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"Published Weekly On the Largest Freshwater Island In The World"
Wednesday, February 9, 2011

MANITOULIN WIND NEWS

TURBINE LOCATIONS

By Rick Martin,
Senior Manager, Business Development Wind Energy
Project Manager, McLean's Mountain Wind Farm
Northland Power Inc.

How are wind farm's turbine locations selected? What are the key location features? What factors affect turbine height and distance decisions? There are many questions about how the McLean's Mountain Wind Farm turbines will look and where they will be placed in advance of the construction phase. There is a science to turbine location.

The location of a wind power system involves assessing prevailing wind patterns, wind speeds and a review of natural or present obstructions. It might surprise you how much wind speed can vary within a small area. Turbine location requires a high-wind area, but also a reasonable distance from large structures and residential communities. The large flat plateaux, currently used for grazing cattle and hunting deer, provide a near-perfect location for a wind power generating project. Each individual turbine will require approximately one acre to allow for assembly, crane pad and foundation. Added to this is the land required for connecting roadways and the power lines between the turbines.

Portions of this area include lots where annual harvesting of firewood takes place. Landowners will have first option on cutting the marketable wood from their lands and be compensated by the project. First Nation lands, including the ceremonial lands of Sheguiandah First Nation, are not included. Extensive consultation has been undertaken with landowners and with the UCCM bands.

McLean's Mountain is located on a point that projects out into the North Channel exposing the area to an above average wind resource. This is why McLean's Mountain and the plateau extending beyond Columbus Mountain to Honora Bay was originally selected. Wind studies over the past decade have verified its potential. Not only is the wind speed measured, the project's four meteorological towers measure the wind speed at three different heights, 24-7, allowing for calculation of wind shear close to the bluff's edge and inland. This data, along with wind direction, allows us to forecast wind performance and turbine suitability.

Turbines are then chosen based on the aerodynamic characteristics of the blade, generator output versus blade length and tower height. Every turbine is slightly different. When the right turbines are chosen for the real site conditions, power output is optimized, sound levels are minimized and community impact is mitigated. In addition to all of this, the turbines are located a minimum of 550 metres from any defined receptor according to the Green Energy Act, to create a comfort zone reflective of pre-construction conditions.

Wind directions do vary, but through data collection prevailing wind patterns are recorded resulting in a Wind Rose. See illustration at end of column. The Wind Rose indicates wind speed and wind direction patterns. From this, the turbine locations are plotted by computer to meet all the above stated criteria ensuring turbines don't shadow each other from the prevailing wind. A minimum wind is required before turbines begin to turn. At around 12-13 metres per second, the units achieve full load capacity. As wind speed increases the blades adjust to maintain the full load. Under very high wind conditions, the blades adjust to face the wind and the rotor comes to a stop. The turbine then stops generating electricity. This is a very important, built-in safety feature unique to industrial-sized units. As wind speeds return to a safe range, the rotor again begins to turn and the generator comes back on line automatically.

Access to the transmission infrastructure is also a key location feature. Again, the McLean's Mountain Wind Farm benefits from available connection access to the provincial power grid at Goat Island.

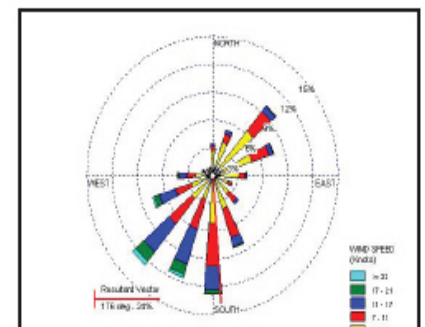
Our turbines will be upwind, three-blade, horizontal axis units that serve to minimize turbine blade sound. When units are properly installed, with a proper grounding grid, turbines can safely handle and contain something as dramatic as a lighting strike. The blades are of hollow fiberglass construction and contain only a grounding grid within each. This minimizes interference with telecommunications signals in the area. This is important as turbines are often located in areas where telecommunications towers are nearby.

The recent declaration by the World Wildlife Fund of a vision by 2050 for an all-renewable energy world is bold. But, it is possible if we understand that wind and solar power are essential to any move to cleaner, environment-friendly power production. Wind turbines on our landscapes are new for Canada, but not new to the rest of the world. Some may say the wind turbines are large and unattractive. Others see them as beautiful symbols of energy generated without greenhouse gas emissions, without producing serious radioactive waste and as proof we can harness nature's gifts.

The turbine location map is available for you to review. Please don't hesitate to come into the project office and see it for yourself. We would be happy to speak with you directly about the wind farm layout or any of your issues or concerns.

McLean's Mountain Wind Farm
Northland Power Inc.
13 Worthington Street, Little Current

Ph: 705-368-0303



WIND ROSE

NEXT WEEK: THE RENEWABLE ENERGY ACT

NORTHLAND POWER

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MANITOULIN WIND NEWS

1. Feed-In Tariff Contract
Issued: April 8, 2010

2. Consultation with Renewable Energy Facility Office
Completed: January 17, 2010

3. Submission Completion
Expected: March 7, 2011

4. 30- Day Review Period
Environmental Registry for the Manitoulin project will be posted here: http://www.ebr.gov.on.ca/ERS-WEB-External/content/about.jsp?f0=aboutTheRegistry.info&menuIndex=0_1

5. REA Decision & Municipal Permits
-Building permit
-Notice to Proceed under a FIT contract

Renewable Energy Approval that includes…
-Project description report
*Facilities, equipment or technology that will be used to convert renewable energy source to electricity
*Class of the Renewable energy generation facility
*Activities that will be engaged in as part of renewable energy project
*Capacity of energy generation facility
*Ownership of the land where project will be located
*Report on any potential negative environmental effects that may result from engaging in the project
*Map showing the project and the surrounding 300 metres of the project

-Construction Report
*Summary of communication with members of public, aboriginal communities, municipalities, local road boards and local service boards
*Evidence that information required to be distributed to aboriginal communities was completed.
*Any information provided by aboriginals in terms of feedback
*Evidence that consultation form was distributed to municipalities or boards
*Completed or partially completed consultation forms, if any

-Decommissioning plan report
*Procedures for dismantling or demolishing the facility
*Activities related to the restoration of any land and water impacted by facility
*Procedures for managing excess materials and waste

Ministry of Transporation requires:
-Application for a sign permit
-Application for a Building and Land Use Permit/Entrance Permit
-Application for Encroachment Permit
-Approval if service roads connect to existing public roads

Ministry of Culture requires:
-Approval from appropriate body if project falls on property protected by Ontario Heritage Act
-Archaeological assessments and mitigation plan if potential impacts found in first archaeological study

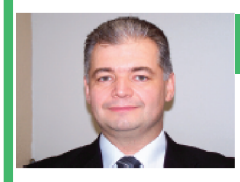
Federal government requires:
-CBC requires applicants to comply with Radio Advisory Board of Canada and CANWEA guidelines to notify CBC of any proposed wind facilities
-RCMP Mobile Communications unit must be contacted and alerted of wind project
-Transport Canada requires equipment dealing with aviation regulations
-Additional requirements if project is located near an airport to prove that birds will not be attracted by project
-Fisheries and Oceans if additional review is required under Fisheries Act

-Construction Plan Report
*Details of any construction or installation activities
*Location and timing of any construction or installation activities for the duration of installation
*Any negative environmental impacts that may result from construction or installation
*Mitigation plan for any negative environmental impacts

-Design and operations report
*Site plan of project location
*Conceptual plans, specifications and descriptions related to design and operation of facility
*Environmental effects monitoring plan with respect to any negative environmental impacts
*Resource plan setting out a description of the actions to be taken

-Additional studies and reports
*Archaeological and Heritage resources must be identified. Applicant must show how they are going to be impacted.
*Must show that the facility meets setback requirements
*Public comment period and hearing under the Environmental registry
*Studies related to provincially protected wetlands, woodlands, forests, valleylands and areas of land and water that represent significant geological or biological features.
*If relevant additional compliance reports dealing with legislation in the Oak Ridges Moraine, Greenbelt, Far North of Ontario, Niagara Escarpment and Lake Simcoe
*Provincial parks and conservation reserves
*Significant habitat necessary to sustain wildlife including birds and bats.
*Study related to bodies of water located near the project site.
*Review of records within a 300m radius of the proposed project to ensure no natural features or bodies of water impacted
*Noise study to prove the project design does not exceed 40dBA

MNR requires:
-If on federal crown land – Approval for work permits and/or tenure to occupy Crown land under the Public Lands Act
-Permits under Endangered Species Act (ESA)
-Approval under the Fish and Wildlife Conservative Act (FWCA)
-License under the Aggregate Resources Act (if project requires removal of mineral aggregate material)



RENEWABLE ENERGY APPROVALS

By Rick Martin,
Senior Manager, Business Development Wind Energy
Project Manager, McLean's Mountain Wind Farm
Northland Power Inc.

MCLEAN'S MOUNTAIN WIND FARM REA SUBMISSION INTO PROVINCIAL GOVERNMENT BY EARLY MARCH

What are the requirements under the Renewable Energy Act (REA) for a wind project? How stringent are the protections to the public and the environment? How does the public have input and get involved in the REA process? Despite what you have may heard or read, the Ontario government has set up a rigorous approval process for wind energy projects such as the one proposed for McLean's Mountain.

To better understand what checks and balances are involved, it is important to understand the basics of the Green Energy and Green Economy Act, 2009 that sets out the process for development of renewable energy projects in Ontario. There is an executive summary of the Green Energy Act and other information on the Act available from the Ontario government website at http://www.greenenergyact.ca. This new approach reflects changes made to the Environmental Protection Act, Environmental Assessment Act, Environmental Bill of Rights, the Planning Act, and various requirements under legislation enforced by the Ministry of Natural Resources. Protections built previously into these pieces of legislation have been maintained in the new REA process.

We have touched on some of the requirements in previous articles. The basic checklist of requirements by the Ministry and by the federal and provincial government is included with this column mapped out in a REA process chart.

Prior to construction, the wind project developer must receive a 20 year contract from the Ontario Power Authority under the new Feed-In Tariff (FIT) program. This program provides a guaranteed purchase price for power produced supporting the economics of the project. Wind facilities over 50 KW, like McLean's Mountain Wind Farm, require additional pre-submission requirements and must comply with noise, property, railway and road set backs. There may also be requirements related to proximity to water, natural heritage or cultural heritage depending on the location of the project. There are recent, stringent, wetlands requirements too.

There are five major steps that must be completed in order to obtain a Renewable Energy Approval: Step 1: Pre-submission work; Step 2: Consultation on pre-submission work; Step 3: Completion of the submission; Step 4: Public notice to the Environmental Registry and Step 5: Decision.

Although this project has a FIT-awarded contract, work had begun on site identification and studies several years before the government established the REA and the FIT program. The result has been studies have been redone or resubmitted to meet the new standards and additional requirements. We have met and will meet every requirement. It is a public process and information is shared through the Public Information Centres held and all documents are available in the project office for your review. We are here to answer questions and address concerns.

We have also been taking this extra time to ensure proper consultation with the First Nations of Manitoulin Island and the community at large. Many of you will now be aware that the UCCM has established its own new corporation to develop energy projects and has partnered with Northland Power on the McLean's Mountain Wind Farm. This is exciting news. We will explain the partnership and the increased local benefits in a future column.

Within two weeks, we will be submitting a complete REA submission. The public will be notified and you will have the opportunity under the Environmental Bill of Rights to make comments on that final submission.

For now, what remains is completion of some final studies and work well underway that are related to the Ministry of Natural Resources wetlands guidelines and the Ministry of Culture and Tourism's heritage studies and archeological dig reports.

After consideration of all the relevant information provided and public comments, the Ministry of the Environment can issue, amend, renew or refuse the REA. If approval is granted, the applicant must then gather the remaining approvals and permits required prior to moving forward with the project. This includes, but is not limited to a municipal building permit and a notice to proceed under the FIT contract in addition to any additional federal requirements needed.

If you have any further questions related to the REA process or the potential impact of the wind farm on you, please do not hesitate to contact us. Come in to visit us at the office so we can go over your concerns directly.

NEXT WEEK: FIRST NATIONS PARTNERSHIP

McLean's Mountain Wind Farm
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NORTHLAND POWER

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MANITOULIN WIND NEWS

FIRST NATIONS PARTNERSHIP

By Rick Martin,
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Project Manager, McLean's Mountain Wind Farm
Northland Power Inc.

Why did Northland Power enter into a partnership with the UCCMM on the McLean's Mountain Wind Farm? How does the partnership with the First Nations and their Mnidoo Mnising Power company impact the project? What does this partnership mean to the people of Manitoulin Island? News of the partnership came last week with a press conference held on Thursday, February 10. It was big news for renewable energy in Ontario. The partnership didn't happen overnight, but emerged from the requirement every power project developer has to consult with and to accommodate affected First Nations.

We see the partnership as a real project milestone for many reasons. The partnership is proof of the company's on-going efforts to consult and to communicate with the Manitoulin Island community. The partnership is also testimony to the members of the six bands that comprise the UCCMM for their willingness to engage in a meaningful dialogue about their needs, their concerns and their issues related to the project; despite the fact that negotiations are supposed to be nation-to-nation and not nation-to-proponent. The company believed it has a duty to approach and to work with the UCCMM from a basis of respect and with a goal to achieve mutual understanding.

Many of us on the Island know that there are outstanding issues related to unfulfilled Treaty obligations. This fact could have been an insurmountable barrier. We took our time. We attended conferences and workshops. I was particularly motivated by attendance at a conference called OUR RELATIONS that gave me deep insights into Anishinabek legal claims and a deeper understanding of the Treaties. Many think the Treaty issues are about money and what's been paid or not paid, but I learned the original spirit and thinking behind the Treaties was to establish ground rules, a basis for friendship and most importantly, a way to achieve mutual respect. I learned we are ALL Treatied-peoples.

The partnership between Mnidoo Minising Power and Northland Power is a business deal based on sound investment principles. It enhances the McLean's Mountain Project financially and from a community engagement, long-term benefit perspective. Revenue will be shared 50-50 between the two partners. The Mnidoo Mninising Power share will be used to enhance opportunities for the UCCMM communities, their families and the future of their youth. The fact that half the profit will remain on the Island ensures the broader community benefits too. This partnership means a lot to the people of Manitoulin Island. The First Nation population is 40% or more of the Island.

The project will be paying municipal taxes of roughly $75,000 annually to the Town. That amount is free of any costs to the municipality in terms of services because the wind farm requires no water, no sewer, no garbage pick-up or snow removal because the proponent takes care of all of that directly. There are 14 landowners who are part of the venture too with half-a-million dollars annually being paid to them for use of the land. This goes a long way to helping support and sustain their farming operations. These farmers will be reinvesting money locally through purchases, supplies and other business and personal needs. There will be jobs, training and construction-related employment and local employment will be the preferred hiring practice.

Just as wind power – a renewable energy source – is about increasing sustainability, the benefits of the project when partnerships are forged locally serve to sustain the community.

Anishinabek Manitoulin residents are significantly worse off economically than non-Anishinabek residents, suffering from twice the unemployment rate and earning 30% less income. That is not fair, nor is it sustainable. Bringing a new source of long-term income, jobs and knowledge to them through the McLean's Mountain Wind Farm and future power projects should help bring equality and better community relations for all on the Island.

Northland Power has partnered with other First Nations on a variety of energy projects over the years. These are partnerships that work, partnerships fulfilled and partnerships that deliver benefits far greater than the dollar value of the investment. This McLean's Mountain wind project will generate enough electricity for over 17,500 homes and save over 155,000 tonnes of CO2 emissions annually. This partnership is a new beginning harnessing the power of the Island's wind, but also opening economic opportunities for energy projects on UCCMM First Nations' tribal territory in the near future including solar, hydro, gas or transmission infrastructure projects.

The power of this partnership is that it has been built and continues to be built on respect and through understanding and it can change the economic prospects of a generation.

If you have any questions about the partnership, the project and the benefits to Manitoulin Island that will result from the completion of the McLean's Mountain Wind Farm, please do not hesitate to contact the office, drop in and spend some time and get the facts first-hand.

NEXT WEEK: WE'VE HEARD YOU: THE NEW LOOK FOR MCLEAN'S MOUNTAIN WIND FARM

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MANITOULIN WIND NEWS

WE HEARD YOU: NEW LOOK FOR MCLEAN'S MOUNTAIN WIND FARM

By Rick Martin,
Senior Manager, Business Development Wind Energy
Project Manager, McLean's Mountain Wind Farm
Northland Power Inc.

Have community concerns about wind turbine placement really been heard? Will the public consultations result in accommodations to address those concerns? How do residents track any changes in the wind farm's turbine layout before and during construction?

At a public meeting held on February 15, attendees seemed happy to learn that their concerns had been addressed and had been acted upon by Northland Power. In fact, Northland's McLean's Mountain Wind Farm has removed or relocated 12 turbines in direct response to community concerns. The changes made will reduce the project size from 45 to 33 turbines producing 60 MW of power from the originally forecasted 77 MW.

Lots of people thought attending the consultations, contacting the project office and sitting down with the project team to explain concerns and impacts would not make a difference; but they did. Seven of the 17 turbines for the Honora Bay area have been removed. All of the turbines have been pulled back from the edge of the bluff. The impact of that adjustment has turbines now being placed in one single, rather than a double, row. In the North-East grouping, most receptors are well over a kilometer away from the turbines.

What other changes and accommodations have been made? Northland is removing five turbines from the front line of the project along Highway 540. Three of the turbines (1, 2 and 4) are being removed to accommodate public requests. Two additional turbines (3 and 7) were removed due to vacant land setback, and wetlands issues. The fact is we heard you!! We brought experts and engineers back onto the site and we made every effort to alleviate concerns by moving and removing turbines wherever possible.

As we have said from the beginning and as our actions have hopefully proven, Northland is willing to listen and to accommodate, where possible, legitimate concerns. We want to build a long-lasting, mutually beneficial relationship and to be good corporate neighbours.

The original and the revised turbine location maps are available for you to review in the project office. Each turbine location is assigned a number. You would see how the afore-mentioned turbines have been removed or adjusted. Any other minor changes to the wind farm project can be monitored by regularly visiting the local project office. Any significant change, as determined by the Ministry of the Environment, would be addressed through a public information meeting

Changes to a project like this and of this magnitude are not easy, but we believe they are important if the changes can make a difference to reasonable concerns raised by the municipality, landowners, residents and First Nations. We will always treat seriously and give consideration to issues that are raised respectfully and are based on legitimate and rational concerns. We cannot respond to fear mongering, junk science or tactics designed solely to obstruct.

The wind is a gift and harnessing it for electrical power is an environmentally-friendly way to live responsibly on Manitoulin Island and in Ontario. The recent partnership with the UCCMM is another example of the company's willingness and interest in consulting with and accommodating the greater community that calls this wonderful place -- Mnidoo Mnising – home. That's sound community engagement.

The construction phase is next and we will strive to keep communication open and transparent throughout the process. We hope you can watch this project take form and find its place here on the Island without too much inconvenience.

If you have any questions about the Northland –UCCMM partnership, the new turbine locations, the project in general and the benefits to Manitoulin Island that will result from the completion of the McLean's Mountain Wind Farm, please do not hesitate to contact the office, drop in and spend some time and get the facts first-hand.

NEXT WEEK:
LOCAL IMPACT DURING CONSTRUCTION

McLean's Mountain Wind Farm
Northland Power Inc.
13 Worthington Street, Little Current Phone: 705-368-0303

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MANITOULIN WIND NEWS

LOCAL IMPACT DURING CONSTRUCTION

By Rick Martin,
Senior Manager, Business Development Wind Energy
Project Manager, McLean's Mountain Wind Farm
Northland Power Inc.

What are the construction phases for the wind farm? How will local roads and the bridge traffic be affected during construction? How long does it take to complete the construction process? As we all watch for signs of Spring, the project office is busy working on the pre-construction requirements for the McLean's Mountain Wind Farm. You know the size of the turbines and the number being erected, we've talked about road allowances and access to site locations, but soon work will begin to prepare for a smooth construction program to minimize local impact.

The construction of a wind farm requires a great deal of coordination. It is also subject to Ministry of the Environment (MOE) review, approval and monitoring. Everything will be done in accordance with government requirements and regulations. There are a number of logical sequences involving specific teams with expertise related to critical tasks. Like a complicated surgical procedure, nothing happens without a plan and often simulation of the sequences to identify possible glitches. Wind farm construction in general can be divided into two parts, the first is focused on site conditions and site preparation. The second is construction of the turbine tower.

The first thing Island residents will notice is the geo-tech equipment that should start arriving in the coming weeks. That equipment is to conduct core sampling as part of the initial exploratory and information gathering sequences, already approved by the Ministry of the Environment (MOE) as part of the pre-construction steps in the REA – Renewable Energy Assessment. The core sample will help identify sub terrain strengths and weaknesses. It will permit fine-tuning of the site work and construction plans.

Next to arrive will be road construction equipment followed by the electrical construction phase to install the ground grid work to then link to the tower foundations. Nothing is left to chance. It's an exciting time and watching a wind farm being constructed is fascinating. Lots of new technologies are involved to bring precision to the effort and, again, to assist in minimizing local impact.

Having the layout of the site, a survey team will start to mark out the route for the roads in the construction site using GPS. The GPS determines elevation of important benchmarks to be used in setting road alignment. Previously, a LiDAR (Light Detection And Ranging) study was completed, which is done from the air using laser to capture topographical features over the region. This information helps reduce impact on new road construction and layout. Anyone interested in the engineering process required throughout the construction phase is most welcome to come to the project office for regular updates. We have a construction video you can watch that takes you step-by-step through all phases.

Once the pre-construction planning of the site is ready, we will issue further information on the construction phases. At the public information meetings, held over the past years, many of you expressed interest in those later stages, particularly related to construction of the wind towers, installation of the reinforced foundations, preparation of the surrounding forms, pouring of the concrete, bolting the foundations and assembly of the crane that will await arrival of tower components. It should be noted that local gravel, local concrete and local employment will all be part of the construction program.

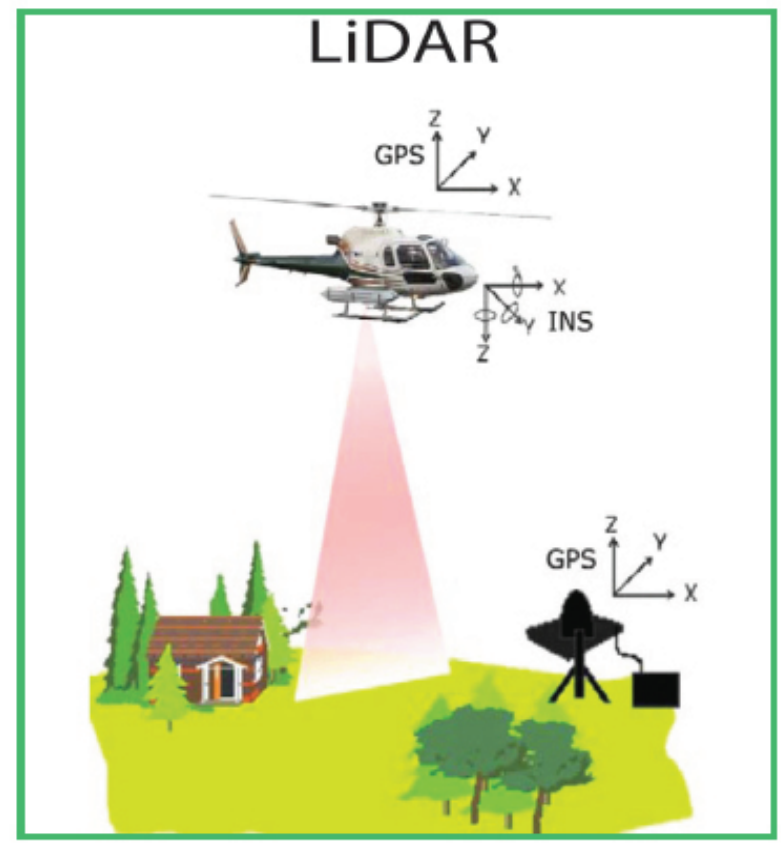
We want you informed and engaged. We're making history. Manitoulin Island will become part of the province's transition to more Green Energy. The wind farm will mark our place in that shift. We also want to keep you well informed of any road closures, detours that may be required along key routes. The construction phase is distinguished by two other "C's" – coordination and communication.

We plan to communicate daily using the local radio station, regularly by flyers, information bulletins, newspaper columns and large signage positioned in high traffic, highly visible locations to warn of closures and to advise and inform of developments. The project office windows will display information and updates too.

We hope most residents come out and participate in the arrival of the turbines. That won't happen until the other phases are complete in terms of site preparation, grid and electrical construction, road building, construction of the foundations and pouring of the concrete tower pads. However, we will alert everyone to that special moment.

How long will it take? The construction phases should last five-to-six months from arrival of the road equipment to erection and testing of the turbines. The goal is to have the wind farm operational by January 2012. It takes time to do it right.

Again, the hope is you are fully aware of the process and that inconvenience will be minimized through careful planning and regular open communication. Please feel free to learn more about the construction phases ahead by contacting the project office or dropping in for a one-on-one discussion. You are welcome.



NEXT WEEK:
COMMUNITY INVOLVEMENT

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MANITOULIN WIND NEWS

COMMUNITY INVOLVEMENT

By Rick Martin,
Senior Manager, Business Development Wind Energy
Project Manager, McLean's Mountain Wind Farm
Northland Power Inc.

How does a community get involved in a wind farm project? When does community involvement matter? How do farmer and landowner communities get involved in wind power projects to benefit all? If you relied solely on the media to get a sense of how Ontario communities are responding to the new renewable energy projects you'd think no one benefits from or supports wind farms. This isn't true. Community engagement and community involvement are critical to any wind farm project.

Among the first to embrace renewable energy as a viable and responsible move in Ontario were local farmers. Why? Farmers believe in the power of wind. Wind power is not new technology for most farmers. Many farms started using the wind to pump water and to generate power back in the late 1870s through to early 1930s and 40s. While many people benefit indirectly from the clean air and economic benefits of wind power development, farmers can and are benefitting directly.

I'd like to use the fact that March 13-19 is Agricultural Safety Week in Canada as a good time to salute farmers and landowners on Manitoulin Island as early adopters of green energy through wind power. They have been an important community, very involved in decisions related to the planning of the McLean's Mountain Wind Farm. There is an excellent supplement in this edition of the Expositor focused on farmers and farm safety. Ask a farmer about what makes wind power safe and he or she will probably tell you that wind energy is consistent with land stewardship principles. A community, like farmers and landowners, can get involved with a wind farm project by embracing renewable energy as a long-term solution to environmental safety issues affecting their land. There are no harmful emissions from wind.

Manitoulin farmers and landowners got involved in the McLean's Mountain Wind Farm project very early on in the process. Most see renewable energy as the cash crop of the future. The family farm is under great pressure and sustainability is a top-of-mind topic. Why not lease land to wind developers when that land remains unharmed by the turbines and it is possible to farm right up to the base of the turbines? Wind energy doesn't interfere with raising cattle or crops.

Wind energy has been proven to be a sound way to supplement farm earnings and a bankable, low-maintenance revenue stream that permits farmers to preserve the quality and traditions of their way of life. All landowners, not just farmers, benefit from wind energy. Land lease payments form a binding contract that, over the life of the wind power project (20 years and extendable), becomes an investment in keeping the land in the family and as an open green space.

Compared to other types of energy generation, wind energy uses virtually no water, so local water resources are unaffected for purposes such as irrigation, and drinking water. Farmers and landowners on Manitoulin see the wind farm as a wise environmental choice for their communities.

That warm initial welcome from farmers and landowners matters a lot. Discussions were open and forthright. Concerns were put on the table. Questions were answered and landowners did their own due diligence. Farmers know the experience with renewable energy projects throughout Europe has been positive for farmers. I am a farmer in addition to being project manager for the McLean's Mountain Wind Farm. I own 450 acres in Northern Ontario and lease an additional 300 acres, plus up until recently I had over 100 head of Charolais cattle. I know all about the blood, sweat and tears that go into working a farm. Land stewardship is all about priorities and protection. Effective stewardship helps maintain and restore the function of natural resources. Sustainability is a priority and serves to make renewable energy an accepted solution.

A rural community is as strong as the sustainability of its farmers and landowners. Manitoulin just got little stronger thanks to this wind farm. Everyone will benefit. The land lease payments mean farmers will be investing locally in suppliers with new purchasing power. They are the anchors to the clean and greener economy.

Let's all pay tribute to those people who make the land their way of life and agriculture their business. They represent an alert and involved community. They represent a community of rational thinkers who put land stewardship and environmental concerns first. Climate change, impact of pollutants and weaning ourselves off fossil fuels are important to farmers and landowners today and for future generations.

Your involvement has made a difference. Stay safe. Stay strong. Stay true to the stewardship principles that prove renewable energy is the right thing for this community.

If you have any concerns over the impact of wind farms on rural life please give us a call or drop into the project office. Join the number of people within this community who have benefited from coming in and having a chat going over the facts with us. Speak with one of the landowners or farmers involved in the wind farm project. They did their homework and invite you to do your own due diligence.

NEXT WEEK:
TRUE COST OF RENEWABLE ENERGY

McLean's Mountain Wind Farm
Northland Power Inc.
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Wednesday, March 23, 2011

MANITOULIN WIND NEWS

TRUE COST OF RENEWABLE ENERGY

By Rick Martin,
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Project Manager, McLean's Mountain Wind Farm
Northland Power Inc.

Are renewable energy sources such as solar and wind power more expensive? Should nuclear energy be the preferred cheaper alternative to wind power? Is there a cost for not switching to more renewable energy?

Supplying energy to a growing world population, while reducing greenhouse gas emissions, has been accepted as one of the big challenges facing humankind in this century. Over the past week, the discussion about best energy solutions got a whole lot more complicated in light of the Japanese nuclear situation and recent reports of an Ontario Power Generation investigation into a release of about 73,000 litres of demineralized water from the Pickering nuclear plant into Lake Ontario. The perception of "cost" related to a power source now clearly includes costs related to safety and security risks, health and medical costs and the expenses related to decommissioning a plant.

I do NOT want to use this past week's nuclear disaster to influence people to see green energy as safer and better. I do think it is fair to join the rest of the world in a sober second thought about nuclear costs. Nuclear isn't cheaper than wind. The proposed new Darlington nuclear power station is expected to cost $20 Billion. In addition, according to the Canadian Environmental Assessment Agency, a further $10-13 Billion will be required to build its nuclear waste facility. That's not cheap.

Advocates both pro and opposed to wind power are trying to answer that first question about whether renewable energy is more expensive than the current dominant power sources of nuclear, coal and hydro. Everyone can agree that finding a true valuation tool is difficult because infrastructure costs related to each power option are not available. Much of the power has been government-run, operated and publicly-financed so not always factored into the per kW cost. Wind and solar power have been developed by private companies that pay market rates and account for costs differently, including covering grid and infrastructure costs the public energy plants do not.

Renewable energy is still relatively new in Canada, so it was difficult to find statistics, but a 2008 report by the California Energy Commission indicates that the cost to generate wind energy is at par or lower than conventional methods. A 2007 report by the US Department of Energy shows the average wholesale price of wind power as being at or below the average wholesale price of conventionally-generated electricity.

NEXT WEEK:
ECONOMICS

What about other myths related to the expense of renewable energy? How about the one that says the manufacturing of turbines takes as much greenhouse emissions as they could offset in the lifetime of operation? According to CANWEA, a wind turbine produces enough clean electricity in 3 to 5 months to offset all of the greenhouse gases emitted in its manufacture – and it will produce clean electricity for another 20-25 years. This compares favourably with the most environmentally efficient power stations today. A modern wind turbine is designed to operate for more than 20 years and at the end of its working life, the area can be restored at low financial and environmental costs. What about the cost of decommissioning nuclear? A single nuclear reactor in Quebec was decommissioned in 1986 at a cost of $25 million (roughly $32 million in 2011 dollars).

There is a cost to not moving to renewable energy sources. A tremendous amount of research has been underway since 2002 in the United States by the Stanford University, Global Climate and Energy Project. Climate change is not a myth. Pollution and our global reliance on fossil fuels have increased the greenhouse gases in the atmosphere and caused the pH of the upper ocean to decline. The Stanford team is focused on what it takes to stop such harm.

According to the team, using current available technology, the entire world could theoretically switch 100% of its energy needs to renewable sources in a few decades and it will not cost more. Why? I'll quote from the research, "..when you actually account for all the costs to society – including medical costs – of the current fuel structure, the costs of our [Stanford] plan are relatively similar to what we have today ..... and global energy needs would drop by 30% due to the efficiency boost."

The health costs related to greenhouse gas emissions are being tracked. Health Canada states reducing air pollution hospitalizations through the use of cleaner energy will save the health care system up to $1 Billion a year. The Canadian Lung Association cites 92,000 emergency room visits in 2008 caused by air pollution. While not all of that pollution is due to fossil fuels, they are a significant contributor. There are NO greenhouse emissions from wind power.

The fact is technology is constantly improving and those improvements bring down costs – improved materials and improved design enable taller turbines to have more efficient blades thus generating more energy. Costs for producing and maintaining a wind farm have fallen 80% in the last 20 years

In the long term a vast amount of costs can be saved as wind power generation grows in acceptance and the number of wind farms has a greater impact on Ontario's energy mix.

If you have questions and concerns know that we are here in the McLean's Mountain Wind Farm project office ready and willing to discuss them with you. There are facts and there are numerous research sources not funded by the industry that could help you in your wind power deliberations. Give us a call or drop in.

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MANITOULIN WIND NEWS

ECONOMICS OF WIND POWER

By Rick Martin,
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Northland Power Inc.

Is wind energy economically competitive? What are the economic benefits of wind power? How does a wind farm make economic sense to a rural area? There has been some talk that wind power doesn't make economic sense. Well, the research and experience in other jurisdictions have proven that wind power brings new economic power, particularly to rural regions.

Let's take a look state-side and then return to Ontario's experience with wind economics. The "Wind Powering America" program will create $60 billion in investments in rural America over the next 20 years. Over that same 20-year period it will create $1.2 billion in new income for farmers and landowners and create 80,000 new jobs. According to the New York State Energy Research and Development Authority, wind energy produces 27 percent more jobs per KW hour than coal plants and 60 percent more jobs per KW hour than natural gas plants. Wind energy is currently contributing to the economies of 46 American states.

What about here in Canada? Wind energy in Canada has increased considerably in the last six years as governments try to reduce the environmental impacts of power generation and to stimulate rural economic development. Ontario is the current provincial leader with roughly one-third of the country's wind energy development. Government renewable energy policies and Green Energy Act initiatives have served to kick-start a Canadian and a provincial renewable energy sector.

Wind energy is also proving to be competitive in its own right where wind energy is competing with more established technologies. In Canada and the U.S., wind energy is proving it can compete with other technologies in meeting the demands for increased generating capacity. The environmental benefits of wind energy are no longer the only driver.

The NSERC (National Sciences and Engineering Research Council of Canada) Wind Energy Strategic Network (WESNet) is a Canada-wide, multi-institutional and multi-disciplinary research network that has been working over the past five years with a dedicated team of thirty-nine (39) top researchers from sixteen universities across the country to get the facts on wind energy impacts. Twelve research centres across Ontario are dedicated to alternative energy R&D, including the McMaster Institute for Energy Studies and the Waterloo Institute for Sustainable Energy. The Ontario Centre of Excellence for Energy was established in 2005. Renewable energy is becoming an important economic driver and a 21st century industry sector.

The Canadian experience, according to British Columbia Hydro, indicates there is a strong economic multiplier for every 1,000 new MW of wind energy that generates benefits in terms of billions in private sector investments, new tax revenue and new jobs in addition to 1,000 MW powering 300,000 Canadian homes.

Why put wind farms in rural Ontario? The fact is you put wind farms near good wind sources. For rural communities, wind farms can be an important source of economic stability. Why is that important? According to Statistics Canada and the last Census results, the family farm has been under threat due to economic stress. From 1996 to 2006, there were 10,309 fewer farms representing a decrease of about 2.8 farms per day. That is an incredible statistic.

Wind farms provide lease income to landowners and new income for rural municipalities through property taxes and often through additional amenities agreements. Wind development projects can help rural landowners remain on the land they've owned for generations and continue serving their local communities with new guaranteed crop revenue.

A quick look at the economic benefits to and positive experience in rural communities with wind farms in Ontario is provided below.

Wolfe Island Wind Facility	• $25 million invested in the community during construction. • $3 million annually back into the community. • During the wind farms first summer of operation 2,000 tourists to see the facilities which resulted in spending time and money in the community.
Erie Shoreline Wind Farm	• Contributes $300,000 annually in municipal tax revenue. • Created permanent jobs for nine residents. • The *Erie Shores Interactive Centre* was built in order to provide further information about wind energy to the tourists and schools that came to see the wind farm.
Prince Wind Farm (Lake Superior near Sault Ste. Marie)	• Since the wind farm was installed spending at local establishments has increased by $2.6 million annually. • The construction of the wind farm involved the services of 38 local companies. • There is now a permanent staff of 17. • A new renewable power training centre added to Sault College of Applied Arts & Technology.

Manitoulin Island will have its place on the map of a greener Ontario. The economic benefits for NEMI will include –

- Establishment of a Community Fund to annually support local charitable causes or groups;
- Nearly $100,000 in new municipal tax revenue;
- 7 to 8 site-related jobs; and
- On-going support for local activities such as hockey – Manitoulin Islanders and the Little NHL, etc.

Wind energy is clean, green, renewable and one of the best sources of economic renewal and sustainability for rural communities. That will be the experience here on Manitoulin Island. Not sure? Give us a call or drop in to the McLean's Mountain Wind Farm project office and we can talk about the economic benefits or any other aspect of the wind farm that interests you.

NEXT WEEK:
CHANGING WIND TECHNOLOGY

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MANITOULIN WIND NEWS

CHANGING WIND TECHNOLOGY

By Rick Martin,
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5000 BCE: wind powers the first sailboats along Egypt's Nile River

When did wind turbines first appear as a power source? What is the history of wind turbine use and design? How has technology changed the modern turbine? Wind turbines may appear to some to be a modern invention, but the earliest known harnessing of wind power was with the sail boat as early as 5000 BCE by the Egyptians. This initial use of wind power had an important impact on the later development of sail-type windmills.

The first windmills were developed to ease the burden of daily tasks such as grain-grinding and water-pumping. What's interesting is that the majority of us, if asked, would attribute the windmill to the Dutch. In fact, the first documented design is a Persian windmill. The Persian model had vertical sails made of bundles of reeds or wood that were attached to the central vertical shaft by horizontal struts.
Others attribute the harnessing of wind power for water pumping and grain grinding to the Chinese. More than 2,000 years ago, the Chinese used a vertical-axis windmill. The earliest actual documentation of a Chinese windmill was in 1219 A.D. by a Chinese statesman called Yehlu Chhu-Tshai. Here is where the technology already started to have an impact as the Persian/Chinese vertical axis was changed to a horizontal axis when windmills first appeared in Europe. The reason for the evolution from the vertical-axis to a horizontal design may be because European water wheels also used a horizontal-axis configuration.

1600s: Windmills pump water from Holland's reclaimed wetlands

Around 1390, the Dutch set out to refine the tower mill design creating the big sails off the top and front of a stone building. The construction of the sails generated aerodynamic lift and improved rotor efficiency. It was a significant technological improvement. The process of perfecting the windmill sail, making incremental improvements in efficiency, took 500 years. By the time the process was completed, windmill sails had all the major features recognized by modern designers as being crucial to the performance of modern wind turbine blades. The early wind mills were symbols scattered across country sides serving as a sign of pre-industrial Europe and technological changes to come. The steam engine surpassed the wind powered mills for a time in Europe, while 19th century advances in wind power happened in the United States. The first American wind mills had four paddle-like wooden blades. Most of these mills had tails to orient them into the wind, but some were weather-vaning mills that operated downwind of the tower. Speed control of some models was provided by hinging sections of blades, so they would fold back like an umbrella in high winds, an action which reduced the rotor capture area to reduce thrust.

1888: Charles Brush develops first large wind generator producing 12 kilowatts

The most important refinement of the American fan-type windmill was the development of steel blades in 1870. Between 1850 and 1970, over six million -- mostly small one horsepower or less mechanical output -- wind machines were installed in the U.S. alone. In the late 19th century, the successful "American" multi-blade windmill design was used in the first large windmill to generate electricity. It was created by Charles F. Brush in Cleveland, Ohio. Known as the Brush machine, it had a rotor 17 metres in diameter and a large tail hinged to turn the rotor out of the wind. The big technological breakthrough being the first to have a gear box generating a direct current and producing 12 KW of electrical power. It turned at 500 RPM. The Brush machined ruled wind power electrical generation for 20 years.

In 1891, Poul La Cour from Denmark developed the first electrical output wind machine to incorporate aerodynamic design principles. The higher speed of the La Cour rotor made electricity generation practical. By the close of World War I, the use of 25 kilowatt electrical output machines had spread throughout Denmark.

The development of bulk-power, utility-scale wind energy conversion systems was first undertaken in Russia in 1931 with the 100kW Balaclava wind generator. This machine operated for about two years on the shore of the Caspian Sea, generating 200,000 KW of electricity. Experimental wind plants emerged subsequently in the United States, Denmark, France, Germany, and Great Britain during the period 1935-1970 proving that large-scale wind turbines would work.

The mother of turbine invention and innovation continued to be necessity. European developments continued after World War II mostly a result of a shortage of fossil fuel. In Denmark, the 200 kW Gedser Mill wind turbine operated successfully until the early 1960s. In Germany, Professor Ulrich Hutter developed a series of advanced, horizontal-axis designs that used modern, airfoil-type fiberglass and plastic blades with variable pitch to provide light weight and high efficiencies. This design approach sought to reduce bearing and structural failures by "shedding" aerodynamic loads, rather than "withstanding" them as did the Danish approach. One of the most innovative load-shedding design features was the use of a bearing at the rotor hub that allowed the rotor to "teeter" in response to wind gusts and vertical wind shear. The development of modern vertical-axis rotors that began in France by G.J.M. Darrieus in the 1920s was reinvented in the late 1960s by two Canadian researchers.

During the years 1973-1986, the commercial wind turbine market evolved from the 1 to 25 kilowatt size range to intermediate-scaled machines generating 50 to 600 kilowatts. Wind farms in California made up the majority of wind turbine installations until the early 1990s. In California, over 17,000 machines, ranging in output from 20 to 350 kilowatts, were installed in wind farms between 1981 and 1990. At the height of development, these turbines had a collected rating of over 1,700 megawatts and produced over 3 million megawatt hours of electricity, enough at peak output to power a city of 300,000.

After 1990, most market activity shifted to Europe and Asia. The installation of over 10,000 megawatts of European wind capacity supported a thriving private wind turbine development and manufacturing industry. Green power initiatives got underway. The 1990s brought real technology advancements that reduced noise levels, balanced weighting, produced much greater amounts of power and improved maintenance.

As blade technology advanced, blade size grew as blades became lighter and more aerodynamic. Larger blades require larger towers. The tower is perhaps one of the most important parts of a wind turbine. Tower technology is highly engineered and optimizes the structure to handle the unique static and dynamic loads generated by wind turbines. There are a couple common approaches to building towers. Free standing towers require significant foundations, they have no guy wires. They are either lattice towers, or made from pipe/tubing. Their main advantage, I think is their appearance, and the very small footprint required.

Early 1900s: Windmills drive pumps and generators across rural North America

Technological advances are again proving beneficial. The move is away from the lattice tower that permitted birds to fly through increasing bird mortality. The McLean's Mountain Wind Farm will not use a lattice tower, but rather a column tower that permits the wind to go around. This approach results in considerably less bird kill. These column-style towers are structural tubes that taper from base to the top. They are aesthetically very pleasing. This tower structure uses the most steel, as well as concrete for its foundation for a superior result.

There are now three basic types of wind turbines defined by the International Electrotechnical Commission (IEC) – Class 1, 2 and 3. The class of turbine selected is based on site conditions. Class 1 is for high winds with high turbulence used most often in offshore or ocean shoreline areas. Class 2 is for high winds with moderate turbulence for inland areas still subjected to very high wind conditions. Class 3 is for moderate winds and low-to-moderate turbulence in inland areas with less inconsistent and less turbulent wind conditions. The McLean's Mountain Wind Farm will use a Class 3 turbine. The Class 3 turbines are improving steadily by technology and material choices. Wind turbines are a modern technology. Wind power is the fastest growing energy source on earth. According to Industry Canada, Canada has been experiencing a 60 percent, per year, growth rate in the wind energy sector since 1998.

The winds of change blow with technology advances.

If you would like to know more about the Class 3 wind turbine or have any other issues you'd like to discuss, please do not hesitate to come in the project office. We are here to address any concern about the wind farm, including the wind turbines with you personally.

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1941: Putnam's 1.25 megawatt turbine demonstrates the need for lighter materials

2006: 3 megawatt turbines are mass produced

NEXT WEEK: **WIND FARM PROJECT UP DATE**

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MANITOULIN WIND NEWS

WIND FARM PROJECT UPDATE

By Rick Martin,
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What is involved in the pre-construction phase for the Renewable Energy Approval (REA) for the wind farm project? What are the tracked, all-terrain vehicles, one with a drilling rig on it, and equipment being used for? Are there public safety or environmental issues related to this pre-construction phase of the McLean's Mountain Wind Farm? I am sure you've seen several new people around and if you've been up in the Green Bush area, you've probably seen our equipment at the side of the road and are wondering what's up and what's next. We are fulfilling pre-construction requirements under the direct clearance of the Ministry of the Environment.

The REA requires wind farm developers to be very sure of their plans before being approved to construct. As a result, we have to survey the land areas using GPS, as discussed in previous Manitoulin Wind News columns, to again identify and confirm turbine site locations. A few of the turbine sites had to be relocated slightly, over the winter, as we have indicated in earlier communications, due to newly identified wetlands. Now that the snow is gone, all turbines sites, including the recently relocated sites, are being reviewed and any adjustments or changes are made. The survey data is provided to the construction team. They send out a crew to go on to the land and check for conformity to existing conditions.

This is ground work to ensure proper siting of the turbines within the wind project. We usually call this "micrositing". Micrositing is focused on important details related to wind flow, the terrain, equipment access and environmental issues. Ability to construct, accessibility and respect for the environment are the important factors in this process. Micrositing will generally result in very little adjustment to turbine placement.

The drilling and water units are for core sampling. Core samples are obtained by drilling with a special, hollow, drill head into the limestone or rock, with a hollow steel pipe called a core tube. The hole made for the core sample is called the "core hole". A variety of core samplers exist to sample the different conditions. The drill crew consists of a team of four trained and certified crew members. Included with this column are a couple of pictures of the equipment and the teams out in the field.

You may see the crews around at the local restaurants and motels. They make sure the drill rig goes in and on to the land without environmental impact and safely. The core sampling is done by drilling down 30 feet. Each core hole is filled and grouted so there is no risk to humans or animals of stumbling over or into the depression. In the coring process, the sample is pushed more or less intact into the tube. Removed from the tube on site and logged into special containers to be sent to the laboratory, the core sample and subsurface properties are inspected and analyzed using different techniques and equipment. The information generated is part of the required geotechnical studies. The results will be submitted to the Ministry of the Environment as part of the REA package. This permits us to then finalize turbine foundation engineering design parameters and predict turbine foundation requirements.

We have anticipated that we will be using the "spread base foundation," since the historic core sample information that we have from three years ago indicates that the rock formation is generally limestone and shale. This is the surest plan going forward. If other rock types are found through this sampling process there are alternative designs that can be used. The spread base foundation is about 9 feet in depth with an engineered rebar reinforcing structure. It is more than adequate to support the turbines, even in hurricane force winds and fine soil conditions. It will obviously be even stronger in a limestone "pocket". (A DVD showing the installation process of this type of base can be viewed at the local project office on Worthington St. Please contact Kirsten Basser or me, Rick Martin, to make an appointment.)

There are no public safety or environmental issues related to this pre-construction phase of the McLean's Mountain Wind Farm.

We will keep the public informed of turbine location changes and the final turbine siting map will be available. If a significant turbine layout change occurs, a public meeting will be required. My commitment to you is that the public will be well informed and there will be transparency in the process. You can watch this newspaper for any Public Notices of any meeting related to final turbine locations. We'll be out to answer any questions.

If you'd rather meet one-on-one, please do not hesitate to come and visit us at the project office. The address and phone number are provided. We'd be happy to see you and to go over your issues thoroughly.

NEXT WEEK:
ROLE OF PUBLIC MEETINGS

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MANITOULIN WIND NEWS

ROLE OF PUBLIC MEETINGS

By Rick Martin,
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Project Manager, McLean's Mountain Wind Farm
Northland Power Inc.

How does the public have a say in a wind farm development plan? How does the public ensure its questions are heard and considered? Is public consultation about good community engagement or just public relations for developers? It's been almost two years since the Ontario government passed the Green Energy and Green Economy Act on May 14, 2009. Integral to the legislation was the requirement for public consultation. The public has a direct say in any wind farm development through the public consultation process and public information centres held by the proponent.

Since 2004, the McLean's Mountain Wind Farm project has held four public meetings. (Please see the chart provided of all past public meetings.) The next public information meeting will be held on May 18. It is not one of the required meetings. It is a supplementary meeting to inform of equipment changes. This meeting is to explain a change in the turbine heights and locations as part of our efforts to respond to earlier public feedback. You told us you would prefer fewer and more efficient turbines. So, we are happy to announce, this is what has driven us to explore alternatives and a new configuration.

Ontario's Renewable Energy Approvals (REA) Regulation (O. Reg. 359/09) requires renewable energy project applicants to engage the public, municipalities and Aboriginal communities in discussions about their projects. The McLean's Mountain Wind Farm project team is strongly committed to real community engagement to help us be good corporate citizens.

At an early stage of project planning, an applicant must notify all landowners who are near the proposed project location of the planned project and must place a notice in a local newspaper. Applicants must also hold at least two community meetings. The goal of public consultation and public information meetings is informed discussion.

Project documents are available to the public in advance of these meetings. Project team experts are available at the meetings to take you through the documents and to provide one-on-one explanations and answers to your questions or issues. The public ensures its voice is heard and questions and concerns are documented by coming out to a public consultation meeting and registering.

Why register? Registering your name, address and contact information along with filling out issue sheets ensures you are listed with the Ministry of the Environment (MOE) as an alert or as a concerned resident. It means your questions have to be answered and the questions and answers logged with the Ministry. Our responses must occur in a timely and satisfactory manner. If you have questions that have not yet been addressed, it is your responsibility to give us enough information so we can contact you with a response.

We here at the McLean's Mountain Wind Farm believe there is a difference between informing and engaging the public. We have made every effort to establish two-way communication throughout the project. Yes, there are mandatory requirements to inform, but we have gone beyond the basic activities. There is an obvious challenge to any wind developer in terms of public opinion. Facts and openness go a lot further in establishing a basis for communications than rumours or evasiveness.

It isn't always easy to come out to a public meeting to get information. Council meetings held in evenings may also be a challenge, so we have a project office open and available letting you call, email or make an appointment to drop in and have someone go over all documents and information with you. We also hope these columns are helpful too.

Community engagement most definitely has impact. Proof? The most recent proof of the impact of community involvement in the McLean's Mountain Wind Farm project is three-fold. One, we have entered into a partnership with the Mnidoo Mnising Power company as a result of real community and stakeholder engagement. Two, we have, where possible, relocated or removed turbines as a result of community discussions. To reduce the number of turbines, we've had to use a taller turbine. Three, the public information centre meeting in May is being held to explain, in detail, those initiatives and the local impact. The changes are in response to this community's involvement with the project developer. We listened. We heard you. We took action to meet those needs and concerns.

The May 18 public meeting will be held in a well-known and accessible location – the Royal Canadian Legion No 177 at Vankoughnet Street East in Little Current. We've set the time of the meeting for after dinner hours from 7:00 to 9:00 p.m. There will not be a formal presentation, or an agenda for the evening, just detailed information on the equipment changes and knowledgeable folks there to take you through it all at your convenience. Anything more you need or want information on can be done in a follow-up and again registered and reported to the Ministry for greater accountability.

Personally, I enjoy the public meetings and hearing from residents directly. In addition to the notice in the newspaper, letters are issued to the municipality, affected landowners, those already on the MOE register and to the First Nations in the area. If you can't make the meeting, please call or email and let us know what information you need to stay informed and to be heard.

The project office address and contact information are included with this column. Don't hesitate to call or drop in. To make this work, we have to hear each other and work together to make bringing renewable energy to the Island positive and a benefit to the community.

MCLEAN'S MOUNTAIN WIND FARM – SUMMARY OF PUBLIC INFORMATION CENTRES

Meeting Date	*Meeting Location*	*Meeting Purpose*
June 30, 2004	NEMI Recreation Centre/Arena, Little Current	• Present General Project Information • NPI's intent on undertaking an EA
June 28, 2005	NEMI Recreation Centre/Arena, Little Current	• Provide information about the project • Provide the public with an opportunity to learn more about the EA process • Provide a venue for questions and for providing feedback to NPI about the project.
June 25, 2009	NEMI Recreation Centre/Arena, Little Current	• Present the results of environmental studies and evaluations of the siting of the wind turbines and transmission line route • Present the assessment of project impacts on the environment with potential mitigation measures and identification of residual effects • Present specific information on the project • Provide a venue for questions and for providing feedback to NPI about the project.
March 22, 2010	Royal Canadian Legion No 177, Little Current	• Present the proposed project and the Renewable Energy Act (REA) process • Respond to public questions, issues or concerns
May 18, 2011 (upcoming)	Royal Canadian Legion No 177, Little Current	• Present changes in wind turbine layout • Present the change of wind turbine hub heights from 80 m to 100 m • Introduce Mnidoo Mnising Power, who has entered into a 50/50 partnership with NPI to develop the McLean's Mountain Wind Farm

NEXT WEEK:
THE EFFECT OF TALLER TURBINES

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