

STATE OF NEW HAMPSHIRE SITE EVALUATION COMMITTEE

RE: Application of Antrim Wind, LLC for Certificate of site and)
facility to construct up to 28.8 MW of wind electric generation)
in the Town of Antrim, Hillsborough County, New Hampshire)
and operate the same (SEC Docket # 2015-02).)

SUPPLEMENTAL PRE-FILED TESTIMONY OF RICHARD BLOCK

Q: Please state your name and address.

A: Richard Block, 63 Loveren Mill Road, Antrim, New Hampshire 03440.

Q: What is the purpose of this testimony?

A: To provide supplemental information to prove that the revised turbine proposal as currently before the Site Evaluation Committee ("SEC"), Docket # 2015-02, is virtually unchanged from the proposal denied by the SEC in Docket #2012-01.

Q: What is an additional purpose of this supplemental testimony?

A: To provide several published articles demonstrating that the Applicant has provided false information to the media claiming broad support among the residents of Antrim, and that their claim is totally unfounded.

Q: Is there any other purpose of this supplemental testimony?

A: To bring forward from SEC Docket #2012-01 a series of photographs included with testimony submitted by Susan Morse, wildlife tracking expert hired by the non-abutting

intervenors, demonstrating some significant signs of wildlife activity on the Tuttle Hill/Willard Ridge, along with photographs of the extensive boulder formations which would be demolished with the construction of AWE's access road.

Q: What details can you add to demonstrate how little changed the present proposal is from the original denied configuration?

A: The September 10, 2015 Prefiled Testimony of John Kenworthy states on pages 8 and 9:

“the turbine heights from foundation to blade tip were reduced from the previous project design. In 2012, all 10 turbine heights included in the application were approximately 492 feet. In the reconfigured Project design, AWE has significantly reduced the height of turbine # 9 to eliminate visibility of the tower and nacelle from Willard Pond and thus substantially reduce its visual impact. Turbine #9 will now be 446.2 feet, which is a 45-foot reduction from the prior proposal. AWE has also reduced the height of turbines # 1 – 8. Turbines #1 – 8 will be 488.8 feet from foundation to blade tip. These changes collectively represent a substantial difference in the configuration of the proposed facility.”

The reduction in height of turbines # 1 – 8 from 492 feet to 488.8 feet (only 38.4 inches) is totally insignificant. This represents a change of less than two-thirds of 1%, by no means “a substantial difference.” It is impossible for a factor of -0.0065 to result in any discernable change in the results of the calculations used to determine the visibility on the viewshed maps. As illustrated in Attachment RB(Supp)-1, the change in turbine models from the Acciona AW 116/3000 to the Siemens SWT-3.2-113 results in almost no alteration of the visual effect on the landscape.

The reduction in height of turbine #9 is likewise insignificant; the height reduction of that turbine is only 8.7% from the remaining turbines. At over 91% of their height, this turbine would still be over 170 feet taller than the tallest building in the state and still taller than any turbine now in operation in New Hampshire. This minor reduction cannot possibly “substantially reduce its visual impact.” [See Attachment RB(Supp)-2]

When these inconsequential changes to the turbine heights are considered in combination with the almost identical footprint of the current proposal to the “previous project design” as illustrated in my Prefiled Direct Testimony of May 23, 2016 in Exhibit RB-2 of that

document, it is plain to see that there would be negligible difference in the visual impact of the present proposal from that of the previous design in Docket #2012-01 which was rejected by the SEC in its “Decision and Order Denying Application for Certificate of Site and Facility” issued on April 25, 2013. That Decision declared that the project “is simply out of scale in context of its setting and adversely impacts the aesthetics of the region in an unreasonable way.”

Q: Have you found false statements made by the Applicant as to the support of the proposed project from the residents of the Town of Antrim?

A: Mr. Kenworthy has repeatedly claimed that the Antrim Wind Project has broad and majority support from the residents of Antrim, yet these claims are unfounded and not true as demonstrated by the facts of any and all votes held in the town. In an interview quoted in *Renewable Energy World Magazine* in an article titled “Siting a Wind Farm in the Most Challenging Place in the US” dated March 2, 2016, Mr. Kenworthy states that “the project was overwhelmingly supported by the town of Antrim... The town of Antrim has been behind us for six years. The support has been demonstrated in referendum, in votes across the town...” [see Attachment RB(Supp)-3]

The fact remains that there has never been a legitimate referendum held in Antrim to determine how the voters feel about an industrial wind facility in town generally nor about AWE’s proposals specifically. In the most recent of the “votes across the town,” a proposed Zoning Ordinance amendment written and petitioned by AWE in March of 2014, the 390-278 vote defeat for them clearly demonstrated that there is no “overwhelming” support. In a newspaper article in the Hillsborough, NH *Villager* (“Big Wind blown away”), Gordon Webber, chair of the Antrim Selectmen at that time and a “spokesman for Antrim Wind” said “...at the end of the day, it was a clear decision by the voters. The voters are never wrong.” Another interviewee pointed out that “Proponents tried to make this a referendum on wind; if so, it failed pretty badly.” [see Attachment RB(Supp)-4]

Another article about this vote published in the Monadnock Ledger-Transcript (“Voters kill wind petition”) points out that in fact, since there were so few pro-wind people in town to demonstrate support at the polls, AWE resorted to paying people from towns such as Hillsborough and Concord to stand outside of the Town Hall and hold signs in favor of their

petition. [see Attachment RB(Supp)-5]

Q: Do you have other concerns about the impact this project would have on the Tuttle/Willard ridge?

A: Jack Kenworthy, on page 13 of his Prefiled Testimony dated March 3, 2016, states that development of this industrial wind turbine facility in Antrim's Rural Conservation District is appropriate because "there are no significant environmental impacts" and that "most of the Project impact will be temporary..."

On July 10, 2012, as part of the research in preparation for testimonies submitted in SEC Docket # 2012-01, a group led by Susan Morse hiked, examined, and documented the existing natural conditions on most of the Tuttle/Willard ridge. Ms. Morse is an internationally respected expert in wildlife ecology, natural history and tracking, Members of the group included intervenors Geoffrey T. Jones, licensed New Hampshire forester and former Director of Land Management for the Society for the Protection of New Hampshire Forests; Francie von Mertens, Trustee of New Hampshire Audubon and graduate of Keeping Track's KTMP wildlife habitat monitoring training; Richard Block, graphic specialist, former cartographer, and graduate of Keeping Track's KTMP wildlife habitat monitoring training; and Brenda Schaefer, abutting landowner and amateur naturalist.

It was obvious to this group that the ridge contained extensive habitats for numerous wildlife and the signs of it were abundant. [see Attachment RB(Supp)-6] The construction of an access road and clearings for the turbines would clearly and permanently disrupt these habitats in a most destructive way.

Of utmost concern was the region of huge boulder formations walked through along the flagged location for the proposed access road. [see Attachment RB(Supp)-7] Ms. Morse's Prefiled Direct Testimony for SEC Docket # 2012-01 dated July 31, 2012 states on pages 9 and 10:

"The rugged and sometimes massive boulders – evidence of Pleistocene surficial geology – are as exquisitely beautiful as they are impressively rugged! Huge erratics augmented by post-glacial fracturing create a unique environment in which mosses, lichens, ferns and herbaceous species flourish and embody life's tenacious but fragile hold on this once stark

landscape. All who were present on our field walk that day were deeply disturbed to think that this remarkable landscape would be blasted, blown up, and reduced to rubble that would then be used to surface a road that shouldn't be there. This is steep and sensitive habitat. This ridgeline should be conserved. This natural area is too special and deserves much more study of its additional potential treasures, including unique geological features and rare plants."

When considering that these extensive "exquisitely beautiful" boulder formations and rare and valuable habitat for bear, bobcat, and fragile plant life would be totally and permanently blasted away during road construction, it is not possible to conceive that "most of the Project impact will be temporary."

Q: Is there anything else you would like to include in this supplemental testimony?

A: Yes. I am including the "Antrim Planning Board Land Use Survey" from March 9, 2010. [see Attachment RB(Supp)-8]

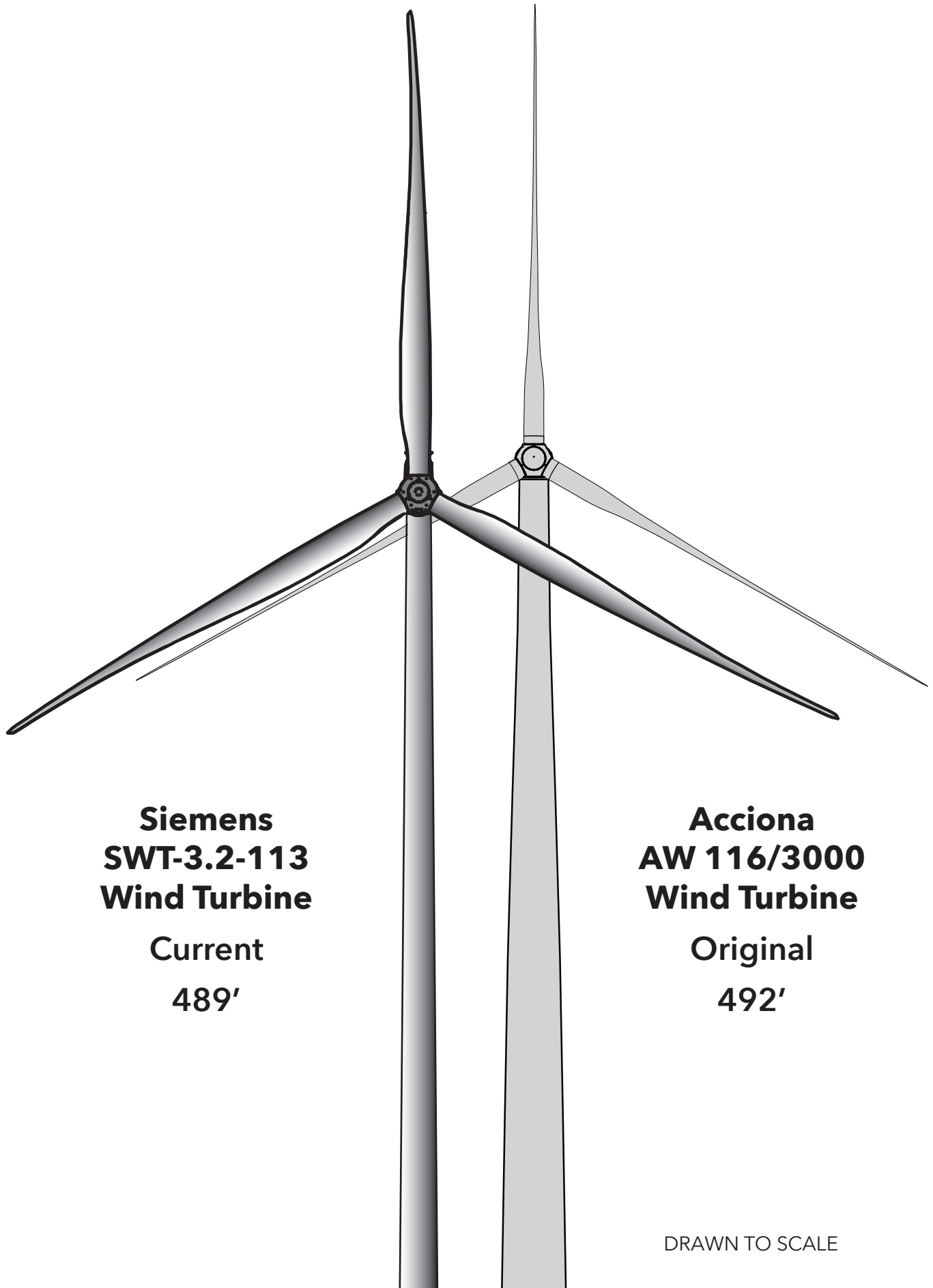
Q: Does this conclude your supplemental testimony?

A: Yes, it does.

Exhibit RB(Supp)-1

Comparison of Siemens vs. Acciona Wind Turbines

*Comparison of the proposed Antrim Wind turbines:
Current proposal vs. original proposal*



**Siemens
SWT-3.2-113
Wind Turbine**

**Current
489'**

**Acciona
AW 116/3000
Wind Turbine**

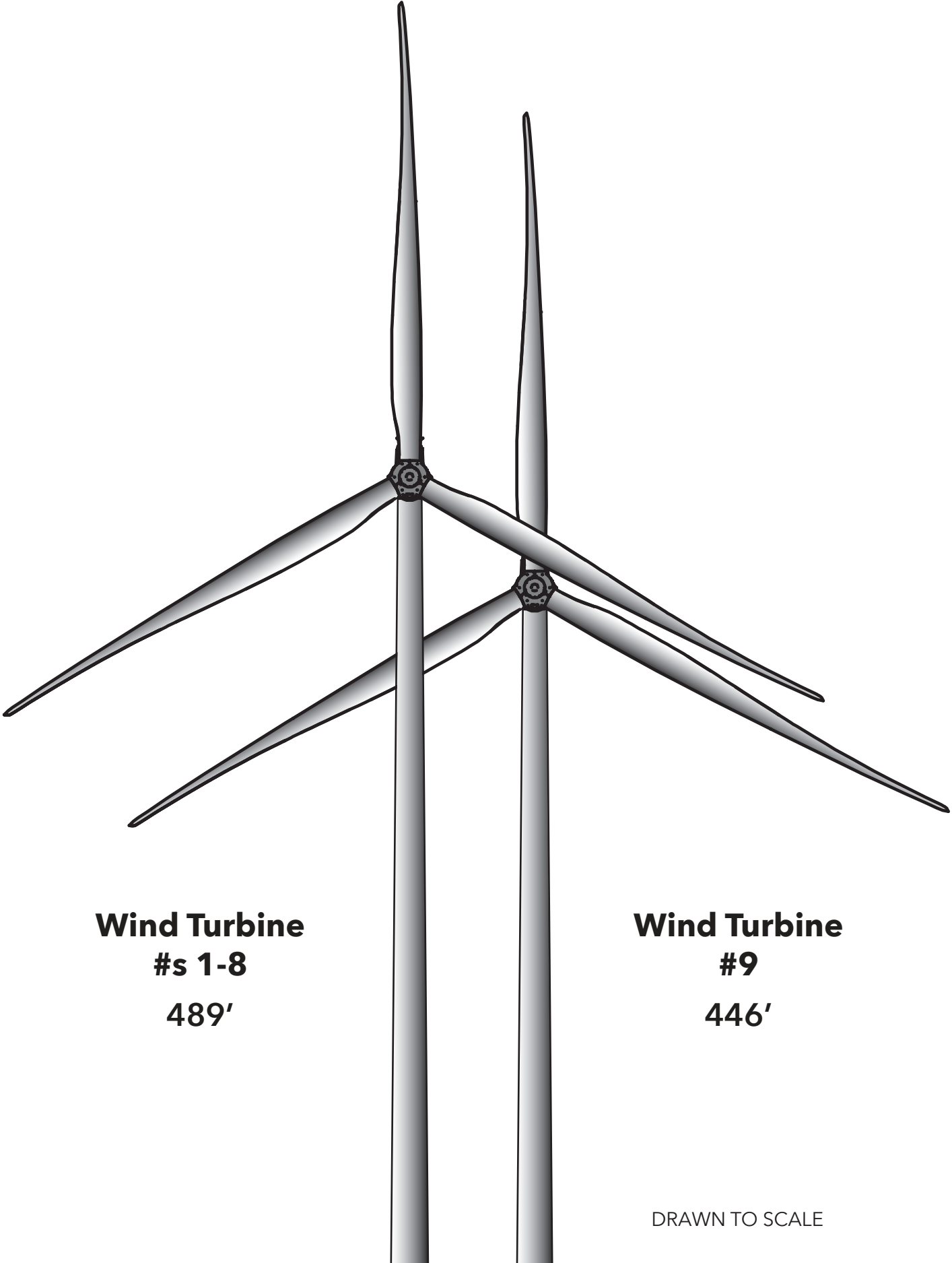
**Original
492'**

DRAWN TO SCALE

Exhibit RB(Supp)-2

Comparison of Turbines #1-8 vs. #9

*Comparison of the proposed Antrim Wind turbines:
Turbine #s 1-8 vs. Turbine #9*



**Wind Turbine
#s 1-8
489'**

**Wind Turbine
#9
446'**

DRAWN TO SCALE

Exhibit RB(Supp)-3

“Siting a Wind Farm in the Most Challenging Place in the US”
Renewable Energy World Magazine, March 2, 2016

Siting a Wind Farm in the Most Challenging Place in the US



Developer: “It’s a bit of a bellwether for what the future looks like.”

March 2, 2016

By Jennifer Runyon
Chief Editor

According to Jack Kenworthy, CEO of Eolian Renewable Energy, a project developer based in New Hampshire, the best wind projects are those that have died two times because then you know what’s wrong with them. The project he is currently working on is known as Antrim Wind Energy (AWE), a 28.8-MW wind farm on the Tuttle Hill ridge line in Antrim, N.H. in the United States.

On a windy day in late February, Kenworthy, Henry Weitzner with Walden Green Energy, a subsidiary of German utility RWE, and landscape architect David Raphael with Landworks, took several members of the New Hampshire Site Evaluation Committee (SEC) on a site inspection tour to show them how AWE will impact the community in which it resides.

EXHIBIT 8: VISUAL SIMULATION OF PROPOSED CONDITIONS FROM GREGG LAKE, ANTRIM (SHEET 2 OF 2)
ANTRIM WIND VISUAL ASSESSMENT April 2015

Existing Conditions Photograph	View Location Map	Simulation Information
		<p>Turbine Information</p> <p>Model: Siemens SWT 3.3 / 113 Hub height: T1 - T8 302'-0" (92.5 m) T9 380'-10" (79.5') Rotor diameter: 370'-0" (113 m) Overall turbine height: T1 - T8 488'-10" (149.01 m) T9 445'-0" (135.67 m) Date and time: 7/11/14, 8:02pm Weather conditions: Windy sunny</p> <p>Photograph Information</p> <p>Location: North Shore of Gregg Lake, facing south at 43.0431850000, -71.9879250000 Camera elevation above sea level: 1,257.388' (383.3m) Simulation viewing distance: 19' (6.828 cm) Focal length (35mm equivalent): 55mm Distance to nearest existing turbine: 1.71 miles (2.74 km) Furthest visible turbine: 1.83 miles (2.95 km)</p> <p>Technical Information</p> <p>Software: ARCADIS Aechas 10; Nemetschek Vectorworks 2015; SketchUp Pro 8; Adobe Photoshop CS6 Digital elevation data source: USGS National Elevation Dataset (NED) 1/3 arc-second</p>

NOTES:

- This visual simulation is based on GIS data obtained from the New Hampshire State GIS and the USGS National Elevation Dataset (NED) and is not intended to be used as a legal document and is not guaranteed by Landworks.
- This simulation represents a visual assessment of the proposed wind farm and does not represent actual construction, siting, or construction.

Prepared by LandWorks, Middlebury, VT
 Prepared for Antrim Wind Energy, LLC, Patten, NH

Image, right: visual simulation of the AWE as it will be seen from Gregg Lake in Antrim, NH. Credit: AWE.

This wasn’t the first time Kenworthy and the SEC had driven in vans around Antrim and surrounding towns on a site inspection tour. Back in 2012, AWE went through the exact same process before the project was ultimately denied.

New England Wind Projects Challenging

In all of the U.S., New England is among the most difficult places to site wind projects. Walden Green Energy's Henry Weitzner said this one has been one of the worst. "Walden has looked at about 15 different projects," he said, adding, "We have looked at Texas, Minnesota, North Dakota, Utah and California, and I would say that there definitely are some issues in California but this is overwhelmingly the most difficult."

So why even try? Going back to 2009, Kenworthy explained he had originally viewed the process of building a wind farm in the state of New Hampshire as the most reasonable of all the New England states. At that time there had been three wind projects that had gone through the SEC process. "The process itself was long and expensive and kind of painful for all those projects but at the end of the day they were able to be built," he said.

Unfortunately, that wasn't the case with his project, which was not modified or conditioned but outright denied "at the 11th hour on a subjective issue" he said. The reason for the denial was adverse aesthetic impacts.

Rather than give up, Kenworthy altered the project, dropping one turbine all together and modifying the height of another to lessen its visual impact. Further, he swapped out the Iberdrola turbines with higher-rated Siemens turbines so he could deliver the same amount of power to the grid with fewer turbines.

Since a few years had passed, he was also armed with more direction regarding what benchmarks the project needed to meet. "Noise is very clear to us — it is a 40 DBA standard. Shadow flicker is very clear — it is an 8-hour per year standard. We can meet that," Kenworthy said.

Finding Good Sites

Kenworthy said part of his tenacity in building the AWE project is that it is the best sited wind project in the state. Not only because of the excellent wind resource, but also because the project can be built close to existing transmission lines and close to a main highway, so there is no need to build new transmission nor is there any roadway impact.

"Look, good wind sites, nowadays in New England are extremely rare. This is one of them. In fact, it's not just a good wind site, it's a great wind site," said Kenworthy.

In addition, through both iterations, the project was overwhelmingly supported by the town of Antrim, save a few vocal residents.

"The town of Antrim has been behind us for six years. The support has been demonstrated in referendum, in votes across the town, and it's been demonstrated in consistent unanimous support from the board of selectmen," said Kenworthy. "I think without that we wouldn't feel as comfortable coming back in front of the committee."

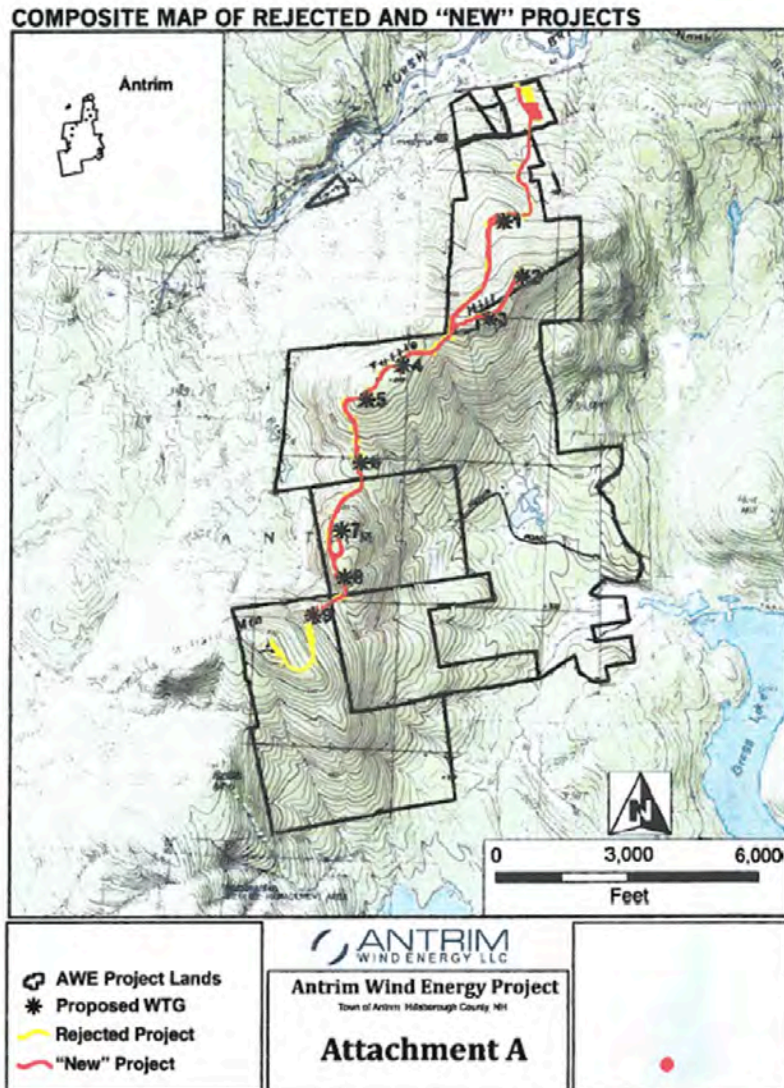
David Raphael also believes that the AWE project is one of the best in New England but he's looking at its visual impact.

"Having worked on wind projects for almost 25 years now including the first one built in New England in recent history, this project is one of the best sites, if not the best site in New England," he said. He added: "From a visual and aesthetic impact, you couldn't find a project with less impacts overall in the viewshed that are substantive, I believe, than this project."

Aesthetics

The reason for the first denial was an unreasonable adverse aesthetic impact so this second time around it was important that Kenworthy and Raphael carefully consider that issue.

“What we’ve tried to do is create more objective standards to get our arms around aesthetics,” said Raphael.



He explained that while it’s true people are going to see the turbines, other considerations are important as well. For example, “whether they are going to see it in their front yard... what they think about wind energy in general...whether they think a turbine is a beautiful example of industrial design or not,” he said.

Also important to consider is how viewing a turbine is going to affect what you are doing, said Raphael.

“If you are there for the view, then the effect on what you are doing is pretty high. If you are there to fish in a little cove and you don’t care about a view, then the effect is pretty low,” he said.

Kenworthy is convinced that the large amount of public support that AWE enjoys will ultimately help usher it through. In this second time around a broad coalition of environmental and other NGOs have pledged support for it. In addition, four state congressmen and one state senator have all written in support of AWE.

Image: The original project shown by a yellow line, the new project in red. Credit: Antrim Wind Energy.

Kenworthy said that public officials “historically would keep their head down in situations like this because it’s contentious” so having their support is “pretty unprecedented.”

He explained: “Look, the unreasonable adverse effects could only affect people,” he said. “You can’t have an unreasonable adverse effect that birds or bears are going to observe it.” So if the issue comes down to people then “when you have this broad a group of stakeholders supporting this project it’s hard to see how you conclude that there is an unreasonable adverse effect because of aesthetics,” he reasoned.

Raphael explained that in the neighboring state of Maine, The Wind Energy Act states right at the beginning that wind power, by its very nature, will be visible.

“Wind is located in areas where it has to have free and clear access to the resource. That visibility alone should not and does not translate into an adverse impact,” he said.

This means that proving a wind farm won't have an adverse impact is the responsibility of the developer but by the same token, proving that it will is the responsibility of the individual or organization that is claiming the impact is unacceptable. It gets very technical very quickly.

“If individuals are aggrieved or parties are aggrieved then [the onus is on them] to create a case for the extent to that grievance and whether that grievance is outweighed by the benefits of the project,” said Raphael.

The Vocal Opposition

During the public meeting for AWE, which took place after the site inspection tour, about 40 people requested to speak with those in favor of the project outnumbering those opposed by about 2 to 1. Major concerns for the opposition were the earth itself and how it will be altered by the construction of an “industrial wind project.”

“AWE will compromise and degrade the land. It's not just someone's backyard,” said one town resident.

Another speaker who was involved as a witness for the NH Audubon for the first project said she was speaking for herself this time around: “We don't believe that we should support industrial energy projects,” she said. She said she favors energy conservation.

Several opponents said they believed that the size of the turbines was out of scale for the terrain. “The difference between the base of the hill and the summit compared to the height of the turbines is grossly out of scale and inappropriate.”

One woman was concerned about the noise. “We know now that noise hurts living things. I have been by Leominster [the location of another wind farm in the state of NH]. It's like a jet plane that doesn't go away. I am against this project,” she said.

As Always, there is a Bigger Issue

With fewer wind farms than you can count on one hand in the state of New Hampshire, Kenworthy believes that the Antrim wind farm is a bellwether for future development in the state. He pointed to national organizations that have come out in support of AWE as examples of the economic power that renewable energy can create.

“The International Brotherhood of Electrical Workers is intervening in our docket because they are concerned that the jobs that they get from these projects are going to go away...The NH Sierra Club is writing a letter strongly in support for the same reason,” said Kenworth.

Kenworthy said that if AWE is denied again, it will stifle investment in the state's economy for a least a decade if not more. If it is approved, however, the reverse will be true.

“If you can go through this process in a fair and reasonable way, come out the other side and build a great project like Antrim, I think it opens up the door for a lot more really great carefully sited and well-developed projects,” he said.

The SEC is expected to issue a final decision regarding a permit in November or December this year.

Exhibit RB(Supp)-4

“Big Wind blown away”
Villager, March 14, 2014



Big Wind blown away

By **MICHAEL PON**
The Villager

For some years in Antrim proponents of big wind, or renewable energy produced by industrial turbines in the Tuttle Hill area of town, have claimed there was a silent majority of residents in favor of it. However, a big wind ordinance written by developer and Antrim Wind CEO Jack Kenworthy, which was petitioned to the warrant by 42 signatures of residents, lost in Tuesday's official ballot, with 278 yes votes to 390 no votes.

A number of Antrim residents claimed that the vote on this petitioned ordinance would serve as an up or down vote on big wind in town. Gordon Webber, a spokesman for Antrim Wind and chairman of the selectmen, was one of them. When asked

if he still considered the vote to be a referendum on wind, he said he was no longer sure.

"I don't know," said Webber. "I've always said the voters are never wrong. Why the vote was the way it was? You, me, anybody can spend a lot of time psychoanalyzing that. But at the end of the day, it was a clear decision by the voters. The voters are never wrong."

But turn the prism of the vote to catch the light of another perspective, asked if the vote was more of a reaction to a developer from out of town writing the ordinance, Webber answers somewhat differently.

"Well, that certainly could play into it. We could psychoanalyze this for quite some time," Webber acknowledged

ANTRIM WIND
continued on page 5

Antrim Wind from page 1

on Wednesday. "I haven't really talked to anybody about it yet, so I haven't gotten any feedback."

Brian Beihl, who opposed the big wind proposal and the petitioned ordinance, put it in his own words.

"Antrim voters, most of whom support clean energy, have spoken and made it clear that developers don't dictate zoning in the town of Antrim, whether it's a Wind Farm or a Walmart," said Beihl. "Proponents tried to make this a referendum on wind; if so, it failed pretty badly. But I think that the voters saw this zoning amendment for what it was: A document benefiting a particular company with questionable ties to town government, and lacking the substance and protections of real zoning. Proper zoning is created and vetted by its citizens, planning professionals and experts."

There were only two races for seats on town boards. Incumbent John Robertson kept his own seat with 261 votes to Robert Holmes' 227 votes and Jeanne Cahoon's 107. On the Planning Board, former alternate Janet McEwen won one of the two open seats with 379 votes, with Michael Frosh Jr. running up for the second seat with 325 votes, leaving Elsa Voelcker out of the mix with 282 votes.

With Charlie Levesque and Martha Pinello, both critics of the failed petitioned ordinance and authors of the preceding two big wind ordinances crafted by the Planning Board, which also failed, were known for their opinions.

So is McEwen, who also found fault with the petitioned ordinance. But Frosh's opinion is not known, and may change the balance of the Planning Board in regards to big wind, or not.

"Not speaking for Antrim Wind, but the town, my thought is the wind issue is not going to go away," said Webber. "I think the town does need an ordinance. I personally, not as a selectman, think the town should have an ordinance regarding big wind. But if the Planning Board writes a new ordinance, will voters feel better about that? I don't know."

Then there are Webber's thoughts on what an ordinance would look like at this point.

"A Planning Board could basically take the current proposal and combine it with the previous ones and tweak them and modify them," Webber suggested. "All three of them failed, so what part of them caused the voters to vote them down? The problem is when people vote, they don't say it is because they don't like this particular line or wording. Is it too restrictive or not enough? To craft something that would pass – how do you do that? But then the goal should not be let's write an ordinance that will pass, but rather just write a good ordinance."

Whatever way a new Planning Board may look at this issue, it is obvious that – with the failure of the petitioned ordinance on the heels of the State Site Evaluation Committee denying Antrim Wind a permit last year – big wind has been stalled in Antrim, if not blown away entirely for the time being.

Exhibit RB(Supp)-5

“Voters kill wind petition”

Monadnock Ledger-Transcript, March 13, 2014

Voters kill wind petition

By Lindsey Arceci

Monadnock Ledger-Transcript

ANTRIM — With a 390 to 278 vote, Antrim residents turned down the proposed zoning amendment to allow for the construction of commercial wind farms. On Tuesday, residents holding Amendment 5 signs lined Main Street, going past the Town Hall; the signs alternated almost equally between Yes and No.

"I'm really grateful to the town, to come through and protect the town's interest," Sarah Gorman of Antrim said in an interview Wednesday. "I'm not gloating, I'm optimistic. The intent of the zoning is saved."

Although there are no wind projects currently on file in Antrim, Gorman said, "I don't think these guys are going to quit," referring to the writers of the ordinance, Antrim Wind Energy of the Eolian Renewable Energy company. Antrim Wind had previously proposed a project for a 30 megawatt, 10-turbine wind farm to be built on Tuttle Hill and Willard Mountain. The project was denied by the N.H.

See WIND - 4

Antrim's wind petition fails by more than 100 votes

From WIND - 1

Site Evaluation Committee, citing visual impact.

If the ordinance passed, a potential wind farm could have been built in the rural conservation district in town. "This is rural conserved area for a reason. We have historical sites up there. We have nesting eagles," Gorman said.

An ongoing topic at the polls Tuesday was the issue of non-residents holding signs in favor of the ordinance. Gorman has lived in Antrim for over 30 years and said she only recognized two of the people outside of Town Hall campaigning for the petition. Gorman said she went over to a woman who was

holding a pro-wind sign and asked her where she was from. Gorman said the woman told her she was from Hillsborough and she was paid by Antrim Wind to hold up the sign.

Project Manager for Antrim Wind Energy John Soininen did not return phone calls seeking comment by press time.

John Szehi, an Antrim resident since 1996, said Wednesday that he went up to people that he didn't recognize and also asked them where they were from. Szehi said the responses included Hillsborough and Concord.

"My feelings are not against wind, earth or solar, my feel-

ings are against Eolian and how they conducted business," Szehi said. "This is not something that happened over night, they have been very persistent with getting their way. It's a profit-making company, they have got quite a niche here and I don't think they're going to give it up."

If a wind ordinance were to pass in Antrim, Szehi said the town would need to "deal with an honest company."

Those in favor of the ordinance felt that renewable energy is an important goal and could prosper in town.

"I'm obviously disappointed that it didn't pass, what do you do?" Anne Enman of Antrim said Wednesday. "Everybody should try and conserve, but we need to find something else besides coal and nuclear."

Enman said the wind debate came down to a "not in my backyard" mindset among residents. "I don't know what the solution is if we're not willing to put a wind farm in our town. I think we need to do wind and solar, and everyone needs to do it, not someone, somewhere else," she said.

"Obviously I'm disappoint-

ed, I thought it would pass even though I thought it would be close," resident Tim Perry said in an interview Wednesday.

Perry said he felt protected by the ordinance. "I thought it covered all the bases that needed to be covered. The process doesn't begin and end with an ordinance. A number of other processes need to happen."

He agrees that this is not the end of the wind discussion. "I don't think it's going to be the end. I think Antrim Wind Energy will take a step back and look at what to do." His concern with the denied zoning amendment is that by 2025 New Hampshire state law says that the state needs to have 25 percent of its electricity come from renewable energy. "If we're going to achieve that, it's going to have to be wind."

In other voting results, incumbent John Robertson was re-elected to the Select Board. Robertson won with 261 votes, but Robert Holmes was close behind with 227 votes; and Jeanne Plourde Cahoon received 107 votes.

Lindsey Arceci can be reached at 924-7172, ext. 232.

Exhibit RB(Supp)-6

Wildlife evidence on the Tuttle/Willard Ridge
Photographs by Susan Morse, July 10, 2012



This scrape was found early on our walk. It was created by a resident bobcat which was posting a scent message to others of its species. Interdigital glands between the toes leave secretions within the scratched and piled materials. Looking at this photograph, my colleague's hand is at the back of the scrape where the bobcat's hind feet have piled the materials upon which the interdigital gland secretions are sometimes combined with feces and urine to create the scent mark. Individual bobcats announce their social and sexual status through these marks and also post their whereabouts within their habitat.



This power pole exhibits fresh scent marking performed by a black bear. At the top of the picture I have placed small sticks into the oblique pairing of two holes which were created by upper and lower incisor teeth. The sticks demonstrate that the two incisors which performed the bite were opposite from one another. Resident bears regularly scent-mark throughout their habitat to minimize unwanted contact and conflicts with each another. At other times scent marking is utilized to facilitate contact with potential mates.



A close-up of the power pole described above shows a bear hair which became attached to the pole within the splintered wood created by the bitten and clawed surface. This hair is white because it is undoubtedly from a white chest blaze which many black bears have. Rubbing of the marked surface is a common behavior of black bears, probably because unique body scents associated with sebaceous oils add to the desired olfactory communication.



This picture depicts a heavily browsed tree which over time became “broomed” and ultimately killed. Too many moose can certainly compromise the food- making plants within their habitat. We saw an tremendous amount of moose sign on Tuttle-Willard Mountain, particularly along the ridgeline.



These fresh scars are caused by the lower incisors of a feeding moose that removed the bark with its teeth in order to eat the contents of the inner bark and sap flow. We found a tremendous amount of barking sign like this throughout the Tuttle-Willard Ridgeline habitat.



To prove that there has been a long-term presence of residential moose within the Tuttle-Willard Ridgeline environment we also looked for older evidence of moose “barking” trees and browsing. This old scar which had completely healed over was created by a moose roughly four or five years ago.



New Hampshire Audubon’s Francie von Mertens and neighbor and naturalist Nathan Schaefer discuss extensive moose feeding sign which we found in this area. These pin cherries have been killed as a consequence of excessive moose browsing. Abundant sign like this throughout the habitat convinced me that moose numbers are perhaps too great for this region, however, these impacts are self-limiting. Moose populations eventually decline as a consequence of declining opportunities for adequate nutrition.



Throughout the entire day we found considerable evidence of bear feeding sign. Here young naturalist, Nathan Schaefer, is posing beside an American beech tree which, top-to-bottom, has been scarred by the claws of a bear which climbed the tree in order to access and eat beech nuts. I found numerous trees exhibiting this kind of sign—new and old alike. In addition, the quality habitat that exists along the ridgeline and adjacent slopes also provides a highly supportive diversity of mast-producing trees and shrubs. This is great bear habitat!



Highly skilled tracker, Scott Semmens investigates a day bed site that I found beneath a large old growth hemlock. The few old growth trees we examined there will be destroyed by the installation of the proposed wind power facility. This is most unfortunate because the trees are few in number and highly important to female bears with young cubs. Biologists throughout the range of black bear recognize that large coniferous “refuge trees” are critical to the well-being of infant cubs, especially in spring and early summer. A female bear uses these trees to hide and protect her cubs while she forages nearby. Potential enemies typically cannot access the cubs high within the crown of a refuge tree like this hemlock. When the mother bear returns from feeding she will often rest beneath the tree and call her infant cubs down to her in order to nurse them.



The large hemlock tree described above was “scent marked” by the bear that used the day bed site. Note the claw marks which are reddish-looking because they are relatively fresh and were made this spring or early summer.



Many of us found bear feces throughout the day. This segment of one feces pile is from a spring feeding bear and shows that the bear was feeding on ants and wild strawberries, to name just two of the dietary choices that this bear enjoyed earlier this summer.



Years ago I discovered that one could better visualize exactly how bear scent-marking wounds were created by simply using a bear skull to re-enact the bite. Photo 1113 is a picture I took at Wolfrun, my study area in northern Vermont, and the photo shows that the upper canine has inserted into the wood and held fast while the long scar is created by the lower jaw which actually performs the bite. Thirty eight years of research at Wolfrun and throughout the northeast has helped me appreciate that looking for bear scent-marking sign is easily found if one concentrates on looking for conspicuous white birches along ridgelines. Throughout the day I found multiple examples, both new and old, of bears scent-marking on birches along the Tuttle-Willard Ridgeline. These pictures depict some of the trees we studied.





Old rotten stumps and logs are often clawed open by black bears in order to access and eat colonial insects, especially the eggs and larvae of carpenter ants and other species. This is but one of the many examples of “grubbing” that I discovered throughout the day. In years of limited soft mast, bears will eagerly seek out even more of this kind of foraging opportunity so as to benefit from the protein-rich insects that can be found there.

Exhibit RB(Supp)-7

Clearing and boulder formations on the Tuttle/Willard Ridge
Photographs by Richard Block, July 10, 2012



Met tower from site of
Turbine #3



Clearing for road



Approaching clearing for site
of Turbine #3



Clearing for Turbine #5



Clearing for Turbine #3



Location of Turbine #3



Location of Turbine #6



Location of Turbine #8



Location of Turbine #9



Location of Turbine #10A



120-year old red oak stump



Wetland delineation



Large boulders along
proposed road



Large boulders along
proposed road



Large boulders along
proposed road



Large boulders along proposed road



Large boulders along proposed road



Large boulder on summit of Willard Mountain, 50 yards from turbine site



Vernal Pool next to turbine clearing



Red-eyed vireo nest along proposed road

Exhibit RB(Supp)-8

Antrim Planning Board Land Use Survey
March 9, 2010

Antrim Planning Board Land Use Survey

Election Day - 3/9/2010 - 100 surveys (484 voted in Town Election)

Are you in favor of commercial wind energy?

Are you in favor of wind energy, would the view of a wind tower/s from your home bother you?

Do you think that wind turbines/towers should be excluded from any zoning districts in Antrim?

Village Business District

Highway Businesss District

Residential District

Lakefront Residential District

Rural District

Rural Conservation District

Steep Slopes District

Wetlands District

Do you think we need improved cellular phone coverage in Antrim?

If you are in favor of better cell coverage, would the view of a cell tower from your home bother you?

Do you think that cell towers should be excluded from any of the zoning districts in Antrim?

Village Business District

Highway Businesss District

Residential District

Lakefront Residential District

Rural District

Do you think that cell towers should be excluded from any of the zoning districts in Antrim? (con't)

Rural Conservation District

Steep Slopes District

Wetlands District

Are you in favor of more commercial/business development in Antrim?

	Yes	No	Other	Total Votes	
	81	15	⊙	96	84.4%
	23	70		93	24.7%
	43	48		91	52.7%
	14	73		87	83.9%
	42	54		96	56.3%
	44	53		97	54.6%
	14	66		80	82.5%
	29	64		93	68.8%
	24	64		88	72.7%
	54	40		94	42.6%
	41	53	don't know	94	43.6%
	44	46		90	51.1%
	50	43		93	53.8%
	20	57		77	26.0%
	58	33		91	63.7%
	54	31		85	63.5%
	32	53		85	37.6%
	Yes	No	Other		
	40	45		85	47.1%
	33	49		82	40.2%
	56	30		86	65.1%
	57	20		77	74.0%

Comments:

- ✱ No on zoning districts but it should not be carte blanche
- ⊙ In favor of wind energy - only if the energy is used for my house, in the TOA & we see a significant decrease in energy cost
- ✱ Nowhere near any homes!
- ✱ I think that people need to realize that we are getting our electric power from pollution producing coal plants in Ohio and because we can't see them - is that ok? NO! Wind energy is clean and would much rather see towers! Thanks!
- ✱ Wind energy is a benefit for all of us. Lempster has actually created a small tourism business out of their wind farm. While I find cell towers to be quite ugly, the sight of towers in Lempster, as well as off Rt 9 in Vermont is quite thrilling. Finally, someone is doing something positive for the environment, and our trade is in balance.
- ✱ Alternative energy enriches us all, cell towers benefit only the land owner, and large companies who make too much money already. apexnh@gmail.com
- ✱ Cell towers must be prohibited outright in the residential district, only be permitted in Commercial, Highway Business and Village Business, in rural areas by special exception only, with ordinance stipulations under that special exception that define that they cannot be seen or placed in proximity to any home, residence, or existing structure by a specific minimum lateral distance requirement which would be equal to one mile from any abutting property line, home, house, and existing structure.
- ✱ Industrial Wind Turbines belong in Industrial Zones not Conservation Areas
- ✱ My additional comments may be viewed from ZBA minutes 3/2009 to 1/2010 Thank you Maureen Watts
- ✱ Exclusions should not be carte blanche
- ✱ Cell towers should not be near any houses
- ✱ Cell towers in VBD and HBD if invisible
- ✱ Commercial business development in town only
- ✱ In favor of better cell coverage if the tower is made to look like a tree
- ✱ In LRD if taxed for view, if not taxed for view - no
- ✱ Yes to better cell coverage on Old Pound Road
- ✱ Cell tower in Res District - depends on impact
- ✱ Wind turbines and cell towers - depends on circumstances