of 75MW, the actual project design repeatedly describes 44 1.5 MW turbines for a nameplate capacity of 66MW. The DEIS states that the 30% availability estimate is based on experience at other locations in New York. However there are no data or references to support this number. Actual documented experience in Vermont indicates that the power generated is likely to be only 20 or 21% of nameplate capacity. Since, according to GE Energy, the wind availability in upstate New York is "out of phase" with electrical demand, the actual usable energy would be only one third of that which is generated. So the correct equation would be: 66MW X 21% availability X 8,760 hours/year X 33% usability = 40,066 MWh per year. This is the amount of net incremental energy that may be expected. This amount of energy would satisfy the average

annual usage of 4,000 homes, not the 20,000 claimed by the consultants. The DEIS estimate is wrong by a factor of five. That consultants with expertise in their fields would make an error of such magnitude should make one skeptical of their other conclusions as well.

The reason that there is such a difference between GE's availability estimate of 30% and the actual Vermont experience of 20% lies in GE's carefully contrived definition of availability. GE defines availability as the % of time that there is sufficient wind to cause the turbine rotors to move. According to the GE specs in DEIS Appendix A, the rotors begin to move when the windspeed reaches 7.9 mph. At this windspeed, the turbine produces a tiny fraction of its capacity. The turbine does not reach "rated nameplate capacity" until the windspeed is 27mph. Sustained wind of this magnitude is decidedly rare in the central Finger Lakes. That the authors of the DEIS would maintain that the units would operate at nameplate capacity 30% of the time must mean that they either have very limited understanding of wind turbine operations or they intended to dishonestly inflate the economic value of this project. Other capacity factors that were omitted include planned downtime for maintenance (5% according to AWEA) and emergency downtime due to icing or lightning strikes (the DEIS references a European study in which 14% of turbines were damaged by lightning each year.)

There is an additional issue regarding the usability of wind-generated energy that was not addressed by the authors of the DEIS. According to NYSERDA, upstate New York generates more electricity than it consumes. It is a net exporter of electricity to the power grid. Downstate New York, on the other hand, generates less electricity than it consumes, and is a net importer from the grid. So any incremental wind energy (or its fossil fuel equivalent) needs to travel over three hundred miles for it to be consumed. Given this distance, there will be significant "line loss". The 40,000 MWh that leave Windfarm Prattsburgh will be much less by the time they arrive at the end users in Manhattan. From an environmental and economic perspective it would make much more sense to build windfarms closer to NYC (the Catskills and Long Island have more favorable wind profiles) or to build more conventional generating capacity along the lower Hudson.

The DEIS maintains (p. 6) that the 75MW of power generated by the project "*greatly exceeds the energy required to construct and operate the project.*" This statement is not supported by any data or analysis. It does not appear that the consultants even attempted to calculate how much energy would be required for manufacture and delivery of components, cement manufacture and distribution (across Lake Ontario), and the hundreds of thousands of hours of large truck and construction vehicle operations. Diesel fuel consumption for cement mixers alone is estimated to exceed 25,000 gallons.

If the net usable power is really only 4.6 MW (calculated as 66MW X 21% availability X 33% usability), is it possible that the project generates less energy than it uses? The DEIS overstates the value of the power from this project by a factor of sixteen (75MW claimed output vs. 4.6MW actual output). Without further analysis, we will not know if this project passes even the most basic economics test.

The final economic benefit claimed in the DEIS (p.15) reads: "*... as a result of the RPS, the PSC anticipates that wholesale energy prices are likely to decline as the addition of substantial amounts of renewable energy offsets some of the program costs. The cumulative cost of premium payments, projected to range between \$582 million and \$762 million for renewable projects, is expected to be offset by approximately \$362 million in wholesale energy cost reductions as New York reduces its reliance upon fossil fuels.*"

The statements cannot be accurate. Replacing a less expensive energy source (fossil fuel) with a more expensive energy source (wind) can only result in higher energy costs not lower. Additionally there is no evidence to suggest that intermittent wind-generated electricity will result in any fossil fuel facilities going offline. The only way to reduce fossil fuel consumption is for electricity consumers to agree that they will only use electricity when the wind is blowing. There are third world countries that operate this way. Attachment A provides a comparison of the cost differentials of various energy sources.

2. **PILOTs and Lease Payments.** There is no question that PILOTs and lease payments are of some positive economic value to our communities. However there are serious questions about the negotiation process for the PILOTs as well as their longer-term reliability. A fairly negotiated PILOT would reflect the actual economic value of the project. According to the DEIS the economic cost of the project is \$150M. The economic value must be higher than that to enable a profit for the developers. However, taking a conservative approach and using \$150,000,000 as the economic value would require the developers to pay \$6,000,000 worth of PILOT each year, not the \$255,000 that is derived from the DEIS data. (These numbers are only for town and school taxes and do not include payments to the counties or SCIDA.) It should be noted that the PILOT negotiated for the Maple Ridge project in Lowville calls for the developer to pay the town, county and school districts \$9M each year or \$64,000 for each turbine. By comparison, Windfarm Prattsburgh will pay less than \$7,000 per turbine.

The DEIS does not address the reliability of future payments; it just assumes that they will be there. In fact, these payments will continue only as long as the developers or future owners have the financial capacity to do so. There are two likely scenarios that could lead to an end to the PILOT and lease payments. One, the owners may simply go bankrupt. The DEIS does not consider the financial condition of the developers. We have not had the opportunity to examine audited financial statements for the last five years nor have we seen the financial results that demonstrate a successful track record of windfarm development. Until such documents are made available we cannot assess their financial position and determine the degree of future risk.

The second likely scenario is that government subsidies may be reduced or eliminated. New York has the second highest electricity costs in the nation (Center for Governmental Research). These costs are a substantial barrier to economic development. Wind energy is even more expensive, and as more windfarms come online, our electricity costs will continue to rise, furthering our economic disadvantage. Political leaders in Europe are now recognizing the folly of wind energy and are reducing or eliminating their once generous subsidies. (Attachment B.) Sooner or later subsidies will end here as well. Without subsidies there are no PILOTs or lease payments. This risk must be considered to fairly assess the project's economic impact. In the business world, this is called a sensitivity analysis, a comparison of probabilities, risks, and weighted outcomes.

Given all of the problems associated with PILOTs and leases we strongly recommend that the developers be required to purchase the property for each turbine site. This will enable town assessors to add 100% of the actual value of this project to our tax rolls. It will also define a clear and direct liability path in the likely event that there are safety and health problems associated with the turbines.

## Potential Risks and Costs

1. **Construction.** The DEIS continuously understates the impact of this project on the area. However some of their own data undermines or negates their assumptions and conclusions. On p. 9 the DEIS states, *“The majority of the area consists of open crop fields (primarily hay, corn, potato, and oats) and pastures, with forested areas generally confined to small woodlots and steep slopes that descend into adjacent valleys.”* The term “majority” would indicate that more than 50% of the land is agricultural in nature. However DEIS Appendix K states that only 3.1% of parcels in Prattsburgh and 1.9% of parcels in Italy are agricultural. So the truth is that this is not an agricultural area, it is a residential and recreational area. In Prattsburgh, 0.5% of the land is considered “industrial” while that number is zero for Italy. So, although we may not be agriculture, we are most certainly not industrial, at least for the present time. The DEIS states that this project will cover 2,185 acres. Additionally it will impact tens of thousand of additional acres nearby. Construction of this project will dramatically change our regional character from residential and recreational to industrial. This impact is deliberately understated by the DEIS and must be corrected.

There are several other aspects of the construction process that require additional study to ensure a complete and true picture of impact:

- **Wind Turbine Foundations:** the DEIS states that each foundation will require “approximately 300 cubic yards of concrete”. However, given the actual dimensions of the foundations, they will require 1,046 yards (the proper equation is  $\text{Pi} \times \text{radius-squared} \times \text{depth}$ ). 44 turbines will require 46,000 cubic yards, or 4,600 cement mixers. The estimates in the DEIS are simply wrong. An impact of this magnitude requires detailed analysis and evaluation by an objective third party capable of doing basic multiplication.
- **Waste Removal:** to make room for the 44,000 cubic yards of concrete, at least that amount of dirt and rock will need to be removed and transported to an approved disposal site. The DEIS does not comment on this activity or identify the disposal site. Nor does it consider the thousands of additional truckloads necessary to accomplish this.
- **Impact on Local Traffic:** the DEIS claims that the impact will be minor. In fact the impact of thousands of construction vehicles will be major. Additionally the turbine component delivery vehicles are very large and very slow. Every one of these trailers (168 in all) will cause the complete closure of Route 53, and every other road they use, for hours and days at a time. There is also reason to believe that these deliveries may not go smoothly. There are tens of thousands of residents in the central Finger Lakes who are dead-set against this project. Picketing or other disruptions are to be expected. What are the plans to deal with several thousand SUNY students engaging in peaceful protest at the Route 390 exit ramp? The cost of police overtime for a year of protests should be added to the overall project price tag.
- **Condition of local roadways:** according to General Electric specifications, the “Allowable Vehicle Grades” cannot exceed 10%. Additionally, there are

limitations for “Allowable Bumps and Dips” (no more than 6” for every 50’ of roadway). Surely our local roads do not meet these specifications. Yet the Transportation Study from Fischer Associates fails to address these significant restrictions. Once again, it appears that important details necessary for a fair analysis are overlooked, either intentionally or through incompetence.

2. **Decommissioning.** It is inevitable that at some time in the future the windfarm will no longer be viable. For public safety and aesthetic reasons it will then have to be removed and the sites remediated. Making sure that money is set aside for this work is a major concern. The DEIS describes the establishment of a Decommissioning Reserve Account, which is intended to cover the costs of decommissioning the windfarm. However the developers do not have to put any money into this account until year fifteen of the project. Additionally they are only required to deposit \$15,000 per turbine between years 15 and 20. So this account would contain less than \$100,000 per turbine at the projected end of the windfarm’s usefulness. Since each turbine is estimated to cost \$1.5M to decommission we will have a shortfall of almost 60 million dollars.

This Decommissioning Reserve Account is not a prudent approach, and should be removed from consideration. In its place we should demand a minimum of 1.5 million dollars for each and every turbine in an interest-bearing escrow account, at our local bank. The 44 turbines at Windfarm Prattsburgh would require a deposit of 66 million dollars. An escrow account or some other type of guaranteed financial instrument is the only way to avoid being bankrupted by a \$60M decommissioning bill.

3. **Avian Mortality.** The various studies conducted by EDR on raptors, birds, and bats lack rigor and consistency and do not demonstrate even a basic understanding of scientific methods, experimental design, or avian biology.
  - Raptors: consultants (unidentified and uncredentialed) claimed to have spent several days in Clute field looking for raptors. They reported that they did find some, but admitted that the numbers appeared “very low”. For reasons unknown, they stopped their observations each day at 3pm even though the peak hour for sightings was from 2 until 3. The graphs indicate that that many more raptors would have been seen had they continued to observe for the remaining daylight hours. It is interesting that they did report seeing a bald eagle even though the text argues that bald eagles would not frequent the windfarm area because of “*unsuitable aquatic habitat*”. In fact, bald eagles do frequent the windfarm area, as they are quite fond of the bass and trout in the farm ponds and the Hi Tor ponds.
  - Birds: possibly the same consultants conducted radar surveys on a number of nights to try and estimate the numbers of resident and migrating birds. Unfortunately they chose a radar unit that was both unsuited for the task (marine radar with a wave guide antenna not a parabolic one) and underpowered (10 kW vs. the recommended 50kW, please see Attachment C). Their approach to setting up and operating the unit demonstrated zero understanding of basic radar principles. Thus, it is not surprising that they found few birds. It would have been very difficult to do so given their equipment, their techniques, and their appalling lack of expertise.

EDR has been asked to provide information regarding the qualifications of the field workers but they have not responded to this request. EDR has also been asked to provide actual source data and details regarding the “proprietary software” they used to determine the number of birds, elevations, direction, and airspeed. They have not responded to this request. This lack of response is perhaps significant in that the airspeed of a bird cannot be determined without knowing the wind velocity and direction at the bird’s actual altitude. Since EDR had no wind-sensing devices and they used only a single radar unit (preventing real time comparison of bird direction and altitude) they could not possibly have determined the flight speed of birds. This is not a miscalculation or misrepresentation; it is an outright fabrication. The fact that they are not willing to share source data and software algorithms suggests that they may not have actually conducted the field studies as reported. Perhaps they just rewrote avian studies from other Draft Environmental Impact Statements.

- Bats: the bat fieldwork, its explanation, and conclusions just do not make any sense. They did a small amount of mist netting. They also operated two “Anabat II” acoustic detectors. However they could not acquire sufficient data to reach any conclusions. There were two reasons for this. First, one cannot obtain relevant data from mist netting because it is not a statistically valid sample that can be calibrated and extrapolated. As for the acoustic detectors, their working range, according to the DEIS, is only 10 to 15 meters meaning that their sample area was minuscule compared to the many square miles of the project area. Having failed to generate any meaningful information from their fieldwork, they went to wind energy literature to look for other studies. On p. 82 they state that “*Johnson and Strickland documented bat mortality rates of 46.2 fatalities per turbine per year at wind projects sited along forested ridgelines in the Appalachians.*” In fact, Johnson and Strickland documented no such thing. They couldn’t have because their experimental design and intent would not allow it. Johnson and Strickland were not interested in “bat mortality rates”; they were merely trying to determine if two specific endangered species might be impacted by a proposed wind development. Their sampling was infrequent, inconsistent, and incomplete. They apparently used college students with no specific expertise in biology and they only searched for bats at the bases of turbines rather than the 10 acres surrounding each turbine where animals struck by the spinning blades would be thrown. There is nothing in the Johnson study about 46.2 fatalities; the authors of the DEIS intentionally fabricated this number.

Had the consultants actually wanted to conduct valid surveys of raptor, bird, and bat activity, they could have used the type of equipment described in Attachment C. This equipment was especially designed for this task under contract with the U.S. Navy, and it has proven to be extremely accurate and reliable. Another readily available alternative is Doppler weather radar that is able to detect between thirty and fifty times more birds than the low power marine radar that was used (according to DEIS Appendix E).

Clearly, these consultants intended to conclude that the wind turbines would not be hazardous to avian populations and they designed their studies, manipulated data, and made up numbers to reach that very conclusion. Had they been a little more diligent in their literature search they would found official documents from the U.S. Fish and Wildlife Service which estimate that stationery communications towers kill five million birds a year, or about one thousand kills per tower. Given that the rotor sweep area of a wind turbine is 48 times the cross-sectional area of a

typical communications tower, it is reasonable to assume that a wind turbine would be much more deadly to avian wildlife than a stationery communications tower. If the turbines are only twice as deadly, these 44 turbines will kill more than eighty thousand raptors, birds, and bats every year. The claim in the DEIS that wind turbines kill only one or two birds a year is a complete fabrication.

Since the work on avian mortality is totally without merit, new studies must be conducted to determine the biological impact of the project. These studies must comply with the written instructions that they have received from the U.S. Fish and Wildlife Commission (Attachment D). Some of these requirements are:

- Conduct studies in and around the project area.
- Conduct studies under various weather conditions.
- Conduct studies over a multi-year period. Cover both spring and fall migration, and breeding seasons.
- Utilize remote sensing technology (radar, acoustic, and infrared).
- Sample day and night, season to season, and year to year.
- Work with Fish and Wildlife to develop draft study design prior to conducting new studies.
- Utilize a combination of acoustic monitoring and vertical and horizontal radar.
- Collect data at several sites in the project area.
- Include an analysis of the cumulative effect of (multiple) projects on natural resources.

4. **Aesthetic/Visual Resources.** Like the Avian Mortality Study from EDR, the Visual Resource Assessment from Saratoga Associates suffers from poor design, sloppy fieldwork, and relies on computer-generated “simulations” rather than actual observations. The analysis by Saratoga begins by incorrectly categorizing the study area. Page 14 of DEIS Appendix G states: “*The landscape is thus comprised of a mosaic of actively cultivated agricultural fields (approximately 40% of the study area)* “. As previously stated, DEIS Appendix K accurately notes that only 3.1% of parcels in Prattsburgh are agricultural, with even fewer, 1.9%, in Italy. This misrepresentation is apparently intended to convey the message that only farmland is being impacted whereas the reality is that the study area is primarily residential and recreational and that thousands of people are being impacted, not just a handful of farmers.

In order to determine the visual impact of several of the proposed turbines, Saratoga spent September 13, 2005 in the field taking pictures of four balloons moored at 400 feet above turbine sites. However these pictures are not found in the DEIS. Saratoga indicates that the “*summer haze was judged to limit visibility to only 10-15 miles. Such visibility conditions are only marginally acceptable for photo documentation. For this reason, supplemental photographs were taken on October 17, 2005, without benefit of balloons, when clearer atmospheric conditions permitted more distant visibility.*” Later Saratoga states that the photos with the balloons were used to calibrate their computer-generated simulations.

None of this makes any sense. The photos were apparently taken within a mile or two of the tower sites so a visibility of 10 to 15 miles would not have limited the clarity of the balloons. Additionally if the photos were sufficiently clear to calibrate the simulation they should have been included in the Appendix as legitimate proof of the visual impact of the turbines. The only explanation for all of this doubletalk is that the photos were an inconvenient but accurate depiction of turbine visual impact, a reality that Saratoga chose not to reveal. Careful examination of the “visual simulations” (particularly the view from Wood Hill) and known

objects in the photos leads one to fairly conclude that the computer simulations understate the visual impact of the turbines by a factor of 3 to 4 times. Without question the Visual Resource Assessment by Saratoga is intentionally fraudulent.

SCIDA has a section on its website entitled “Area Attributes: growth, progress, technology, and community in Steuben County ... achieving the proper balance.”

It goes on to say, “*Relaxation is something everyone seeks when looking for a place to live. Steuben County prides itself on its beautiful lakeside sunsets, its gorgeous panoramas ...*”

The magnitude of this project is not “in balance” nor is it consistent with “relaxation” or “gorgeous panoramas”. SCIDA should wholly reject this portion of the DEIS on the grounds that it is fraudulent, inaccurate, and useless for decision-making.

5. **Regional Economic Development.** One of the key objectives of the 2002 State Energy Plan is “stimulating economic growth”. When it comes to economic impact, this project has many significant risks that are not appropriately addressed in the DEIS.

- **Tourism.** The DEIS maintains that impact on tourism is negligible, basing their claim on studies that were paid for by the American Wind Energy Association and the British Wind Energy Association. Both are blatantly biased and have since been completely discredited. The wind association studies stated that tourists were generally not affected by windfarms and that some actually liked them.

In 2003 the tourism board in Scotland released a 190 page report that completely contradicted the earlier BWEA survey. This new report concluded that 15% of tourists would definitely avoid areas with windfarms and that an additional 10% would be less likely to return. Over 50% of tourists agreed that windfarms spoiled the look of the countryside. The study concluded that plans for additional windfarms would eliminate 4,000 to 6,000 tourism jobs, and result in \$120M to \$210M in lost tourism revenue.

The Wales Tourist Board reached a similar conclusion as well. A survey of 19 tourism businesses revealed, “over half of the respondents thought windfarms have already and will continue to have an adverse effect on tourism.” In a survey of 205 tourists who had seen wind turbines, 30% stated that the wind turbines “detracted from the experience” And when shown actual pictures of existing windfarms in Wales, 65% expressed negative reactions. Without question, significant portions of tourists to the countryside are clearly turned off windfarms, and will choose to spend their money elsewhere.

The Southern Tier is the third largest tourist destination in New York State (per the SCIDA website). Tourism in the Central Finger Lakes supports almost 15,000 jobs, and brings in over \$200 million annually. A mere 10% drop in tourism would cost us twenty million dollars, more than 30 times the annual payments promised by Windfarm Prattsburgh. These economic risks are decidedly and hugely negative. It is foolhardy to risk damage to a sector with 15,000 jobs for a project that may create 4 to 6.

- **Real Estate Tax Base.** An analysis of data in DEIS Appendix K on property values in Italy and Prattsburgh reveals that there has been significant growth in the number of “higher end” (> \$100,000) properties over a 5 year timeframe while the lower end of the market (< \$60,000) is unchanged. This growth reflects two new dynamics that are operating in the local housing market. The first is the trend for existing property owners to convert from



seasonal to permanent residency by building new homes or expanding existing structures. The second dynamic is the movement of people from urban/suburban areas back to the country. These new permanent residents have chosen to move here not because of the amenities, not because of the convenience, not because of plentiful jobs – we don't have those attractions here. Rather they come for the rural culture, peace and quiet, scenic beauty, low crime, good schools, and recreational opportunities. These people are overwhelmingly against the type of industrial development that Windfarm Prattsburgh represents because it diminishes the quality of life factors that enticed them in the first place. These new arrivals represent an important economic development engine for towns like Italy and Prattsburgh. New home construction dollars go to local workers and suppliers. Real estate tax rolls are enhanced by the new assessments, and these folks tend to spend locally for other goods and services. This positive migration of new money to our communities will come to a screeching halt if the windfarm is built. People desiring a rural experience will not choose to live near an industrial development. Even before construction this project has started to erode property values. Once it is built, this erosion will accelerate. The fact that the wind industry funded two bogus studies on real estate values is irrelevant; the damage to our own property values will be very real. (Please see Attachment E for additional information.)

- **Impact on Other Economic Development.** By changing the character of this area from rural/recreational to commercial/industrial, Windfarm Prattsburgh will have a chilling effect on other economic development. Businesses that are considering expansion or relocation must be confident that they will be able to quickly fill their openings with highly capable people. A business in either Yates or Steuben Counties with technical or professional openings will have to attract candidates from outside the area as we have a very limited supply of such talent here. Highly capable technical and professional people have a great many opportunities. Every company and every community competes against one another for these people. The fact of the matter is that very few in this talent pool want to live and work in a rural area such as ours. Places like Boston, San Diego, Chicago, Austin, Seattle, and Silicon Valley are perceived to have a lot more to offer than Italy and Prattsburgh. Our recruiting challenge is to find that small sliver of the talent pool that would be interested in the rural experience we offer. In other words we try and match our features with their desires. Those willing to trade the inconvenience of the rural experience for its benefits (peace and scenic beauty, recreation, etc.) may choose to come here to live and work. However Windfarm Prattsburgh and the eight other proposed developments will transform our region from rural to industrial and essentially shut down our very limited talent pipeline. If I can't fill my openings with top talent I cannot afford to and will not choose to do business here. It is that clear and simple. No more new business here. Steuben County may become the epicenter of a vast economic development wasteland.

The amount of economic value from all of the proposed windfarms is but a small fraction of the value derived by the decision of a single company like ALSTOM Transport to invest \$50M and create 750 jobs in Hornell. It is either the windfarms or the ALSTOMs. We can't have both. From every rational economic, environmental, or social perspective, ALSTOM wins hands down.

6. **Public Health and Safety.** Concerns with blade flicker, ice throw, low frequency noise, and lightning have been documented by a number of objective third parties (unaffiliated with the wind industry). References to these studies may be found in Attachments F, I, J, and K. The

DEIS ignores all of these studies and relies only on studies from their own consultants. There is no science to their studies; their authors have minimal, if any, credentials. They simply make broad unsubstantiated claims that there are no public health and safety concerns. In fact, all industrial facilities pose potential hazards to the public. In the case of large industrial windfarms we need much more coordinated research to understand the exact risk profiles that are present. This will lead to changes in turbine design, turbine siting, and turbine size, as well as setbacks from property lines, residences, public highways, etc. To address these legitimate health and safety concerns in a fair and responsible manner, experts in industrial safety, risk management, public health (particularly morbidity and mortality), fetal development, acoustics, audiology, and neurology should be commissioned to objectively review the existing literature and recommend an appropriate path forward.

7. **Cumulative Effects of Nine Local Windfarms.** Because windfarm development in Steuben and surrounding counties has been segmented into nine separate and independent projects (p. 202), there is no serious attempt in the DEIS to gather the data necessary to consider the cumulative impact of more than 500 wind turbines that form a nearly contiguous industrial complex across many miles of rural hilltops. Some of the cumulative effects that should be analyzed prior to construction include the following.
  - **Stability of the Electrical Grid.** The total nameplate capacity of the nine projects under consideration is 779.5 MW. To put this in perspective, this aggregate capacity is 59% greater than the Ginna nuclear plant and 15% more than the coal-fired plant at Somerset. Adding this amount of intermittent, variable, and unreliable power to the grid is a recipe for disaster. Attachment G contains relevant testimony on grid stability related to the northeast blackout of several years ago. The impact of this mega-plant capacity must be carefully analyzed to make sure that we do not compromise the integrity of the entire northeastern grid.
  - **Regional Economic Issues.** Most people consider a few turbines to be a curiosity. Many people consider a windfarm of 15 or 20 turbines an eyesore. It doesn't appear that anyone has yet considered the reaction to a windfarm of 519 turbines. At present the largest windfarm east of the Mississippi, Maple Ridge, has 140. The aggregated nine local projects are almost four times larger than Maple Ridge. An industrial development of such scale would completely change, for the worse, the rural character of the region, and could have a devastating effect on our quality of life and our economy. Certainly it is both prudent and responsible to adopt a regional moratorium on industrial windfarms so that the future impact of such a mega-development can be assessed, before spending hundreds of millions on construction.
  - **Avian Mortality.** As discussed earlier it is logical, based on Fish and Wildlife Service studies, to project that a single turbine will kill 1,000 to 5,000 raptors, birds, and bats each year. Therefore, 519 turbines would kill between 519,000 and 2,595,000 raptors, birds, and bats annually. Over its twenty-year useful life this giant windfarm could kill between 10,380,000 and 51,900,000 creatures. Of course, declining populations due to this mortality may reduce the number of kills over time.

## Quantitative Analysis of Project Benefits and Costs

### Project Benefits

According to the DEIS, and from corrected calculations, the maximum (20 year) benefits of the project are:

- 40,000 MWh of usable annual electrical generation, which is worth over twenty years approximately \$80M, at \$0.10 per KWh
- \$350,000 in annual PILOT and lease payments which equals \$7M over twenty years
- \$300,000 in annual wages worth a total of \$6M.

Thus the aggregate **gross economic value of the project is \$93M** over the life of the project.

### Project Costs

1. **Tourism.** Given the third party studies in Europe it is reasonable to expect that tourism revenue (currently \$200M per year) in the Central Finger Lakes will be adversely affected. The European studies concluded that the adverse affect of new windfarms would be in the range of 15 to 25%. A very conservative projection of a mere 3% decline would cost \$6M a year, for a **life cycle cost of \$120M**. In addition, such a decline would cause the elimination of 450 jobs in the local tourism industry.

Related to the tourism issue is the proposal to build a luxury hotel and spa at Reservoir Creek in Naples. Construction of nearby windfarms will destroy the business case for this project. 120 permanent jobs will be lost. This is not a rational trade-off. Losing 570 jobs to gain 6 defies logic and common sense.

2. **Property Values.** No one knows for certain the exact impact of Windfarm Prattsburgh on property values. The wind industry “studies” conclude that there is no impact. However, our local real estate experts believe that the impact will be substantial, particularly at the higher end of the market. The more your property is worth now, the less it will be worth in the future. High-end properties with turbines in prime viewsheds may become virtually worthless (in terms of the value of residences). A loss of only 15% in value for Prattsburgh and Italy amounts to a **total loss of over \$20M** (on a real estate base of \$135M). There will also be losses for properties adjacent to Italy and Prattsburgh if turbines damage the viewsheds, or there are blade flicker or noise issues. Unfortunately the authors of the DEIS did not acquire the relevant data for these adjacent properties so this loss cannot be quantified at this time.
3. **Construction Delays.** The construction phase of this project will cause massive traffic stoppages when tens of miles of roads are widened and re-built, and when hundreds of huge machines are creeping down our highways. Assuming that 3,000 people will be held up an average of 45 minutes a day for 90 days of construction results in 202,500 hours of delays. If we further assume that our time is only worth \$5 an hour, the inconvenience has an economic cost of **\$1.01M**.

4. **Decommissioning.** Given the generous (or corrupt) design of the Decommissioning Reserve Account, this process will cost local taxpayers **\$60M**.
5. **Avian Mortality.** Raptors, birds, and bats have both intrinsic and extrinsic value, which varies widely from person to person. Many people would say that bald eagles, a majestic endangered national symbol, have a great deal of value. There are many who feel that songbirds are of unique and special value (witness the billions we spend each year on wild bird food). Certainly the delight our grandchildren experience watching the hummingbirds feed is of value. And there are many bat advocates who appreciate that these tiny mammals effectively control mosquito populations. And the hundreds of bluebirds nesting on Hi Tor are enjoyed by those who hike the trails.

The challenge is to transform this perceived value into an accurate economic value. Because the perceived value does vary widely, we will utilize a range of possible values, a range broad enough to have a high probability of capturing the true average value. Let's assume that the average economic value of an avian life ranges from fifty cents to \$5.00. (Individual values could range from a few cents for a "nuisance" bird such as a grackle to tens of thousand of dollars for bald or golden eagles. With a very conservative estimate that the windfarm will kill 1,600,000 creatures over 20 years, the aggregate economic cost of that carnage ranges from \$800,000 (50 cents each) to \$8,000,000 (\$5 each). Erring far to the conservative side we suggest an overall economic cost of **\$2M** for avian mortality.

6. **Public Health and Safety.** Given that research on windfarms and human morbidity and mortality is still in its infancy (primarily due to stiff opposition from the wind industry), it is difficult to calculate the economic value of human lives that are diminished or lost. However we do know that there is a range of human susceptibility for different windfarm effects. For example, blade flicker may not affect most people; it is likely a problem for just 20 to 30% of the population, and a severe problem for less than 10%. It is reasonable to expect that low frequency noise may affect some people quite significantly while others may not have any adverse reaction. Though we do not know the exact percent of the population that will be negatively impacted, we can construct a simple model for examination and quantification. This would be a "best case, not a "worst case" scenario.

To be very conservative, we will assume that the wind turbines will adversely affect only 10% of the population. Since the 2010 projected population for the two towns is 3,358, 10 % would be 336 people. Let's further assume that two thirds of the susceptible population do not live, work, or travel close enough to turbines to be affected. This leaves us with 112 residents who will have their quality of life or health diminished by Windfarm Prattsburgh. The next step is to determine the economic value of the lives of our residents.

One simple method of valuing human life is to say that we are worth only what we earn in a lifetime. No other contributions will be considered. So the researcher who cures cancer will only be considered to be worth her paycheck. Utilizing the socioeconomic data in the DEIS, it is possible to calculate that the average individual annual income in Italy and Prattsburgh is \$30,600. Over a 40-year career this amounts to \$1,224,000. This is the gross economic value of the average person in our community.

If we assume that the diminishment in quality of life or health is minimal, i.e. only 10%, the total economic loss for the 112 residents is ( $\$1,224,000 \times 112 \times 10\%$ ) which amounts to

**\$13.71M.** Should we assume that the diminishment of quality of life or health is more substantial, say 35%, this loss rises to almost \$50M.

The following table summarizes the economic benefits and costs for Windfarm Prattsburgh.

### **Quantified Benefits and Costs for Windfarm Prattsburgh LLC**

<b>Gross Economic Benefit</b>	\$93,000,000
<b>Economic Cost</b>	
Tourism	(\$120,000,000)
Property Values	(\$20,000,000)
Construction Delays	(\$1,000,000)
Avian Mortality	(\$2,000,000)
Public Health and Safety	(\$13,710,000)
Decommissioning	(\$60,000,000)
<b>Gross Economic Cost</b>	<b>(\$216,710,000)</b>
<b>Net Economic Impact (Loss)</b>	<b>(\$123,710,000)</b>

For every \$1.00 that comes into the community from Windfarm Prattsburgh, there is an offsetting cost of \$2.32. Or for every dollar that comes in, we lose \$1.32. Given that the benefits were calculated as “maximum possible benefits” over a full 20 years and that the costs were calculated using very conservative assumptions, it is likely that the actual economic damage from this project will be much greater than \$123,710,000.

### **Conclusions**

This DEIS is not fair, accurate, scientific, or complete in its examination of the complex and serious environmental impacts of this project. The quality of the experimental design, execution, and analysis is often inept and frequently naive. The consultants who supposedly did the work lack the knowledge, skills, credentials, and experience necessary for a fair and thorough examination of the issues. There are numerous situations where the consultants deliberately misrepresented and manipulated the facts. In some cases they just made up their own numbers. In other cases they intentionally left out pertinent information because it did not support the conclusion they were being paid to reach. An objective examination of this document concludes that the DEIS is a poorly assembled and intentionally fraudulent fabrication that deserves to be rejected. We trust that Labella Associates PC will so advise the Steuben County Industrial Development Authority, and that the Authority, in its capacity as Lead Agency, will put an end to Windfarm Prattsburgh LLC. The degree of fraud evidenced by this DEIS should prohibit them a second chance.

## **List of Attachments**

- A Energy Subsidies and External Costs, UIC Nuclear Briefing Issues Paper #7**
- B Summary of Wall Street Journal Article on the sudden decline of the Danish wind industry**
- C Affordable Avian Radar Surveillance Systems for Natural Resource Management and BASH Applications**
- D U.S. Department of the Interior, Fish and Wildlife Service documents**
- E Correspondence relating to negative economic impact of Windfarm Prattsburgh**
- F Comments from Public Hearing regarding human morbidity issues and low frequency noise**
- G Prepared Witness Testimony, Committee on Energy and Commerce**
- H Darmstadt Manifesto, paper on adverse impact of wind energy in Germany**
- I The Case Against Wind Power, Dr. J. R. Etherington**
- J Review of the Noble Environmental DEIS, Nina Pierpont, MD, PhD**
- K A Problem With Wind Power, Eric Rosenbloom**