

Thu 2/7/2013 1:46 PM

From: Anne Conolly [mailto:aconolly@camponaway.org]
Sent: Thursday, February 07, 2013 12:48 PM
Subject: NH Wind Watch

Dear NH Science, Technology and Energy Committee:

I am the Director of Camp Onaway, a 102 year old girls' summer camp on Newfound Lake(www.camponaway.org). For over 100 years we have offered girls from many states and countries a healthful, peaceful and educational 7 week summer where they learn to appreciate and care for the natural environment of our woods, lake and mountains while they make good friends, build new skills and have fun. They learn about protecting the Newfound watershed and they volunteer to help care for it. The northeast shore of the lake is occupied by two other similar summer camps and we work together to maintain the pristine quality of our properties.

We are very concerned about the proposed wind farms on the mountains in our area, following the recently built farm in Groton. It's not only the view or real estate value that concerns us, but it's the issues of sound, vibration and health, lights, power lines, access roads, site work and operations causing land erosion and negatively impacting the lake which we all work so hard to take care of to keep clean and safe.

Our Development Director, Meredith Funston, attended the informational meeting in January where they proposed a moratorium on the projects around Newfound Lake until NH can address the environmental and economic impact properly. She reported that it was both "VERY interesting and alarming." It seems the foreign wind farm companies are taking advantage of our lack of regulations and oversight in NH, and rushing to put the farms up across our mountain ranges, with the ranges around Newfound next on the list. Evidently, the small amount of energy generated from the farms comes at a very large cost, including land erosion that will impact the lake, known as one of the cleanest in the country. I hope you'll read the attachments and help slow this down as best you can so NH can address energy opportunities in a more thoughtful and productive manner.

We are so proud of the work that we do at Onaway to remain environmentally prudent and cautious and feel that we have had no opportunity for input on this matter. The moratorium would at least allow time to investigate the impact on our lake and shore and time to put good regulations in place. Then we can proceed, more responsibly and scientifically, to pursue the best renewable resources for NH.

Thank you very much for your attention to this matter.

Yours truly,

Anne P. Conolly
Director, Camp Onaway
518-443-0004



2012 Aerial Photo Tenney Mountain Ridgeline Construction

The Wild Meadows Wind Power Project is being proposed by Iberdrola Renewables, a Spanish company, and is in the final planning stage before construction. Final permitting will start soon and construction could begin by the end of 2013.

This project consists of 37 wind turbines and is the second such project in the Newfound Lake area, after the one built recently by Iberdrola in the Town of Groton, to the North of Newfound Lake. Each of the towers will be 454 feet tall, strobe-lit and will be constructed into the top of mountain ridgelines to the South and the West of Newfound Lake in the NH towns of Alexandria, Danbury and Grafton.

Information Packet

Together, we can save our mountains, lakes, wildlife and communities from the Industrial Wind Power invasion

The purpose of this Information Packet is to educate and provide information for all residents and organizations in the vicinity of the proposed wind power projects planned for the mountain ridgelines in Alexandria, Danbury and Grafton, as well as other towns in the Newfound Lake Region that will be impacted.

In order to communicate as much information as possible in an efficient manner, this Information Packet is organized as a set of Frequently Asked Questions (FAQs).

Who is NH Wind Watch?

New Hampshire Wind Watch is an organized group of area residents that was formed to educate New Hampshire residents about wind energy issues, and to oppose the second wind power project planned for the Newfound Lake Region. We believe that this project is inappropriate for our area and should be stopped. Our contact information is on the last page of this document.

What's the Problem?

Wind power has been touted as "green energy" and is perceived by many as a way to lessen our dependence on foreign oil. Neither of these is true and wind power in the NH mountain area is neither green nor effective. The industrial wind tower turbines produce noise, health and environmental impacts, scenic impacts, lowering of property values and do not produce much power at all. And when they do, the electricity is more expensive than other sources of energy that are available. Furthermore, any electricity produced will be transported out of state.

What is Wind Power?

A wind power project consists of the construction of industrial wind turbine towers (in our case 37 of them) each 454' tall, which is 65% higher than the tallest building in New Hampshire. The towers will be placed on the top of several mountain ridges in the three towns. Each tower is erected on a massive concrete pad (up to over 20' deep and over 50' across) and each tower will be about 14-16' in diameter at the base and 8-10' at the top. On top of the tower will be a turbine and a 3-blade propeller. The blades rotate at about 15-20 rpm and the turbine converts the wind energy to electric power. Based on the turbine model, we believe there are hundreds of gallons of hydraulic & lubricating oil in each turbine. These are potential sources of fire and spill.



Turbines in Lempster, NH - 2011

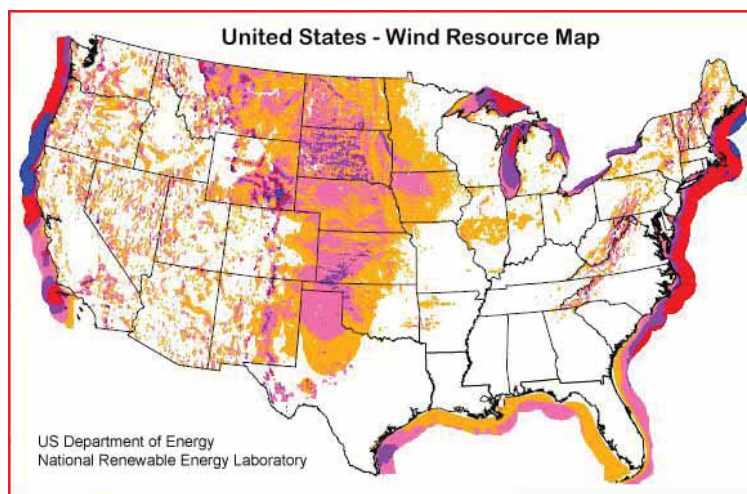
The 37 towers will be located on top of several ridges between Melvin Mountain, (Grafton) and Forbes Mountain, (Alexandria). About half will have red flashing lights on top. Miles of access roads will be needed to get to the towers and to travel between them. In addition, an on-site electrical switchyard or substation and an operations & maintenance building will be needed . The individual turbines will be connected by an underground electrical collection system and each turbine will have a generator step-up transformer. Finally, the power will need to be transported via above ground transmission poles to an existing power station. Iberdrola claims that the transmission lines can directly connect to an existing high tension system located nearby, however, that has not been verified. Construction of the project will require significant blasting of ledge and clearing of trees and vegetation resulting in a permanent scar on a large area of land easily visible from many recreational areas including the summit of Mt. Cardigan. The travel surface for the roads between the turbines will be 36



feet wide. This does not include the shoulders and other clearing to allow for drainage. The cleared areas will be substantially greater. Additionally, the topography can result in areas being cleared that are over 150 feet wide. Over 6,000 acres have been leased for this purpose. Each wind turbine consists of three major components: the tower, the nacelle, and the rotor. The nacelle sits atop the tower and houses a rotor hub, drive shaft, gear-box and generator and the rotor consists of the three blades, each 159' long.

Each industrial wind turbine produces power when wind speeds exceed 8 mph up to 55 mph. The sustained wind speeds have to be above 33 mph to achieve rated output, in this case 2.0 MW. In fact, lesser wind speeds generate far less electricity; for example, at 11 mph, the output is 9% of rated capacity.

According to the National Renewable Energy Laboratory, the annual average wind speed in the Newfound Lake area is 11 mph.



Why here?

That's a very good question since the winds are not great and the power is not needed here. In fact, New Hampshire has more power than it can use. It is a net exporter of power to states south of here. The reason for placing the towers here is that the State regulations are receptive to such projects, the land is inexpensive, the towns are not affluent, and there are no local ordinances in place to control them. It is certainly not because the winds are optimal or that we need the power here. Also, there is a potential for the developer to expand the project in the future by adding more towers within the overall project site.

Why not here?

In addition to the many technical and environmental reasons against wind power in the Lakes region, there are many other reasons for not placing them here: a) this is a recreational and high tourism area on which our local economy is dependent – wind towers are very large and totally incompatible with the natural environment; b) this is a form of predatory development and is out of control – we already have two biomass projects, another wind power project, and two hydro projects in the area and we have done our share; c) the towers are placed in areas of high visibility from natural and recreational resources such as Newfound Lake, Wellington State Park, Ragged Ski Area and Mt. Cardigan; and d) there are significant scenic and financial impacts on towns and residents that do not have standing in the project area nor have any formal role in the approval or permitting of the project. The high cost of the New Hampshire wind power contracts will exceed the economic benefits touted by the project proponents and serve as a drain on New England's regional economy. Mt. Cardigan attracts more hikers, naturalists and tourists each year than any other mountain outside the Presidential range.

How many projects are planned for the Region?

The best answer is another question – how many ridges and mountains are there? What is already in place and proposed proves that there is no limit to the number of industrial wind turbine towers that could be placed in the towns surrounding Newfound Lake.

The first project built by Iberdrola, a Spanish corporation, consists of 24 towers in Groton, named **Groton**

Wind Farm, is presently going into operation. Some of the towers can be seen from almost anywhere on Newfound Lake, from Route 3A to the north, and from Tenney Mountain Highway, where the massive transmission poles have industrialized the view. The towers dominate the area to the north of Newfound Lake and can reportedly be seen from as far away as Lake Winnepesaukee.

At this time, a second wind turbine project named **Wild Meadows Wind Farm**, again by Spanish developer Iberdrola will consist of 37 towers, is proposed to the west and south of the Lake. These towers will be seen from as much as 90% of Newfound Lake and for many miles around the towns of Alexandria, Danbury and Grafton. All 37 towers are close to and will be clearly seen from Cardigan Mountain. Surely not the view that presently attracts hikers, naturalists and tourists.

A third project named **Spruce Ridge Wind Farm** by EDP Renewables, a Portuguese Corporation, is in the early planning stages and will consist of 15-25 towers in the towns of Groton, Hebron and Alexandria. This third project would complete a string of towers to the south, west and north of the Lake. There are reports of other possible projects to the east, which would complete the full circle of turbines on the tallest ridgelines surrounding Newfound Lake.

Why didn't we know about this sooner?

For the past three years, Iberdrola has been secretly leasing land and working quietly with town officials to erect meteorological (met) towers to measure the scope and breadth of the wind strength, speed, direction and characteristics. It is only now that, as part of the State permitting process, the developer is required to undertake a public information process and we learned a few weeks ago about the proposed project.



Blinking turbine lights at night, 7 miles away from Upper Pond near Lincoln, Maine

What has happened so far?

The developer has collected wind data from the met towers, prepared engineering studies, held public meetings in the 3 host towns, taken the public on a tour of another wind power project in Lempster, NH, and met with interest groups. The next, and final, major step for the developer is to file an application with the NH Site Evaluation Committee (NHSEC). That could occur soon and the SEC process will take about 8 months. Approval of the project could occur by the end of 2013 and the project constructed and placed into operation about a year later.

Who benefits from the project?

The landowners are paid for leasing their land; the Towns receive revenues; the State taxes the developer; and the foreign developer earns a profit. Also, some people will “feel good” that they are helping our efforts to be energy independent and protecting the environment, but they are wrong.



LEFT: Wind Power in Residential Area. RIGHT: Turbine Construction

Most of the financial benefits are financed by federal subsidies, tax credits and grants. New Hampshire also offers additional benefits to wind developers. It is the U.S. taxpayers that are paying for these benefits, not Iberdrola from the sale of power. Furthermore, these payments are financed by money we borrow, adding to our growing national debt, which is partially funded by China. When the Wind Power Production Tax Credit briefly expired in 1999, wind power development virtually stopped in the U.S. Most of the European countries have stopped or greatly reduced subsidies for wind power.

Who is hurt by the project?

It is especially residents within 1-2 miles of the towers who will most suffer the health, environmental, scenic and property value impacts but also people many miles

away who will have their scenic views negatively altered. It is reported that the Groton towers can be seen from as far away as Alton on Lake Winnepesaukee. A recent 10 year study in upstate NY, found that proximity to the wind turbines negatively affected the resale price of homes within a five mile radius between 11% and 35% loss in value. In an area like Newfound Lake that is a major tourist destination with a lot of vacation homes, the effects of the Wild Meadows project is likely to be greater than in upstate NY as potential property owners have other options nearby. This in turn will reduce local demand for small business, restaurants, groceries, inns and the jobs that they provide while the wind power project will create only 3-5 permanent jobs. Also, wind power projects elsewhere have not produced the benefits claimed by the developers. The image of the host towns and surrounding towns will also be adversely affected and the views and property values in the Region will be harmed. A recent study in the lakes region of Scotland concluded that tourism would drop by 43% if there was a high concentration of wind towers.

So, wind power is good, isn't it?

Many think that wind power is good because it frees us from dependence on foreign oil; helps the environment; is an alternative to “dirty” sources of energy; and lowers the cost of electricity. None of these is true here. The technical and economic viability of wind power is driven by the presence of strong, constant winds, which do exist in other areas of the country and off shore, but not in this region. Our winds are notoriously intermittent and unreliable – just ask any local sailor.

Less than 1 percent of our energy comes from wind power. If NH were to achieve its wind energy goal of 15% by the year 2025, it is estimated that about 1,380 industrial wind tower turbines would be needed - that's over about 304 miles of our mountaintop ridgelines.

Germany has erected 18,000 wind turbines that generate only 6% of their total electricity supply. Is that the vision for NH that we want? Do we want to permanently ruin our landscape while still not making a meaningful contribution to our energy needs? Our landscape is becoming unnatural and inhospitable. Wind power is produced only 15-30% of the time (although Iberdrola will likely claim an average annual net capacity factor of over 33%) and at times of day when the power is not needed.

Wind power is more expensive than other sources of power and the power companies still need to have conventional power capacity operating continuously since they can't rely on wind power being available when and where they need it; thus wind power doesn't reduce the need for existing conventional power plants to supply backup power during the frequent periods of low wind. A report released by the German Government's energy agency concluded that wind plants are expensive, inefficient and have serious environmental effects. Because of all of this, wind power is really not "green".

Finally, the economics of wind power do not work. They require Federal subsidies as well as New Hampshire State mandates that require utilities to sell a percentage of their electricity from renewable energy, even if the price is higher. When the subsidies were stopped in Spain, Ireland, Switzerland and elsewhere, foreign developers came to the US. This is not a "Buy American" technology or industry. When wind projects get built, our electricity costs go up to cover the increased balancing and transmission costs and the subsidies which are given to foreign developers, which for the most part are derived through extra fees and charges on our NH electric bills. Due to the instability wind power causes to the electric grid, Japan, Ireland, Spain and Australia have significantly limited or halted new wind power connections to their power grids. What do they know that we don't?

What are the problems with wind power?

In the space available, these can only be listed and are virtually "too many to count". The major problems and impacts include: noise, **health** (sleep deprivation, anxiety, strobe/flicker effects, headaches, stress, dizziness, nausea, earaches, etc.), wildlife, water quality, terrain alteration, visual dominance, land usage, property values, wind variability, power cost, lack of power generation efficiency, interference with television and wireless signals, etc.



Iberdrola simulation of Turbines in "Wild Meadows" as viewed from Mt. Cardigan

Who else is opposed to this project?

The Newfound Lake Region Association and the Boards of Selectmen from both Bristol and Bridgewater have taken formal positions in opposition to this project. Also, many homeowner associations and camps around the lake have voiced serious concerns. We expect as other groups learn more about the project, they too will actively oppose it.

What is NH Wind Watch trying to do?

Educate the public about wind power plant issues, and stop further wind power plants on our ridgelines.

How is NH Wind Watch planning to do this?

By focusing our efforts on several fronts: 1) educating the public with the facts surrounding industrial wind projects in our towns; 2) getting the local towns to vote in opposition to the project; 3) using media to get the full story out to residents, organizations, politicians and regulators; 4) engaging professionals to develop documentation of the expected adverse impacts from the project and to support our opposition at the regulatory and legal levels; 5) convincing the State to add balance to their regulations and to take into account all of the impacts of wind power projects; and 6) gather facts from operating wind power projects elsewhere.

2112 Photo: Aerial Sequence of Tenney Mountain Ridgeline Construction - "Groton Wind"

What can I do to help?

A lot! First of all, we will need a significant amount of donations to hire legal counsel and other experts to help us defeat this project.

We have established a short-term goal of \$250,000 and a longer-term goal of \$500,000 for our fundraising efforts.

CONTACT US

JOIN US! Visit our Web Site at:
www.NHWindWatch.org

Join our Facebook Group:
www.Facebook.com/groups/NHWindWatch

Call New Hampshire Wind Watch at:
 1-603-744-2300

Write New Hampshire Wind Watch at:
 NH Wind Watch
 215 Lake Street
 Bristol, NH 03222

www.NHWindWatch.org



- **Educate yourself** - When it comes to talking about Wind Power, knowing the facts is important! This packet and our website are great sources of wind power information.

- **Attend your town's public and board meetings!**

- **Sign a petition:** Find one at Auto Trends in Bristol, Newfound Grocery in Bridgewater or the Grafton General Store in Grafton;

- **Monitor NH Wind Watch News on our website:**
www.NHWindWatch.org

- **Spread the word** to friends, neighbors and local businesses who will be affected.

- **Join our Facebook Group:** Connect with other area residents affected at:
www.Facebook.com/groups/NHWindWatch

- **Volunteer your time** – We Want You!
 Email us at volunteer@NHWindWatch.org

- **Write your area associations and newspapers:**
 Names and addresses are listed on our website:
www.NHWindWatch.org

- **Take this to your politicians and regulators** to educate them on these issues; Names, addresses and letters to send them are listed on our website:
www.NHWindWatch.org

- **E-mail us** at info@NHWindWatch.org so we can add you to our email distribution list to keep you informed.

PLEASE DONATE

Make a donation on our secure website:
www.NHWindWatch.org

Mail a donation to:
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THANK YOU

Providing education for and about Industrial Wind Power Projects in New Hampshire

