

State of New Hampshire

**Site Evaluation Committee
Docket 2012-01**

**Antrim Wind Energy, LLC
Hearing on the Merits**

Post-Hearing Final Brief

Intervenor

Janice Duley Longgood,

Abutter

Background

I, Janice Duley Longgood, direct abutter to the AWE proposed industrial wind project, am submitting this brief pursuant to RSA 162-H to tell the Committee of my concerns for me, my family and the environment where we live if the Committee approves the AWE project. If the SEC approves this project, my home and my family will suffer the greatest impact.

I have been a resident of Antrim for 28 years and have lived in my current home the entire time. As I stated in my testimony, I purchased the home and property (51+/- acres) from my in-laws, who are now deceased. My home and property is at the end of Salmon Brook Road. My home is a little over 1 mile from Rte. 9 on the East side of Salmon Brook Rd. overlooking a beaver pond out onto the ridgeline on which the turbines would be built. (Lot map Abutters exhibit 3,4,5). (Correction from direct testimony day 9 afternoon session p.36 line 18 where I misstated that I was about 2 miles from Rte. 9. Although I made an error in my testimony, the location of my house in relation to the proposed wind project is established by the maps.). Building our home in this location was purposeful as we chose to live in this rural area due to the peace, quiet and abundant wildlife. If this Project is permitted it, will forever change the landscape, the atmosphere, and my ability to continue to live in the rural, quiet and peaceful place that I chose.

Other abutting land owners share concerns about the impact this project will have on their properties. The wind farm will forever change the environment and the enjoyment of living in a rural peaceful environment. All neighbors/ abutters have stated that they are opposed to the wind farm being permitted. All individuals who have moved here have made a conscious decision to move to the rural part of New Hampshire to experience peaceful quietude and many, including me, to enjoy their retirement years.

The property was in the Longgood family for 10 years before I took shared ownership, at the time the family owned 90 acres. My home is on the east side of Salmon Brook Road, about 800 feet from the road into the woods, in a hollow, from Salmon Brook Road itself. The home was intentionally oriented to face the ridgeline and to overlook the beaver pond; all large windows are facing south east to take advantage of the view and the sun. My home is the last year round residence on the road as you travel from Rte. 9. At my home I do not hear any road noise from Rte. 9. The town plows to the end of my driveway. I purposefully chose to live in this remote wilderness section of Antrim for the peace, quiet, abundant wildlife and privacy that it affords. I have established fruit trees (peach and apple), raspberries, blueberries, a large garden plot where organic gardening practices have enriched the soil over the years and have planted many perennials. We spend a lot of time outside and have a pool, hot tub and several decks. We cleared the land and built our home with purposeful intent. Over the years upgrades and home improvements have included an addition of a sizable family room, an entry room/mud room, an exterior out building, skylights and windows on the north end of the living room, new windows in the living room. The home was wired to include a transfer switch that is wired to the 200 amp box to power the home with a generator during power outages. Landscaping and road grading projects have significantly improved the land and enhanced access for safety. This is all in addition to ongoing basic maintenance.

The property has been protected as well by the Antrim zoning regulations that have designated this area the Rural Conservation District beginning in 1989. (Abutters Exhibit 4). My family and I have relied on this zoning designation. The zoning ordinance was supposed to ensure us that the improvements we made to the home and property were worth the effort toward the lifestyle we moved here to pursue. There is a presumption of continuation of land use policy

following years of covenants restrictions and rural conservation zoning. This industrial project is not congruous with the stated land use initiatives as stated in the Antrim Master Plan. A map was submitted as an exhibit by Antrim Planning Board, (APB 7 APB 1-21 map), which illustrates that the project area, including my home, is in the priority area for land conservation. In addition the Map *2012 HIGHEST RANKED WILDLIFE HABITAT BY ECOLOGICAL CONDITION*, the New Hampshire Wildlife Action Plan (NH Fish and Game) shows the Project Area as having many areas in the Highest Rank Habitat by Condition in NH. (NB Exhibit 3, LB 7).

The purpose of this brief is to plead the SEC to deny site and certificate for the AWE 10 turbine project in the rural conservation district of Antrim. This project would be comprised of what I understand to be the largest turbines in New England and be built by a developer that does not have a proven track record. The developer has not made any attempts to meet directly with concerned residents. The destruction to wildlife, rural mountains, and desirable habitat is not worth the benefit of an energy facility that is only capable of providing electricity 40% of the time at best.

As proposed the wind farm will consist of 10 turbines, 4 of which are closer than one mile to my residence. (The fifth turbine is one mile 280 feet). Turbine distance: Turbine 1, (T-1) 7,850 feet, (T-2) 7,763 feet, (T-3) 6,757 feet, (T-4) 4,669 feet, (T-5) 3,843 feet, (T-6) 4,119 feet, (T-7) 4,667 feet, (T-8) 5,521 feet, (T-9) 5,876 feet, and (T-10) 6,115 feet. (This information was provided at the technical session by Jack Kenworthy of Eolian.) (Abutters Exhibit 2). My home, my property will be surrounded by an industrial wind farm. The east side of my property line is 1,885 feet from the project site. This will forever change the way I live

my life and my ability to enjoy a pursuit of leisure and recreation. My home, my property will no longer exist as I enjoy it now.

Aesthetics/ Visuals

Expert testimony has established the following:

“The project itself will result in significant impacts to these priority conservation areas both in terms of habitat fragmentation and aesthetic impacts to the region. Benefits of the proposed conservation easements would be very limited in comparison with the impacts of the project. The project would remain for up to 50 years and beyond this time restoration would be minimal leaving the regraded landscape in place.” (Exhibit PC-4 Jean Vissering, p.2).

The impact on the view of the night sky will be significant. Currently there is no light pollution, no visible lights at night. The impact of FAA lighting will be significant for those of us who have been accustomed over many years to the natural night sky. I do not see any lights from neighboring homes in the evening as the house is situated away from the road and neighbors.

If this project is approved, I expect I will see between 3 to 6 turbines from my home. (Motion to Compel Antrim Wind LLC to Respond to Data Request by Janice Duley Longgood” June 28, 2012. I requested a visual simulation from my home and was denied.) I currently see a beautiful ridgeline that is prime conservation land.

Sound

There is no question that I will suffer from sound pollution from the wind turbines. Applicant’s sound consultant Robert O’Neil determined that the sound levels on Salmon Brook Road will be up to 41 or 42 decibels, and my residence at approximately 3,883 feet from the nearest turbine, is closer to the wind turbines than the L3 location (4,200 feet from the nearest turbine) where Mr. O’Neil collected his data. (Transcript, Day 4 Afternoon Session, p. 92-93,

and Epsilon Associates Sound Level Assessment Report, p. 5-1 and 7-5). The sound from the turbines will be louder at my house than at L3 because L3 is farther from the turbines and L3 picked up road noise, which I do not hear at my house.

The other sound consultants involved in this case have not contradicted Mr. O'Neil's conclusion that the area around my home will experience the most sound. The other sound consultants have, however, criticized Mr. O'Neil's study in a way that indicates that if anything my home will experience even more sound than Mr. O'Neil testified.

Sound expert Gregory Tocci concluded that Mr. O'Neil under-calculated the sound that would be heard from the turbines at L3 by not taking into account that background insect noise is not always as high as it was during the time period that Mr. O'Neil collected his samples. (Exhibit PC-5, Tocci, First Supplemental Pre-Filed Testimony, p. 18.) Mr. Tocci characterized the sound impact on the Salmon Brook Road as "Significant residential impact", "25% chance of residents annoyed", "18% chance of very annoyed." (Exhibit PC-5, Tocci, First Supplemental Pre-Filed Testimony, p. 20.)

Additionally, acoustical engineer Richard James testified that "The Epsilon report focuses only on audible sound and relies on A-weighted sound levels for decision making. It summarily dismisses infra-sound and low frequency sound by stating that wind turbine sound does have such characteristics." (Exhibit NB-1, p. 8-9). Mr. James disagreed with Epsilon's statement, stating that

"other independent acousticians and medical professionals have repeatedly reported field tests showing that wind turbine sounds are heavily weighted to the infra and low frequency end of the acoustic spectrum. The level of annoyance produced by wind turbine noise also increases substantially for low frequency sound, once it exceeds a person's threshold of perception. A recent paper by Dr. Henrik Moller shows that as the wind turbines get larger (e.g. longer blades and higher towers) the sound emissions shift downward in the spectrum producing a lower dBA rating while the over-all acoustic energy in the lower frequencies

increases dramatically. There is no reason to assume that the proposed new turbine for the Project will not have a similar characteristic.” (Exhibit NB-1, p. 8-9).

Mr. James concluded that the “Information provided by Epsilon on behalf of the Project developer on topic of health risks, presence and significance of infra and low frequency noise, noise limits and setbacks, background sounds in rural communities and computer modeling studies are incorrect, incomplete, inadequate, and/or otherwise misleading.” (Exhibit NB-1, p. 13).

Based on the testimony of the sound consultants, if the SEC approves this project I will experience more than 42 decibels of sound, which is not only unpleasant and unwanted, but harmful. I have had significant health issues in my life and I am concerned about the impact of sound on my well being. I currently have problems with sleep, high blood pressure and as well as other medical issues. (Testimony of Janice Duley Longgood, Day 9, afternoon session p. 26, line 16). My daughter, who lives with me, suffers from Migranes.

Mr. Tocci also testified about adverse health effects from nearby turbines, and he discussed a recent study in Maine:

“In a presentation to the Maine Medical Association on March 20, 2009, Dr. Michael Nissenbaum presented survey data of 20 homes within 3400 feet of the Mars Hill Wind Project, comprised of 28 1.5MW wind turbines, in Aroostook County, Maine where he interviewed 15 adults. Among the data he presented were that: “93% of those interviewed experience sleep disturbance, 60% 5-7 times per week, 87% to a degree that they have consulted a doctor. 53% have increased headaches, 40% newly onset. 20% experience dizziness, and 20% unusual body sensations.” (Exhibit PC-2).

My home is only slightly further than the 3,400 foot distance in the Maine study.

Mr. James testified about health, too, stating that in his experience,

“wind turbine utilities that appear to meet local requirements in the permitting stage often produce sound levels at the properties and homes of people adjacent or within the Project that lead to complaints once operation commences. Many of these exceed the 40 dBA L(night-outside) limit set by the World Health

Organization (WHO 2009) for safe and healthful sleep. Exceedances of the WHO recommended levels will result in a high level of community complaints of noise pollution, sleep disturbance, and nuisance. In addition, there is mounting evidence that for the more sensitive members of the community, especially children under six, people with pre-existing medical conditions, particularly those with diseases of the vestibular system and other organs of balance and proprioception, and seniors with existing sleep problems will be likely to experience serious health risks.” (Exhibit NB-1, p. 13).

If the SEC approves this project, the sounds at my home “will no longer be the natural sounds of nature but instead the industrial sounds of wind turbines.” (Exhibit NB-1, p. 13). And “the belief that the noise from the roads and leaf rustle will somehow 'mask' the wind turbine sounds is not supported by current research.” (Exhibit NB-1, p. 13). Even if they were, I would not be benefitted because I do not experience road noise at my home.

Shadow Flicker

In his prefiled direct testimony, Applicant’s visual expert, John Guariglia testified that one residence is expected to experience 20-30 hours of shadow flicker per year. (Page 16, Lines 4-5, and Saratoga Associates, Appendix 13B, Shadow Flicker Technical Memorandum, p. 10, Transcript from Day 5 Afternoon Session, p. 111). That residence is mine, thus making me the citizen most impacted by shadow flicker in Antrim. Mr. Guariglia’s Shadow Flicker Technical Memorandum also states that “Potential mitigation options should be evaluated on a case-by-case basis, and may include the use of window shades, awnings and/or strategically placed vegetation. “ (P. 10).

I emphatically state that this constitutes a major change in my experience and enjoyment of my land and home. I spend a significant amount of time outdoors; shades and awnings would not provide me with adequate protection and would not mitigate the shadow flicker. And in my home, I should not be required to use shades to accommodate this industrial project. I do not choose to live my life in an industrial zone.

I disagree with Mr. Guariglia's conclusion that "it appears that the Antrim Wind Project will operate without any significant shadow-flicker issues." (Prefiled Direct Testimony, p. 16, lines 21-22). It appears that the Antrim Wind Project will have a significant shadow-flicker impact on me and my family.

Property Values

Property Value and change of condition: I contend that this project will have a major impact on property values of the homes in close proximity and viewshed to the project differing from the position stated by AWE. AWE states that property values are not impacted by Industrial Wind Turbines and cites the study by Professor Gittell: "Significantly, the Gittell study found that there is no evidence to suggest the Lempster Wind project has negatively impacted property values within the view shed of the project. Given that the proposed Project in Antrim has similar characteristics to the Lempster project, including especially the presence of hilly terrain and a high level of forest cover which limit visual impacts, it is expected that there will be no significant adverse impact on property values as a result of the Project. (Exhibit AWE #27, appendix 14-A). Even if Professor Gittell factors of "hilly terrain and a high level of forest cover" ARE generally applicable to the AWE project, they are in no way applicable to MY home and do not preserve the value of my home.

Mr. Block described shortcomings in Professor Gittell's conclusions, stating that "Professor Gittell, as an economist, relies solely on statistics to reach his conclusions. He does not appear to call upon any appraisal values and has considered only completed sales transactions. By his own admission, "There were very few transactions within a very close distance to the turbines, and also very limited sales of properties with views of turbines, so some caution must be used in interpreting these results' (P.28 in his conclusion)." (Exhibit NB-2

Block testimony p. 7, Exhibit RB1) . Professor Gittell’s study does not seem to have included a home as close to turbines as mine would be.

Mr. Block also stated that Professor Gittell did not take into account any of the homes for sale that did not sell or were abandoned. There were 22 properties in the Block study that were for sale or abandoned in close proximity to the Lempster Wind Facility, and Mr. Block stated that all but two of them appeared to be abandoned. (Exhibit NB-2 Block testimony p. 7, Exhibit RB1) .

Conditions

If the SEC approves the AWE energy project, I ask that the SEC impose a condition on the project that AWE purchase my home and property at fair market value—the fair market value in the absence of the turbines, not the fair market value with the turbines. I ask this because of the unique sacrifices that this project asks me to make in terms of loss of my natural view (day and night), lifestyle, the imposition of shadow flicker and annoying and harmful sound, and because of the obvious impact on the property value of my home. Nobody looking for a home and property like mine will pay the same or more for it because the turbines are there. I am at ground zero.

Thank you for your effort and consideration.

Sincerely,



Janice Duley Longgood

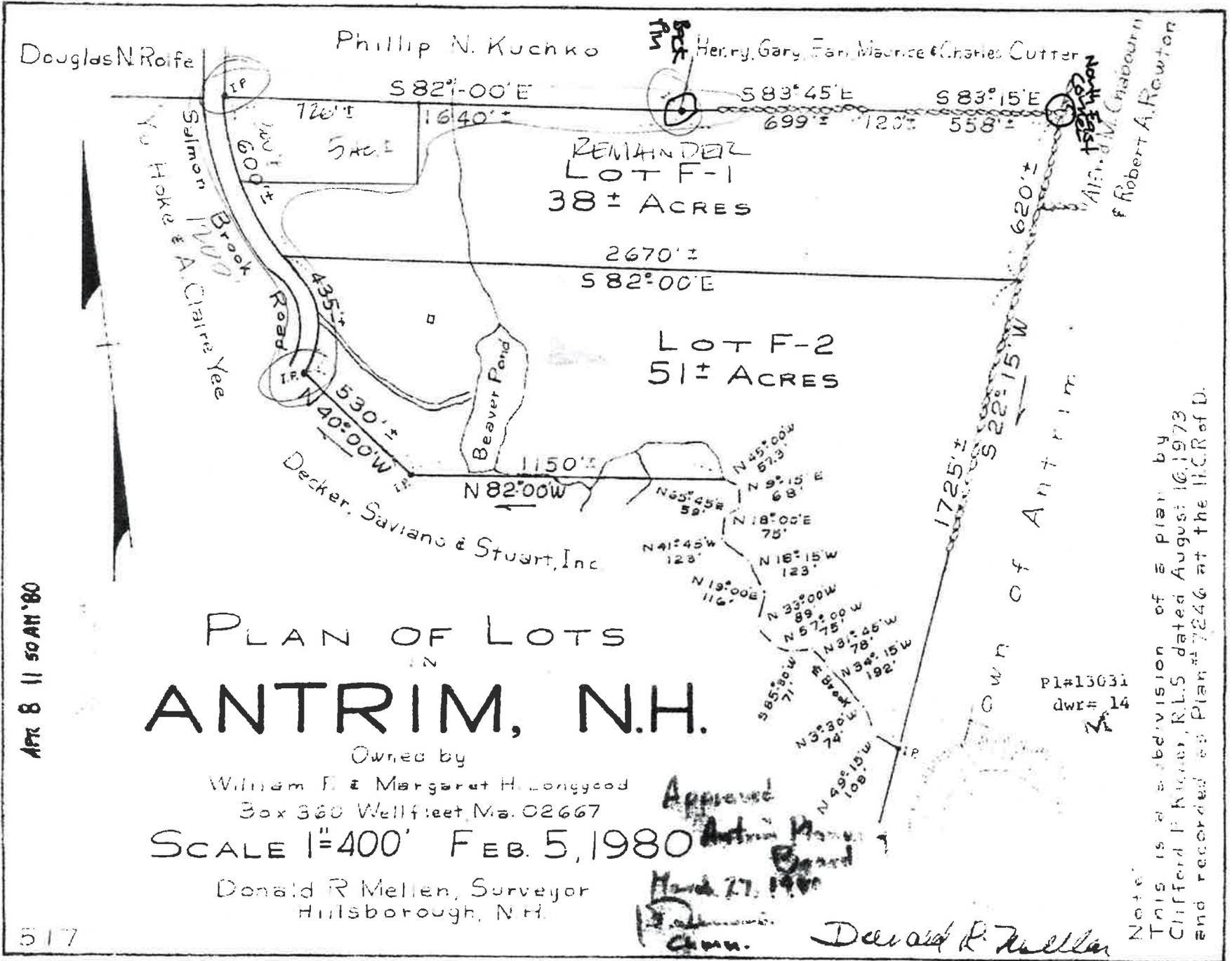
Exhibit: Abutters - b

N.E. Corner: Elev. 1476'
 N 43° 3.637',
 W 72° 1.557'

Back Pin: Elev. 1348'
 N 43° 3.607',
 W 72° 1.854'

APR 8 11 50 AM '80

517



PLAN OF LOTS
 IN
ANTRIM, N.H.

Owned by
 William F. & Margaret H. Longgood
 Box 360 Wellfleet, Ma. 02667
SCALE 1"=400' FEB. 5, 1980

Donald R. Mellen, Surveyor
 Hillsborough, N.H.

Approved
 Antrim Planning Board
 March 27, 1980
 Comm. Donald R. Mellen

Pl#13031
 dwr# 14

Note:
 This is a subdivision of a plan by
 Clifford F. Kicker, R.L.S. dated August 16, 1973
 and recorded as Plan #7246 at the H.C.R. of D.