

March 18, 2010

Rick Martin, Project Manager  
Northland Power Inc.  
Maclean Mountain Wind Farm Office  
P.O. Box 73,  
Little Current, ON P0P 1K0

RECEIVED  
18/03/10  
JB

Dear Mr. Martin,

I am writing this letter to express my deep concern about the Maclean Mountain Wind Project. My family and I live on Honora Lakeshore Road. For 16 years, it was our dream to move to our place on Honora Bay and in 1996 it became a reality. There is not another place in this entire world that I would rather be. Knowing this, you can certainly appreciate my concerns.

My first concern is that Manitoulin Island should continue to represent beauty in its natural state. Foreigners have been attracted to the Island by the Island's ability to differ from their own countries. How has the Island been able to remain unique and distinctive? ... mainly by keeping symbols and reminders of industrialized society at bay. Wind turbines in their industrial form, represent the opposite of what the Island has always stood for. Will the tourism industry be harmed? The Island's calmness has come from people finding beauty and awe in its spiritual nature. By placing industrial wind farms on the Island, the feeling that so many visitors express of having stepped on a "piece of heaven in another world" may eventually be replaced. Will it lead to the loss of income from tourism? You cannot have the type of discord that this issue has created without having pronounced negative effects in the Island's aura. If visitors do not sense it the next time they visit, they will surely hear of it. A piece of our beautiful Island's soul is about to be lost forever.

When it comes to health issues, the wind turbine syndrome is perceived by your industry as an excuse from people that are opposed and face NIMBY. But what has to be noted is that people genuinely fear having to leave their piece of paradise in the case that they would be affected by this specific type of illness. Is their fear warranted? Already, the evidence is mounting. At one point, the evidence was subjective and limited. As time progresses, the evidence remains subjective but the frequency of occurrence has become imposing. Wind syndrome has passed from the anecdotal to the experiential stage and it is at this junction that further studies are needed so that huge mistakes are circumvented. Just in passing, how long do you think the harm of cigarettes remained anecdotal to the tobacco industry? What is worse? A little bit of smoke or lack of sleep? Let's not make the same mistake twice.

What about wind turbines as an intelligent source of electricity? Energy physicists will tell you that wind is one of the most unpredictable and inconsistent sources of electricity. Harnessing the wind is best left to hobbyists. As an industrial source of energy, it leaves much to be desired. Why have energy dependent US and Canadian companies not looked

at wind turbines as a source of energy for their own profitable operations? The answer is simple. Wind energy is too costly. The outrageous costs outweigh the benefits. So why is our government so motivated to make this work? All of this reminds me of the Unisys ICONs, those huge, expensive, government funded computers that used to populate our schools and that are now boat anchors. It reminds me of the money that was available to start call centres all over Ontario just a few years ago. It reminds me of the flavour of the day syndrome. It reminds me of the power that lobbyist have over governments.

The most worrisome effect of this wind project will be at the level of relationships between Islanders. Some people think that the arguments will soon be forgotten. Don't bet on that. Thirty years ago, in my home town of Cochrane, I experienced something similar when an engineering firm constructed a sewage lagoon on the property line of my grandfather's farm. To this day, I still remember this and I am still as angry about it as I was then. This brings me to my next point, secrecy is used in the business world to protect "trade secrets" but some companies use secrecy to more easily acquire assets and rights that do not belong to them. When a property owner on which a buffer zone for one of these turbines, is told by neighbours of the existence of a large scale wind project that is already deemed to be "a done deal", what should we call that? We sometimes call it expropriation without compensation which is simply a nicer way of expressing taking something that does not belong to you. When a property owner has to resort to getting building permits and constructing buildings to protect their property, there is something gravely wrong with the system. This point by itself can get the Island totally divided. We all have a sense of what is right and what is wrong when it comes to business and social practises. Taking from people that lack the resources to defend themselves is not a way of becoming accepted on the Island.

What about depreciation of properties? Large properties adjacent to the wind farm will keep their value simply because of those willing to pay the price to install more lucrative wind turbines. What about those smaller farms and lakeshore properties that have living concerned human beings? There are two aspects to the depreciation picture. First there are properties that drop in value and the drop is readily apparent. Second, there is the problem of properties not appreciating with comparable properties over the life span of the turbines. How should the wind industry compensate the victims? An evaluation of each property affected should be completed. Each property should have four comparatives. Every four years, all properties will be evaluated and compensation will be given for the lack of comparable appreciation. This is the only way to be fair. Anything less would be another form of taking away that which does not belong to you. Do you not agree?

What about expansion? Does the MacLean Mountain project have ideas of expanding larger than the 77 megawatts? Have more farmers and land owners been sworn to secrecy? When will the public know about these deals if they have been made? When will it be "a done deal" once again. I get the impression that my anger is not even close to an end. Once the flood gates are opened, it will be interesting to see what happens and what reveals itself. Of course, it will be too late for the general public and our municipal officials to react by then.

Is Green Energy worth the price? I don't think so. Maybe it would be if I could possibly forget about them after they are constructed. The flicker, noise and sight of these forty-four storey high reminders will be just too much to bear.

Green Energy is supposed to go hand in hand with "Social consciousness". It is supposed to promote taking care of the environment and taking care of people. Are all these commercials on television "Window Dressing" for an industry that uses deceptive secrecy to bend the laws of ethics? Maybe the word Green in Green Energy is meant to be associated to the colour of money. I don't want to see anymore windmill commercials. They now represent greed instead of goodness, respect and wholesomeness.

People are all the same. We all want to deal with individuals and companies that will not take advantage of us, of our generosity and of our good will. We all want to feel that people that are in positions of power will use that power to protect us and not harm us. The MacLean Mountain project has a very large task ahead of it if it is to gain the respect of the community. They must ask permissions when the law says that permissions are not needed. They must consult the Township and listen carefully to what is asked when the law says that they don't have to. The minimum setbacks should not be the objective when people request that they be increased. On Business News Network the other day, the last comment was why are we constructing these wind farms near people's homes. When BNN is noticing the problem, maybe Northland Power should also.

An Industrial Wind Project presently 1000 m from my dwelling is not part of my vision nor that of my children. My greatest regret however is that my children are learning how unfair and thwarted a politically supported project can be. I guess it can always be used as an example of what not to do. By the way Mr. Martin, being subjected to your aggressive engineering firm twice in a lifetime is way too much for me. Can you imagine? I still have the letter that I wrote of behalf of my father 30 years ago. Do people forget these types of injustices? Never. They are never forgotten.

Sincerely,



c.c. Agatha Garcia-Wright, Environmental Assessment and Approval Branch  
David Caplan, Minister of Health and Long-term care  
Gord Miller, Environmental Commissioner of Ontario  
Carol Hughes, Member of Parliament, Algoma-Manitoulin-Kapuskasing  
Mike Brown, MPP, Algoma-Manitoulin  
Township of NEMI



**NORTHLAND POWER**  
McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

[REDACTED]

**RE: McLean's Mountain Wind Project**

Thank you for your letter of April 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

Several of the northernmost turbines and southwestern perimeter turbines have been removed largely due to public input. This results in a reduction in the number of wind turbines. Northland Power Inc. (NPI) is also currently proposing the use of 100 metre wind turbine towers which will lower the number again to 24-26 units. The proposed project will require the construction of a transmission line to connect with the Hydro One transmission system that is located on Goat Island.

NPI has also entered into a 50/50 partnership with Mnidoo Mnising Power, a company formed by the United Chiefs and Councils of Mnidoo Mnising First Nations, to share equally in the McLean's Mountain Wind Farm.

NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

I trust that the following responses address the concerns and questions you have expressed in your letter.

**Concerns and Responses Regarding Impact on Tourism**

**Comment:** "(...) *By placing industrial wind farms on the Island (...). Will it lead to the loss of income from tourism? (...)*"

## **NPI Response:**

The proposed McLean's Mountain Wind Farm is expected to have no negative impacts on Manitoulin Island Tourism. NPI has considered the potential for effects of the project on tourism and recreation activities. The project is well removed from the Lake Huron shoreline areas around the Island. The closest wind turbine (the westernmost turbine, turbine #42) is about 1.5 km from the Lake Huron shoreline. The easternmost wind turbine (turbine #9) of the project area is greater than 3 kilometres from the Lake Huron shoreline. Appreciating that tourist interests vary by individual, it is NPI's opinion that the view of the wind farm, especially from Honora Bay, will be complementary and will not negatively affect the viewscape.

Wind farms can have positive effects on the local tourism economy. There are 6,000 wind turbines in Denmark, which are used for marketing tourism. Local tourism associations may use wind turbines to promote "green tourism". This is particularly targeted towards the German market, where the public is known to have a high level of interest in both environmental issues and in new technology. In a Scottish study<sup>1</sup> 43% of respondents said a wind farm would have a positive effect on their inclination to visit the Argyll area, an area of high landscape value. About the same proportion of respondents said it would make no difference, while less than 8% felt that it would have a negative effect. Nine out of ten tourists visiting some of Scotland's top beauty spots say the presence of wind farms makes no difference to the enjoyment of their holiday. Twice as many people would return to an area because of the presence of a wind farm than would stay away, according to a poll carried out by MORI Scotland Commercial tour companies provide guided tours of several wind farms in the Pincher Creek, Alberta region. Several wind farms in Australia attract so many visitors that commercial tour operators provide opportunities for the public to get a close up view of the wind farms.

Back in 2004 I was involved in conducting a survey about the wind farm, requested by the municipality. The survey results indicated over 95% support of a wind farm by locals and visitors to Little Current. Boaters especially noted that the Turbines provide a landmark coming into the port of Little Current. NPI does not expect that the presence of the turbines would factor into a person's decision on whether to visit the Island. This project may have the potential to attract visitors. At NPI's Miller Mountain project in Quebec, 3500 tourists visited the project in 2008. The Providence Bay Wind Farm located to the south east of the MMWF project, approximately 45 kilometres away, established an interpretation centre for the project, which attracts numerous visitors over the summer visitor months

## **Concerns and Responses Regarding Human Health Impacts**

**Comment:** *"(...) When it comes to health issues, the wind turbine syndrome is perceived as your industry as an excuse form People that are opposed (...)"*

### **NPI Response:**

The Province of Ontario has some of the most stringent regulations in North America regarding wind turbine sighting and sounds restrictions and Northland Power intends to meet or exceed these regulations. It is important to note that although wind energy is relatively new to Ontario, it's a very well-established and proven form of electrical generation around the world. For more

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<sup>1</sup> *Tourist Attitudes Toward Wind Farms*, MORI Summary Report, September 2002 [www.bwea.com/pdf/MORI.pdf](http://www.bwea.com/pdf/MORI.pdf)

than thirty (30) years, tens of thousands of people have been living near wind turbines with no ill effects.

The Ontario's Chief Medical Officer of Health, Dr. Arlene King, recently sent a memorandum to all Medical Officers of Health and Environmental Health Directors stating the following about wind energy and human health: "(...) there is no scientific evidence, to date, to demonstrate a causal association between wind turbine noise and adverse health effects."

I would like to bring your attention to a report released December 2009, authored by an international panel of medical doctors and sound experts titled "Wind Turbine Sound and Health Effects: An Expert Panel Review". It concluded that sound from wind turbines has no direct harmful effect on human health.

To see the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects.pdf)

To see an executive summary of the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects-Executive\\_Summary.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects-Executive_Summary.pdf)

For more information on the effects of sound from wind turbines on human health please refer to the comment response tables provided in the Draft Renewable Energy Approval (REA) package

All of the proposed wind turbines are greater than 698 meters away from any residence, so there should clearly be no issue. The MOE noise standard also meets the range of the Health Canada guidelines of 40 dB(A) to residences.

### **Concerns and Responses Regarding Efficiency**

**Comment:** *"What about wind turbines as an intelligent source of electricity? (...) too costly (...)"*

#### **NPI Response:**

It is true that electricity from wind is more costly per kilowatt hour than nuclear- or coal-based electricity (approximately \$0.135/kWh vs. \$0.04/kWh). If you take into account the environmental, health, and other costs of pollution from coal burning or storing uranium you would find that your tax dollars also subsidize conventional sources of electricity, especially through higher health care costs. The cost of electricity from new coal or nuclear facilities, for example, is considerably higher, while the cost of wind energy is continually dropping and is expected to reach \$0.07 in the near future. In comparison, the cost of solar electricity per kilowatt hour is more than double and often more than triple that of wind.

### **Concerns and Responses Regarding Transparency**

**Comment:** “(...) *secrecy is used in the business world to protect “trade secrets” but some companies use secrecy to more easily acquire assets (...)*”

#### **NPI Response:**

It is NPI’s opinion that the consultation program for the McLean’s Mountain Wind Farm (MMWF) exceeds what is required by applicable legislation and that NPI has on numerous occasions reached out to the public to welcome their input on the proposed MMWF. Land lease agreements have been established with the owners of the private lands. A legal description of the land parcels was submitted to the MOE.

### **Concerns and Responses Regarding Expansion**

**Comment:** “*What about expansion? Does MacLean Mountain project have ideas of expanding larger than the 77 megawatts? (...)*”

There are no plans for expansion of the proposed McLean’s Mountain Wind Farm. The current wind farm configuration will produce approximately 60 MW of electricity with 24-26 wind turbines.

Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is [rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca).

Thank you.



Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre



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**Sent:** Thursday, March 18, 2010 11:25 PM

**To:** rickmartin@northlandpower.ca; McKinnon, Don

**Subject:** Wind Power on Manitoulin Island

I have been following the happenings of the proposed Wind Farm for Manitoulin Island for some time now .. and i am sick at my stomach when i think i'll be seeing these monsters when i go home for a visit, and vacation.

I was born and raised on Manitoulin and live in southern ontario right now. I have always regarded the Island as 'god's country' because of the beautiful, NATURAL landscape, the quietness and peacefulness that you feel when you're there, the abundance of wildlife all over the Island that you don't see elsewhere, all of the beautiful lakes that we have, and all of the trees that form their own picturesque backdrop. The evenings are quiet .. you could hear a pin drop.

Manitoulin Island survives on tourism. The North Channel is a major gateway to boaters. Many come for years and years because of the beauty that Manitoulin holds. Beauty is in the eye of the beholder. I have read on many occasions that tourists who have been coming to the Island for a long time, will probably go elsewhere for their vacation. I don't blame them. The Island's economy will therefore suffer. People leave cities because of the ugly sites of the Windmills (and i know, because i have one within 5 kms. of my home), among other reasons. Who wants to drive across that bridge and the first sight they see is a huge monster of a windmill? Not me and probably thousands of others.

With all of the studies regarding 'health' and the windmills, i would think a stop would be put forth immediately. I can't understand why this STOP has not happened yet. The Town Council should be working and acting on behalf of the residents of Manitoulin .. listening to their concerns and seeing what can be done, instead of saying "there's nothing we can do"! That's totally disgusting and obviously they do not care about health effects, noise concerns, disruption of animals lives, disruption of the tourism economy, the annoying 'blink' that happens with the windmill, etc. etc. etc. Not to mention, the property owners who are close to the windmill sites, who will lose value on their property and who purposely bought their acreage for peace, quiet, and country living.

If there are ANY HEALTH CONCERNS at all, i feel that this project should be stopped dead. I do not have any of the 'results of tests' in front of me right now, but i know that i have read about MANY health problems that are related directly to the windmills and it scares me. The health, safety and concerns of the property owners SHOULD BE considered, prior to moving on with this project. However, i do believe that the residents of Manitoulin were perhaps NOT told of the plans, by Town Council, right off the bat. This infuriates me to no end .. the councillors are to be honest and are voted in to work on behalf of the residents, not to be sneaky behind their peoples backs. I believe this is the case here.

I also feel that people's opinions should have some sort of impact on the GO or HALT of this



project. Many other communities have halted the go.ahead on the windmill projects, and i believe that the project on Manitoulin should be a no.go!!

I know of people who have purchased beautiful acreage in order to be able to see the night sky with it's many stars, constellations, and darkness. They also enjoy seeing the beautiful deer and other wildlife, in their fields and surrounding areas. This will all be interrupted with the installation of the windmills ... that, to me, is an invasion of privacy .. and these landowners SHOULD HAVE BEEN PRE.WARNED about the proposed project, when it first was in discussion.

I will be keeping up on what's happening ... as I am a Haweater and with family still living on Manitoulin, i am very concerned for their health and well.being.

Thanks for your time.



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**NORTHLAND POWER**  
McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

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**RE: McLean's Mountain Wind Project and Community Concerns**

Thank you for your letter of March, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

Several of the northernmost turbines and southwestern perimeter turbines have been removed largely due to public input. This results in a reduction in the number of wind turbines. Northland Power Inc. (NPI) is also currently proposing the use of 100 metre wind turbine towers which will lower the number again to 24-26 units. The proposed project will require the construction of a transmission line to connect with the Hydro One transmission system that is located on Goat Island.

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NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

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I trust that the following responses address the concerns and questions you have expressed in your letter.

**Concerns and Responses Regarding Economic Impacts**

**Comment:** *"Manitoulin Island survives on tourism. The North Channel is a major gateway to boaters. Many come for years and years because of the beauty that Manitoulin holds. Beauty is in the eye of the beholder. I have read on many occasions that tourists who have been coming to the Island for a long time, will probably go elsewhere for their vacation. I don't blame them. The Island's economy will therefore suffer."*

**NPI Response:**

**NPI Response:**

The proposed McLean's Mountain Wind Farm is expected to have no negative impacts on Manitoulin Island Tourism. NPI has considered the potential for effects of the project on tourism and recreation activities. The project is well removed from the Lake Huron shoreline areas around the Island. The closest wind turbine (the westernmost turbine, turbine #42) is about 1.5 km from the Lake Huron shoreline. The easternmost wind turbine (turbine #9) of the project area is greater than 3 kilometres from the Lake Huron shoreline. Appreciating that tourist interests vary by individual, it is NPI's opinion that the view of the wind farm, especially from Honora Bay, will be complementary and will not negatively affect the viewscape.

Wind farms can have positive effects on the local tourism economy. There are 6,000 wind turbines in Denmark, which are used for marketing tourism. Local tourism associations may use wind turbines to promote "green tourism". This is particularly targeted towards the German market, where the public is known to have a high level of interest in both environmental issues and in new technology. In a Scottish study<sup>1</sup> 43% of respondents said a wind farm would have a positive effect on their inclination to visit the Argyll area, an area of high landscape value. About the same proportion of respondents said it would make no difference, while less than 8% felt that it would have a negative effect. Nine out of ten tourists visiting some of Scotland's top beauty spots say the presence of wind farms makes no difference to the enjoyment of their holiday. Twice as many people would return to an area because of the presence of a wind farm than would stay away, according to a poll carried out by MORI Scotland Commercial tour companies provide guided tours of several wind farms in the Pincher Creek, Alberta region. Several wind farms in Australia attract so many visitors that commercial tour operators provide opportunities for the public to get a close up view of the wind farms.

Back in 2004 I was involved in conducting a survey about the wind farm, requested by the municipality. The survey results indicated over 95% support of a wind farm by locals and visitors to Little Current. Boaters especially noted that the Turbines provide a landmark coming into the port of Little Current. NPI does not expect that the presence of the turbines would factor into a person's decision on whether to visit the Island. This project may have the potential to attract visitors. At NPI's Miller Mountain project in Quebec, 3500 tourists visited the project in 2008. The Providence Bay Wind Farm located to the south east of the MMWF project, approximately 45 kilometres away, established an interpretation centre for the project, which attracts numerous visitors over the summer visitor months

**Concerns and Responses Regarding Natural Environment and Aesthetics**

**Comment:** *"I have always regarded the Island as 'god's country' because of the beautiful, natural landscape, the quietness and peacefulness you feel when you're there, the abundance of wildlife (...). I know of people who have purchased beautiful acreage in order to be able to see the night sky with its many stars, constellations, and darkness. They also enjoy seeing the beautiful deer and other wildlife, in their fields and surrounding areas. This will be interrupted with the installation of the windmills (...)"*

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<sup>1</sup> *Tourist Attitudes Toward Wind Farms*, MORI Summary Report, September 2002 [www.bwea.com/pdf/MORI.pdf](http://www.bwea.com/pdf/MORI.pdf)

**NPI Response:**

NPI recognizes the importance of enjoyment of one's property and the surrounding environment. The wind farm will not interfere with the peace and quiet you currently enjoy, except during the construction period, and even then you may not experience disruption depending on the location of your family's property. Perceptions regarding the visibility of wind turbines are subjective. NPI, in the siting of the turbines, has attempted to balance the visibility of the turbines with maximizing the output of the turbines. Visual simulations have been prepared as part of the Environmental Screening process. Updates to the visual simulations are being completed for the recent wind turbine layout change. The machines used for this project will blend in well with the surrounding area.

Impacts to the night sky should be minimal. Wind turbines will be lighted according to Transport Canada (TC) standards. Select turbines on the perimeter will be lit with a single red flashing light (horizontal distance between lit turbines can not exceed 900 meters for any approaching aircraft). The highest turbine in the wind farm will also be lit. All lighted turbines will flash simultaneously. The amount of lighting required should not unduly impact residents and cottagers in the area. Current lighting systems ensure pilot safety, minimal impact on birds and minimal impacts on the night sky viewing and are unobtrusive for communities. Light shrouds and shielding will be used where appropriate to minimize the impact of night time lighting.

Extensive studies on the natural environment have been conducted for the proposed project. These studies include the input of the Ministry of Natural Environment (MNR) and Environment Canada (EC) to ensure that the natural environment on Manitoulin Island is protected. A Natural Environment Assessment, in consultation with the MNR and EC was also conducted for this project. The assessment concluded that the risk to rare, threatened and endangered species in the area is low and minimal significant adverse effects are anticipated. Additional field work was conducted in 2010 as per the MNR direction. Some turbines have been removed and some changes were made to the turbine and road locations to avoid wetland areas that now have to be avoided under the REA process. The results of this work will contribute to the final Environmental Management and Protection Plan (EMPP). NPI will implement mitigation measures where required. A new natural heritage assessment document has been prepared and submitted to the Ministry of Natural Resources for review and comment.

An assessment of avifauna and wildlife in the project area was conducted in accordance with Ministry of Natural Resources and Environment Canada guidelines. The assessment concludes that the potential effects of the proposed project in the avian and other wildlife populations are minimal. There is a large amount of information available regarding the effects of wind farms on birds and this base of information continues to grow. From the experience of existing wind farms, the effects on birds are generally minimal during operation. While some construction activities could result in deer and other species moving out of the immediate area during the construction period, once the turbines are operational there is no evidence to suggest that the turbines would reduce deer population in the area, or that deer would no longer frequent the area.

**Concerns and Responses Regarding Decreased Property Values**

**Comment:** *"(...) Not to mention, the property owners who are close to the windmill sites, who will lose value on their property and who purposely bought their acreage for peace, quiet and country living."*

## **NPI Response:**

Based on the consultations undertaken with the local residents, NPI is aware of the public concerns over the loss of property values due to the proposed development of the McLean's Mountain Wind Farm. The vast majority of evidence on the impact of wind farms on land values comes from Europe, Australia and United States of America (USA). The studies conducted in these countries indicate wind farms have no material effect on property values. Data from Ontario is beginning to emerge as more wind farms are constructed, and the experience from those projects also suggests that wind farms do not decrease property values.

A 2006 study conducted by Blake, Matlock and Marshal Ltd. for Windrush Energy suggests that wind farms have not negatively affected property values. "Property Value Study: the Relationship of Windmill Development and Market Prices" aimed to determine if the development of wind farms in the Melancthon area has had any impact on the growth of property values in the Township. Property values before and after wind farm development in the Township of Melancthon were compared to values in East Luther Grand Valley Township, a neighbouring and similar township except for its lack of wind farms. Property values in Melancthon were also compared to those in Dufferin County. The analysis showed that property values in the Township of Melancthon grew similarly to the rest of the County, and increased more than East Luther Grand Valley Township. Wind farm development was not found to have diminished property values.

The Canadian Hydro Developers Inc. also compared housing price ranges on Wolfe Island and Simcoe Island in Ontario, before and after the development of the wind farm ([http://www.shearwind.com/glen\\_dhu\\_community/fact\\_sheet.html](http://www.shearwind.com/glen_dhu_community/fact_sheet.html)). Findings indicate that Township of Melancthon experienced a stronger growth rate in sales price per property, than the adjoining East Luther Grand Valley Township. The findings of this particular research indicate that the presence of the Wind Farm in Melancthon Township has not had an adverse impact on values within that municipality.

A study conducted in the Chatham-Kent area, where there are a number of wind turbines, found no evidence that wind farms have any measurable affect on rural residential market values. The study was conducted during May and June of 2009 by John Simmons Realty Services Ltd. and Canning Consultants Inc. and was commissioned by the Canadian Wind Energy Association to review possible effects of wind energy developments on real estate values on near-by properties. This information was provided at the March 22<sup>nd</sup>, 2010 Public Information Centre (PIC) that was held in Little Current. To review the study, please visit:

<http://www.canwea.ca/pdf/talkwind/PropertyValuesConsultingReportFebruary42010.pdf>

The appeals review board through MPAC (Municipal Property Assessment Corporation) referred to a very specific case in which a particular transformer was not functioning properly, causing excess noise. MPAC uses market and sales analysis to determine property values and has provided an outline of how they assess properties. This information was displayed on a large panel at the March 22<sup>nd</sup>, 2010 PIC and states that "To date, MPAC's analysis of sales does not indicate that the presence of wind turbines that are either abutting or in proximity to a property has either a positive or negative impact on its value."

Our direct contact with real estate sales representatives have indicated that there has been no effect on property values as a result of the Prince Wind Farm near Sault Ste. Marie. This information was presented at the March 2010 PIC. It is also our understanding that since the McLean's Mountain Wind Farm has been in advanced development stages adjacent properties including Farms have been sold at quite appreciated values.

## **Concerns and Responses Regarding Human Health Impacts**

**Comment:** *“With all of the studies regarding ‘health’ and the windmills, I would think a stop would be put forth immediately (...) If there are any health concerns at all, I feel that this project should be stopped dead.”*

### **NPI Response:**

The May 2010 report on *The Potential Health Impacts of Wind Turbines*, Chief Medical Officer of Health (CMOH) indicates that:

*“There is no scientific evidence, however, to indicate that low frequency sound generated from wind turbines causes adverse health effects. Low frequency sound and infrasound are everywhere in the environment. They are emitted from natural sources (e.g., wind, rivers) and from artificial sources including road traffic, aircraft, and ventilation systems. The most common source of infrasound is vehicles. Under many conditions, low frequency sound below 40Hz from wind turbines cannot be distinguished from environmental background noise from the wind itself (Leventhall 2006, Colby et al 2009).*

*Low frequency sound from environmental sources can produce annoyance in sensitive people, and infrasound at high sound pressure levels, above the threshold for human hearing, can cause severe ear pain. There is no evidence of adverse health effects from infrasound below the sound pressure level of 90dB (Leventhall 2003 and 2006).*

*Studies conducted to assess wind turbine noise indicate that infrasound and low frequency sounds from modern wind turbines are well below the level where known health effects occur, typically at 50 to 70dB. A small increase in sound level at low frequency can result in a large increase in perceived loudness. This may be difficult to ignore, even at relatively low sound pressures, increasing the potential for annoyance (Jakobsen 2005, Leventhall 2006) (...).”*

The report concludes that “low frequency sound and infrasound from current generation upwind model turbines are well below the pressure sound levels at which known health effects occur. Further, there is no scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects.

All of the proposed wind turbines are greater than 698 meters away from any residence, so there should clearly be no issue. The MOE noise standard also meets the range of the Health Canada guidelines of 40 dB(A) to residences. The Province of Ontario has some of the most stringent regulations in North America regarding wind turbine siting and sounds restrictions and Northland Power intends to meet or exceed these regulations. It is important to note that although wind energy is relatively new to Ontario, it’s a very well-established and proven form of electrical generation around the world. For more than thirty (30) years, tens of thousands of people have been living near wind turbines with no ill effects.

The Ontario’s Chief Medical Officer of Health, Dr. Arlene King, recently sent a memorandum to all Medical Officers of Health and Environmental Health Directors stating the following about wind energy and human health: “(...) there is no scientific evidence, to date, to demonstrate a causal association between wind turbine noise and adverse health effects.”

The Chief Medical Officer of Health (CMOH) Report “The Potential Health Impact of Wind Turbines” dated May 2010 concludes that “While some people living near wind turbines report symptoms such as dizziness, headaches, and sleep disturbance, the scientific evidence available to date does not demonstrate a direct causal link between wind turbine noise and adverse health effects” and that “The sound level from wind turbines at common residential setbacks is not sufficient to cause hearing impairment or other direct adverse health effects. However, some people might find it annoying. It has been suggested that annoyance may be a reaction to the characteristic “swishing” or fluctuating nature of wind turbine sound rather than to the intensity of sound.

I would like to bring your attention to a report released December 2009, authored by an international panel of medical doctors and sound experts titled “Wind Turbine Sound and Health Effects: An Expert Panel Review”. It concluded that sound from wind turbines has no direct harmful effect on human health.

To see the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects.pdf)

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For more information on the effects of sound from wind turbines on human health please refer to the comment response tables provided in the Draft Renewable Energy Approval (REA) package.

### **Comment and Response Regarding Town Council Involvement**

**Comment:** *“Town Council should be working and acting on behalf of the residents of Manitoulin listening to their concerns and seeing what can be done, instead of saying “there’s nothing we can do”*

#### **NPI Response:**

A Municipal Consultation Form was provided to NEMI as part of our ongoing consultation with them and their feedback is included in the REA submission package which will be provided to the MOE.

Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is [rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca).

Thank you.



Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

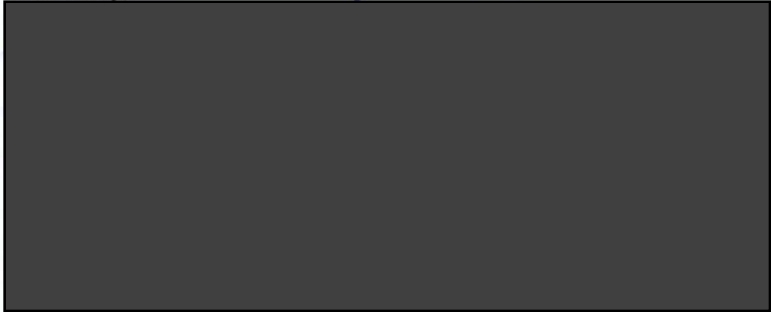
Encl. Notice of Public Information Centre.

McLean's Mountain Wind farm Project  
Box 73  
Little Current, Ontario  
P0P1K0

Mr. Martin:

Please add our letter to the long list of other letters of concern with regard to the Northland Power Project on McLean's Mountain. The many unanswered questions with regard to the environment, health issues, land values, tourism and aesthetics have divided our once easygoing, peaceful community. The Island's reputation as a pristine and unspoiled place to live has vanished and in its place we now have frustration, controversy and anger. Not a very nice place to live. People whose families have lived on the Island for decades are now talking about leaving. Northland's policy has been to act just within the guidelines of the Green Energy Act with no regard for the greater ethical question of whether the wind turbines are in the interest of the Manitoulin community.

Yours truly,







## **NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

[REDACTED]

[REDACTED]

### **RE: McLean's Mountain Wind Project and Community Concerns**

Thank you for your letter of March, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

Several of the northernmost turbines and southwestern perimeter turbines have been removed largely due to public input. This results in a reduction in the number of wind turbines. Northland Power Inc. (NPI) is also currently proposing the use of 100 metre wind turbine towers which will lower the number again to 24-26 units. The proposed project will require the construction of a transmission line to connect with the Hydro One transmission system that is located on Goat Island.

NPI has also entered into a 50/50 partnership with Mnidoo Mnising Power, a company formed by the United Chiefs and Councils of Mnidoo Mnising First Nations, to share equally in the McLean's Mountain Wind Farm.

NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

I trust that the following responses address the concerns and questions you have expressed in your letter.

## **Concerns and Responses Regarding Natural Environment**

**Comment:** “(...) many unanswered questions with regard to the environment (...)”

### **NPI Response:**

Extensive studies on the natural environment have been conducted for the proposed project. These studies include the input of the Ministry of Natural Environment (MNR) and Environment Canada (EC) to ensure that the natural environment on Manitoulin Island is protected. A Natural Environment Assessment, in consultation with the MNR and EC was also conducted for this project. The assessment concluded that the risk to rare, threatened and endangered species in the area is low and minimal significant adverse effects are anticipated. Additional field work was conducted in 2010 as per the MNR direction. Some turbines have been removed and some changes were made to the turbine and road locations to avoid wetland areas that now have to be avoided under the REA process. The results of this work will contribute to the final Environmental Management and Protection Plan (EMPP). NPI will implement mitigation measure where required. A new natural heritage assessment document has been prepared and submitted to the Ministry of Natural Resources for review and comment.

An assessment of avifauna and wildlife in the project area was conducted in accordance with Ministry of Natural Resources and Environment Canada guidelines. The assessment concludes that the potential effects of the proposed project in the avian and other wildlife populations are minimal. There is a large amount of information available regarding the effects of wind farms of birds and this base of information continues to grow. From the experience of existing wind farms, the effects to birds are generally minimal during operation. While some construction activities could result in deer and other species moving out of the immediate area during the construction period, once the turbines are operational there is no evidence to suggest that the turbines would reduce deer population in the area, or that deer would no longer frequent the area.

## **Concerns and Responses Human Health Impacts**

**Comment:** “(...) many unanswered questions with regard to (...) health issues (...)”

### **NPI Response:**

The May 2010 report on *The Potential Health Impacts of Wind Turbines*, Chief Medical Officer of Health (CMOH) indicates that:

*“There is no scientific evidence, however, to indicate that low frequency sound generated from wind turbines causes adverse health effects. Low frequency sound and infrasound are everywhere in the environment. They are emitted from natural sources (e.g., wind, rivers) and from artificial sources including road traffic, aircraft, and ventilation systems. The most common source of infrasound is vehicles. Under many conditions, low frequency sound below 40Hz from wind turbines cannot be distinguished from environmental background noise from the wind itself (Leventhall 2006, Colby et al 2009).”*

*Low frequency sound from environmental sources can produce annoyance in sensitive people, and infrasound at high sound pressure levels, above the threshold for human hearing, can cause severe ear pain. There is no evidence of adverse health effects from infrasound below the sound pressure level of 90dB (Leventhall 2003 and 2006).*

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All of the proposed wind turbines are greater than 698 meters away from any residence, so there should clearly be no issue. The MOE noise standard also meets the range of the Health Canada guidelines of 40 dB(A) to residences. The Province of Ontario has some of the most stringent regulations in North America regarding wind turbine siting and sounds restrictions and Northland Power intends to meet or exceed these regulations. It is important to note that although wind energy is relatively new to Ontario, it's a very well-established and proven form of electrical generation around the world. For more than thirty (30) years, tens of thousands of people have been living near wind turbines with no ill effects.

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I would like to bring your attention to a report released December 2009, authored by an international panel of medical doctors and sound experts titled "Wind Turbine Sound and Health

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For more information on the effects of sound from wind turbines on human health please refer to the comment response tables provided in the Draft Renewable Energy Approval (REA) package.

### **Concerns and Responses Regarding Decreased Property Values**

**Comment:** “(...) many unanswered questions with regard to (...) land values (...)”

#### **NPI Response:**

Based on the consultations undertaken with the local residents, NPI is aware of the public concerns over the loss of property values due to the proposed development of the McLean’s Mountain Wind Farm. The vast majority of evidence on the impact of wind farms on land values comes from Europe, Australia and United States of America (USA). The studies conducted in these countries indicate wind farms have no material effect on property values. Data from Ontario is beginning to emerge as more wind farms are constructed, and the experience from those projects also suggests that wind farms do not decrease property values.

A 2006 study conducted by Blake, Matlock and Marshal Ltd. for Windrush Energy suggests that wind farms have not negatively affected property values. “Property Value Study: the Relationship of Windmill Development and Market Prices” aimed to determine if the development of wind farms in the Melancthon area has had any impact on the growth of property values in the Township. Property values before and after wind farm development in the Township of Melancthon were compared to values in East Luther Grand Valley Township, a neighbouring and similar township except for its lack of wind farms. Property values in Melancthon were also compared to those in Dufferin County. The analysis showed that property values in the Township of Melancthon grew similarly to the rest of the County, and increased more than East Luther Grand Valley Township. Wind farm development was not found to have diminished property values.

The Canadian Hydro Developers Inc. also compared housing price ranges on Wolfe Island and Simcoe Island in Ontario, before and after the development of the wind farm ([http://www.shearwind.com/glen\\_dhu\\_community/fact\\_sheet.html](http://www.shearwind.com/glen_dhu_community/fact_sheet.html)). Findings indicate that Township of Melancthon experienced a stronger growth rate in sales price per property, than the adjoining East Luther Grand Valley Township. The findings of this particular research indicate

that the presence of the Wind Farm in Melancthon Township has not had an adverse impact on values within that municipality.

A study conducted in the Chatham-Kent area, where there are a number of wind turbines, found no evidence that wind farms have any measurable affect on rural residential market values. The study was conducted during May and June of 2009 by John Simmons Realty Services Ltd. and Canning Consultants Inc. and was commissioned by the Canadian Wind Energy Association to review possible effects of wind energy developments on real estate values on near-by properties. This information was provided at the March 22<sup>nd</sup>, 2010 Public Information Centre (PIC) that was held in Little Current. To review the study, please visit:

<http://www.canwea.ca/pdf/talkwind/PropertyValuesConsultingReportFebruary42010.pdf>

The appeals review board through MPAC (Municipal Property Assessment Corporation) referred to a very specific case in which a particular transformer was not functioning properly, causing excess noise. MPAC uses market and sales analysis to determine property values and has provided an outline of how they assess properties. This information was displayed on a large panel at the March 22<sup>nd</sup>, 2010 PIC and states that “To date, MPAC’s analysis of sales does not indicate that the presence of wind turbines that are either abutting or in proximity to a property has either a positive or negative impact on its value.”

Our direct contact with real estate sales representatives have indicated that there has been no effect on property values as a result of the Prince Wind Farm near Sault Ste. Marie. This information was presented at the March 2010 PIC. It is also our understanding that since the McLean’s Mountain Wind Farm has been in advanced development stages adjacent properties including Farms have been sold at quite appreciated values.

### **Concerns and Responses Regarding Tourism Impacts**

**Comment:** “(...) *many unanswered questions with regard to (...) tourism (...)*”

#### **NPI Response:**

The proposed McLean’s Mountain Wind Farm is expected to have no negative impacts on Manitoulin Island Tourism. NPI has considered the potential for effects of the project on tourism and recreation activities. The project is well removed from the Lake Huron shoreline areas around the Island. The closest wind turbine (the westernmost turbine, turbine #42) is about 1.5 km from the Lake Huron shoreline. The easternmost wind turbine (turbine #9) of the project area is greater than 3 kilometres from the Lake Huron shoreline. Appreciating that tourist interests vary by individual, it is NPI’s opinion that the view of the wind farm, especially from Honora Bay, will be complementary and will not negatively affect the viewscape.

Wind farms can have positive effects on the local tourism economy. There are 6,000 wind turbines in Denmark, which are used for marketing tourism. Local tourism associations may use wind turbines to promote “green tourism”. This is particularly targeted towards the German market, where the public is known to have a high level of interest in both environmental issues and in new technology. In a Scottish

study<sup>1</sup> 43% of respondents said a wind farm would have a positive effect on their inclination to visit the Argyll area, an area of high landscape value. About the same proportion of respondents said it would make no difference, while less than 8% felt that it would have a negative effect. Nine out of ten tourists visiting some of Scotland's top beauty spots say the presence of wind farms makes no difference to the enjoyment of their holiday. Twice as many people would return to an area because of the presence of a wind farm than would stay away, according to a poll carried out by MORI Scotland Commercial tour companies provide guided tours of several wind farms in the Pincher Creek, Alberta region. Several wind farms in Australia attract so many visitors that commercial tour operators provide opportunities for the public to get a close up view of the wind farms.

Back in 2004 I was involved in conducting a survey about the wind farm, requested by the municipality. The survey results indicated over 95% support of a wind farm by locals and visitors to Little Current. Boaters especially noted that the Turbines provide a landmark coming into the port of Little Current. NPI does not expect that the presence of the turbines would factor into a person's decision on whether to visit the Island. This project may have the potential to attract visitors. At NPI's Miller Mountain project in Quebec, 3500 tourists visited the project in 2008. The Providence Bay Wind Farm located to the south east of the MMWF project, approximately 45 kilometres away, established an interpretation centre for the project, which attracts numerous visitors over the summer visitor months

### **Concerns and Responses Regarding Aesthetics**

**Comment:** *"(...) many unanswered questions with regard to (...) aesthetics (...).The Island's reputation as a pristine and unspoiled place to live has vanished (...)"*

#### **NPI Response:**

NPI recognizes the importance of enjoyment of one's property and the surrounding environment. The wind farm will not interfere with the peace and quiet you currently enjoy, except during the construction period, and even then you may not experience disruption depending on the location of your property. Perceptions regarding the visibility of wind turbines are subjective. NPI, in the siting of the turbines, has attempted to balance the visibility of the turbines with maximizing the output of the turbines. Visual simulations of the new layout are being prepared and will be presented at the May PIC. The machines used for this project will blend in well with the surrounding area.

Impacts to the night sky should be minimal. The amount of lighting required should not unduly impact residents and cottagers in the area. Current lighting systems ensure pilot safety, minimal impact on birds and minimal impacts on the night sky viewing and are unobtrusive for communities. Light shrouds and shielding will be used where appropriate to minimize the impact of night time lighting. NPI believes that Manitoulin will continue to be viewed as a 'pristine and unspoiled place'.

### **Comment and Response Regarding Ethics**

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<sup>1</sup> *Tourist Attitudes Toward Wind Farms*, MORI Summary Report, September 2002 [www.bwea.com/pdf/MORI.pdf](http://www.bwea.com/pdf/MORI.pdf)

**Comment:** *“Northland’s policy has been to act just within the guidelines of the Green Energy Act with no regard for the greater ethical question of whether the wind turbines are in the interest of the Manitoulin community.”*

**NPI Response:**

The proposed project will require approval under Ontario Regulation 359/09 – Renewable Energy Approval (REA) under the *Green Energy Act* and NPI is complying with all of the REA requirements. Further, NPI will be required to meet the 40 dBA limit at all identified receptors and would be required to mitigate/resolve any exceedances as per the terms of the REA approval.

NPI has great regard for the Manitoulin community and is making every attempt to protect the environmental, economic and social fabric of the community. Consultation activities and natural environment studies conducted to date have met and exceeded the requirements of the applicable regulations.

Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is [rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca).

Thank you.

A handwritten signature in black ink, appearing to read "Rick Martin". The signature is fluid and cursive, with the first name "Rick" and last name "Martin" clearly distinguishable.

Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre

**Northland Power Inc.**

**McLean's Mountain Wind Farm Project**

**Attention: Rick Martin**

RECEIVED  
R (17/03/10)  
RB.

[REDACTED] wish to register our concerns over the proposed wind turbine development on McLean's Mountain and Honora Bay.

We feel that there are outstanding health issues that have not been fully investigated.

Also, the issue of groundwater and the environmental damage that might occur when the footings for these mega towers are installed. The release of gas, oil, and or salt water into the groundwater or the redirecting or stopping of said flow would be devastating. We have not heard of any studies that deal with this issue or of any measure to be taken if this situation occurs. Thirty years ago, my father, had Wright Brother's Drilling Company from Mindemoya attempt to drill a well. The well gave us salt water and gas.

We are also concerned about property value, and the fact the closer your property is to a turbine the greater your land is devalued. At least fifty percent of our land would be affected by this development (windmill No. 25).

At this time, I would also like to inform NPI, I have taken out a building permit to erect a residence on the northeast corner of Lot 33, Concession 3, Howland.

In closing, I would like to question, where the liability lies pertaining to health, environment and land values??????

**More than concerned,**

[REDACTED]



**Monday, March 15, 2010**

**Northland Power Inc.**

**McLean's Mountain Wind Farm Project**

**Attention: Rick Martin**

[REDACTED] wish to register our concerns over the proposed wind turbine development on McLean's Mountain and Honora Bay.

We feel that there are outstanding health issues that have not been fully investigated.

Also, the issue of groundwater and the environmental damage that might occur when the footings for these mega towers are installed. The release of gas, oil, and or salt water into the groundwater or the redirecting or stopping of said flow would be devastating. We have not heard of any studies that deal with this issue or of any measure to be taken if this situation occurs. Thirty years ago, my father, had Wright Brother's Drilling Company from Mindemoya attempt to drill a well. The well gave us salt water and gas.

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**More than concerned,**

[REDACTED]

cc

**Mike Brown, MPP**

**Ontario Ombudsman**

**Ministry of Environment**

Received by

K. Basso

March 17/10



## **NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

[REDACTED]

### **RE: McLean's Mountain Wind Project and Community Concerns**

Thank you for your letter of March, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

Several of the northernmost turbines and southwestern perimeter turbines have been removed largely due to public input. This results in a reduction in the number of wind turbines. Northland Power Inc. (NPI) is also currently proposing the use of 100 metre wind turbine towers which will lower the number again to 24-26 units. The proposed project will require the construction of a transmission line to connect with the Hydro One transmission system that is located on Goat Island.

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NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

I trust that the following responses address the concerns and questions you have expressed in your letter.

#### **Concerns and Responses Human Health Impacts**

**Comment:** *"We feel that there are outstanding health issues that have not been fully investigated."*

#### **NPI Response:**

The recent (May 2010) report on *The Potential Health Impacts of Wind Turbines*, Chief Medical Officer of Health (CMOH) indicates that:

*“There is no scientific evidence, however, to indicate that low frequency sound generated from wind turbines causes adverse health effects. Low frequency sound and infrasound are everywhere in the environment. They are emitted from natural sources (e.g., wind, rivers) and from artificial sources including road traffic, aircraft, and ventilation systems. The most common source of infrasound is vehicles. Under many conditions, low frequency sound below 40Hz from wind turbines cannot be distinguished from environmental background noise from the wind itself (Leventhall 2006, Colby et al 2009).*

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The report concludes that “low frequency sound and infrasound from current generation upwind model turbines are well below the pressure sound levels at which known health effects occur. Further, there is no scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects.

All of the proposed wind turbines are greater than 698 meters away from any residence, so there should clearly be no issue. The MOE noise standard also meets the range of the Health Canada guidelines of 40 dB(A) to residences. The Province of Ontario has some of the most stringent regulations in North America regarding wind turbine siting and sounds restrictions and Northland Power intends to meet or exceed these regulations. It is important to note that although wind energy is relatively new to Ontario, it’s a very well-established and proven form of electrical generation around the world. For more than thirty (30) years, tens of thousands of people have been living near wind turbines with no ill effects.

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For more information on the effects of sound from wind turbines on human health please refer to the comment response tables provided in the Draft Renewable Energy Approval (REA) package.

### **Concerns and Responses Regarding Groundwater and Drilling**

**Comment:** “(...) *the issue of groundwater and the environmental damage that might occur when the footings for these mega towers are installed. The release of gas, oil, and or salt water into the groundwater or the redirecting or stopping of said flow would be devastating.*”

#### **NPI Response:**

Extensive studies on the natural environment have been conducted for the proposed project. These studies include the input of the Ministry of Natural Environment (MNR) and Environment Canada (EC) to ensure that the natural environment on Manitoulin Island is protected. A Natural Environment Assessment, in consultation with the MNR and EC was also conducted for this project. Extensive studies on the natural environment have been conducted for the proposed project. These studies include the input of the Ministry of Natural Environment (MNR) and Environment Canada (EC) to ensure that the natural environment on Manitoulin Island is protected. A Natural Environment Assessment, in consultation with the MNR and EC was also conducted for this project. The assessment concluded that the risk to rare, threatened and endangered species in the area is low and minimal significant adverse effects are anticipated. Additional field work was conducted in 2010 as per the MNR direction. Some turbines have been removed and some changes were made to the turbine and road locations to avoid wetland areas that now have to be avoided under the REA process. The results of this work will contribute to the final Environmental Management and Protection Plan (EMPP). NPI will implement mitigation measure where required. A new natural heritage assessment document has been prepared and submitted to the Ministry of Natural Resources for review and comment.

Given the nature of a wind farm (and the specific mitigation measures proposed for this project), the project is highly unlikely to have any impact of surface or ground water resources. Given the shallow depth of the foundations, three (3) meters and the fractured and permeable nature of the geology, no measurable effects on ground water flow is expected. We are aware, previous to any construction; many people in the community are hauling water to their wells at various times of the year. Based on the bore holes information collected to date, the water table is expected to be well below the depth of turbine foundation excavation. There is no reason to expect that turbine excavation activities would have an effect on the underground water or surface water in the area given the shallow depth of the excavations. Additional geotechnical investigations will confirm the characteristics of the rock and provide input to the design for the turbine foundations to support the turbines.

Gas pockets are unlikely to be found during construction as the foundations extend to a depth of only three (3) meters. The initial geotechnical tests show that the rock near the surface is fractured and permeable and therefore unlikely to contain gas. Care will be taken during the drilling of additional bore holes prior to construction and the excavation during construction to protect against the unlikely release of gas.

Additional geotechnical investigations have been initiated and will confirm the characteristics of the rock and provide input to the design for the turbine foundations to support the turbines. Wind turbines can be erected in a variety of soil/rock conditions. The foundations that will be used for the turbines on this site are the same as the ones used in locations with sandy soil. The large spread foundation disperses the mass of the turbine equally over a significant footprint to enhance its stability.

### **Concerns and Responses Regarding Decreased Property Values**

**Comment:** *“We are also concerned about property value and the fact that the closer your property is to a turbine the greater your land is devalued.”*

#### **NPI Response:**

Based on the consultations undertaken with the local residents, NPI is aware of the public concerns over the loss of property values due to the proposed development of the McLean’s Mountain Wind Farm. The vast majority of evidence on the impact of wind farms on land values comes from Europe, Australia and United States of America (USA). The studies conducted in these countries indicate wind farms have no material effect on property values. Data from Ontario is beginning to emerge as more wind farms are constructed, and the experience from those projects also suggests that wind farms do not decrease property values.

A 2006 study conducted by Blake, Matlock and Marshal Ltd. for Windrush Energy suggests that wind farms have not negatively affected property values. “Property Value Study: the Relationship of Windmill Development and Market Prices” aimed to determine if the development of wind farms in the Melancthon area has had any impact on the growth of property values in the Township. Property values before and after wind farm development in the Township of Melancthon were compared to values in East Luther Grand Valley Township, a neighbouring and similar township except for its lack of wind farms. Property values in Melancthon were also compared to those in Dufferin County. The analysis showed that property values in the Township of Melancthon grew similarly to the rest of the County, and increased more than East Luther Grand Valley Township. Wind farm development was not found to have diminished property values.

The Canadian Hydro Developers Inc. also compared housing price ranges on Wolfe Island and Simcoe Island in Ontario, before and after the development of the wind farm ([http://www.shearwind.com/glen\\_dhu\\_community/fact\\_sheet.html](http://www.shearwind.com/glen_dhu_community/fact_sheet.html)). Findings indicate that Township of Melancthon experienced a stronger growth rate in sales price per property, than the adjoining East Luther Grand Valley Township. The findings of this particular research indicate that the presence of the Wind Farm in Melancthon Township has not had an adverse impact on values within that municipality.

A study conducted in the Chatham-Kent area, where there are a number of wind turbines, found no evidence that wind farms have any measurable affect on rural residential market values. The study was conducted during May and June of 2009 by John Simmons Realty Services Ltd. and Canning Consultants Inc. and was commissioned by the Canadian Wind Energy Association to review possible effects of wind energy developments on real estate values on near-by properties. This information was provided at the March 22<sup>nd</sup>, 2010 Public Information Centre (PIC) that was held in Little Current.

To review the study, please visit:

<http://www.canwea.ca/pdf/talkwind/PropertyValuesConsultingReportFebruary42010.pdf>

The appeals review board through MPAC (Municipal Property Assessment Corporation) referred to a very specific case in which a particular transformer was not functioning properly, causing excess noise. MPAC uses market and sales analysis to determine property values and has provided an outline of how

they assess properties. This information was displayed on a large panel at the March 22<sup>nd</sup>, 2010 PIC and states that "To date, MPAC's analysis of sales does not indicate that the presence of wind turbines that are either abutting or in proximity to a property has either a positive or negative impact on its value."

Our direct contact with real estate sales representatives have indicated that there has been no effect on property values as a result of the Prince Wind Farm near Sault Ste. Marie. This information was presented at the March 2010 PIC. It is also our understanding that since the McLean's Mountain Wind Farm has been in advanced development stages adjacent properties including Farms have been sold at quite appreciated values.

### **Comment and Response Regarding Building Permit**

**Comment:** *"I would also like to inform NPI, I have taken out a building permit to erect a residence on the northeast corner of Lot 33, Concession 3, Howland."*

#### **NPI Response:**

NPI made efforts to identify all potential receptors in the study area. In the event that any receptors were missed, required changes to the layout will be made to maintain a minimum 550 m setback and meet applicable MOE noise guidelines. Specific setbacks are required and a criterion is in place to maintain these typical setbacks based on common building practices when relating to vacant lots. This has been followed on this project.

The MOE has made a decision that crystallization dates are acknowledged for all projects. A crystallization date is the date at which the project layout is publically announced and the public should have an understanding of where the turbines are to be located. If building permits are purchased after the crystallization date, they are being taken out with full knowledge of the expected placement of the turbines.

The MOE, in its letter dated, August 3, 2010 (copy enclosed) has confirmed that the crystallization date is when NPI issued its Notice of Completion, under the previous Electricity Act Regulation. It is expected that all noise receptors, at that time, were considered in the noise assessment for the project. The only exception would be is if a turbine was relocated after a building permit was taken out. That building permit has to describe a building that meets the criteria as a sensitive receptor by the Ministry of the Environment.

NPI published its Notice of Completion on July, 2009 in the Manitoulin Expositor. The Notice of Completion was also distributed to residents within and around the project area at that time through Canada Post Admail.

### **Comment and Response Regarding Liability**

**Comment:** *"In closing, I would like to question, where the liability lies pertaining to health, environment and land values?"*

#### **NPI Response:**

As noted above, negative effects are not expected with regard to health, environment and land values. However, if such effects were to occur and they were proven to be a direct result of the wind farm as a result of negligence on the part of NPI, appropriate action would be taken.


Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is [rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca).

Thank you.

A handwritten signature in black ink, appearing to read "Rick Martin". The signature is fluid and cursive, with the first name "Rick" and last name "Martin" clearly distinguishable.

Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre  
Letter dated August 3, 2010 from MOE Director of Environmental Approvals, Doris Dumais



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**Sent:** Friday, April 16, 2010 8:12 PM

**To:** jtem@northlandpower.ca; commissioner@eco.on.ca; agatha.garciawright@ontario.ca; rickmartin@northlandpower.ca; arlene.king@ontario.ca; info@ombudsman.on.ca; info@oahpp.ca; bduguid.mpp@liberal.ola.org; dmcguinty.mpp.co@liberal.ola.org; info@townofnemi.on.ca; minister.moe@ontario.ca; McKinnon, Don; dca@northlandpower.ca

**Subject:** McLean's Mountain Wind Project and Community Concerns

**Importance:** High

Dear folks - I have pasted in a form letter below, but first I want to let you know I have first hand experience working for a power company that owns and operates an Ontario wind farm and living amongst ridiculously subsidized wind turbines in the Municipality of Kincardine, Bruce County (132+ at last count with 60 more being reviewed to arrive). I own vacation property along with my husband which is to be our future retirement home located in the heart of Manitoulin in the Municipality of Billings. We also own two vacant properties in the Municipality of Central Manitoulin. I cannot tell you how disheartened we are to learn that the disruptive trail of destruction to formerly tranquil rural farm land in our Bruce County home is soon to arrive on our doorstep in our beloved vacation/retirement communities. We can get no respite from these behemoths who come with their absent corporate owners, foreign manufacturing, annoying and continuous pollution of our beloved dark night skies, not to mention the blight they place on the view of the landscape, the near depletion of earth worms and the frightening disbursement of wildlife. We are environmentalists and try to be good stewards of our land and we do believe in renewable energy sources, but these bastardized wind turbines with no battery storage capacity that are only averaging 28% capacity are not the way to go. If those in the cities want this form of energy, let them have it in their neighbourhoods. Rural Ontario and the shoreline areas of the Great Lakes do not want them and other than for a few select land owners, we are not benefitting from them - we are suffering from them. Put them up in Rosedale, Muskoka and any of the other desirable neighbourhoods of those who want this type of power, but do not blight our landscape just because we have a sparse population compared to the urban areas, do not have excessive incomes or because we have weak local by-laws, yet further weakened by the current energy policies. PLEASE DO NOT DESTROY THE GEM KNOWN AS MANITOULIN ISLAND NOR ABUSE THE PEOPLE, LAND, FLORA AND FAUNA THAT EXIST HERE. It may not be a politically powerful location, of any consequence to those in the larger urban southern communities, but that does not give government and politicians the right to spoil it for narrow-minded greed-based purposes and less than reliable technology that is grossly oversubsidized and would not be acceptable if the true price of this method of power production was charged. This province needs state-of-the-art baseload energy sources that occupy a very small landbase for the very large amount of power it can produce. By all means, keep exploring and researching green energy sources, but ensure that the short-sightedness of



rushing to put up what at first glance only appears to be green technology does not continue. Suffering individuals, families and communities may not be able to afford the expensive and elaborate PR and medical studies required to scientifically prove their very real injuries from this type of technology, but that does not make their situations or experiences any less real - they are just "different" than the outcomes wind companies and governments use to measure illness and inconvenience by. Just because I may stand in a garage does not make me a car, nor because I erect a wind turbine does it mean I am a reliable or best choice electricity producing technology. Save the land, save the people and save the animals from these useless spinning sticks and you will truly be acting in an environmentally responsible way. Refurbish, upgrade or construct state-of-the-art baseload power projects - hydroelectric, biomass, biogas, nuclear, etc. Conduct massive amounts of R&D to ensure that solar can become affordable, that wind turbines are not as massive or invasive and come with the battery storage they require to become even remotely reliable. Help homeowners, farmers, businesses continue to reconfigure their energy needs so they can become producers of their own energy and can sell back their excess production. Incorporate self-supporting energy technologies into new buildings and homes. Help Ontarians become less energy dependent and consumptive. Wake up and smell the stink from the wind turbines - it is already too late in my home County of Bruce - do not destroy Manitoulin and what is left of the shoreline areas. Please.



April, 2010

To All Government and Company Officials:

**Re: McLean's Mountain Wind Project and Community Concerns**

The purpose of this letter is to advise you of the many concerns that people living on and off of Manitoulin Island have regarding the Industrial Wind Turbine Project that is being proposed by **Northland Power Inc.** As one of many concerned citizens, I would like to see the following issues addressed in full prior to any construction on this project beginning:

**Economic Impacts**

- Manitoulin is a tourist based economy: With the Ontario Power Authority having just approved 60 MW of the McLean's Mountain project, with another 40 MW awaiting approval and another 100+ MW for future expansion as per the Ontario Power Authority web site, how can Northland and government officials assure residents and visitors that this island will not soon be covered with hundreds of Industrial Wind Turbines? Once the infra-structure is approved for this first project, the road is already paved for many more companies to follow. Firms such as Greenhead Energy and others will also be offered government subsidies and will easily be able to plug into the main grid (which has to first be upgraded for Northland's expansion). Vacationers and long time island residents who used to enjoy the peace and quiet of the natural world will leave and take their economic resources elsewhere.

**Environmental Concerns**

- Soft rock and gas pockets all over the island: Manitoulin is known locally for the existence of extensive gas pockets and limestone rock. A fire burns yearly unless extinguished in Kagawong due to surface leakage. A camp in Bidwell road area is supplied by gas from the ground. A well driller in NEMI had his rig and a recently constructed large new home burn up when he was drilling for water well and struck a gas pocket. When Northland does test drilling

and then digs large holes to form the bases for 43 separate turbines, such explosions could easily occur threatening project employees, equipment and nearby habitats. How will the company prevent and/or deal with such unplanned explosions? Will a soft limestone rock foundation support turbines the height of a 40 storey high building over the lifespan of the turbine? If they do stand for 20 years, who will pay for the turbines to be taken down when they have outlived their usefulness?

- Surface ground water contamination due to extensive drilling for multiple anchor rods for each turbine to unknown depths, in soft, unstable limestone: How can Northland assure other land owners that their ground water supplies will not be changed, disappear or become contaminated with all this drilling going on over such a large area? Drilling and construction activity would definitely adversely affect underground water flow which would contaminate many spring-fed lakes, ponds and drinking water sources.
- Adverse consequences for soil, vegetation, trees, birds, bats and other wildlife both during construction and operational phases. With Manitoulin being home to so many rare species and plants, how can Northland possibly address and mitigate such extensive losses as a result of their project?

### **First Nations Concerns**

- At Northland's public consultation meeting on March 22, 2010 The United Chiefs and Councils of Manitoulin (UCCM) declared their continued opposition to the project until appropriate consultation with Island First Nations has been made. A legal requirement of the Ontario government, as proclaimed by the Supreme Court of Canada, consultation, "has been ignored and continues to be ignored," said Chief Shining Turtle of Whitefish River First Nation and UCCM tribal chair.
- The AOK First Nation has also expressed opposition to this project, sighting concerns regarding improper consultation, and improper setbacks to protect the health of their community and First Nation Land. AOK is also calling for a minimum 2-2.5 km setback distance between turbines and the boundaries of their Nation. Recently the Sheguiandah First Nation supported this resolution made by AOK. The UCCM and the Wikwemikong Unceded First Nation all stated their opposition to the Northland power project.

### **Decreased property values**

- There is increasing evidence that Industrial Wind Turbines(IWT) cause significant loss of property values to nearby lands. Recently in Ontario an appeals review board through MPAC (Municipal Property Assessment Corporation) ruled in favour of a 50% assessed reduction in property value on a property due to excessive noise from a transformer station in a wind farm project. Many people who have tried to move away from IWT's have found themselves unable to sell their properties. Others who have invested their life savings in their home or farm find they cannot afford to sell. This is a particularly bad predicament for those who are experiencing adverse health effects due to their close proximity to Industrial Wind Turbines.

### **Infrasound and Human Health Impacts**

- See below for details, including references. For full information, please visit [www.WindVigilance.com](http://www.WindVigilance.com)

### **Set-back distances between Industrial Wind Turbines and nearby homes and dwellings**

- The 550 metre setback outlined in Ontario's Green Energy Act is clearly not enough compared to other norms and standards around the world (see statements from the World Health Organization in the section below on Noise and Health Effects); I strongly urge Northland Power Inc. to exercise the Precautionary Principle and structure their project so that 2-2.5 km is

the minimum distance between a turbine and any other dwelling such as a home, cottage or hunt camp.

**Re: Response to the Project Proposal and the new Renewable Energy Approval application regarding Adverse Health Effects and Industrial Wind Turbines**

Further to these concerns, I would like to advise Northland Power Inc. and any other corporation, individual, consulting group, government ministry or agency involved in the obtainment and or granting of licence that you will be held responsible if I or any of my family members or group suffer adverse health effects or other negative consequences as a result of exposure to the industrial wind turbines in the **McLean's Mountain Wind Farm**.

The December 2009 American Wind Energy Association and Canadian Wind Energy Association sponsored report entitled "Wind Turbine Sound and Health Effects" (A/CanWEA Panel Review) acknowledges that wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological symptoms.[\[1\]](#)

In a radio interview an author of the A/CanWEA Panel Review W. David Colby, M.D. stated:

"We're not denying that there are people annoyed and that maybe some of them are getting stressed out enough about being annoyed that they're getting sick."[\[2\]](#)

The A/CanWEA Panel Review acknowledges wind turbine noise induced symptoms may include palpitations, insomnia, nose bleeds, dizziness, nausea, eye strain, feeling vibration and headache. [\[3\]](#)

In 2010 Geoff Leventhall an author of the A/CanWEA Panel Review is quoted as stating "... there was no doubt people living near the turbines suffered a range of symptoms, including abnormal heart beats, sleep disturbance, headaches, tinnitus, nausea, visual blurring, panic attacks and general irritability.... it's ruining their lives – and it's genuine...".[\[4\]](#)

The A/CanWEA Panel Review does not provide any science based guidelines that would mitigate these health risks.[\[5\]](#)

The Ontario Ministry of Health and Long Term Care also acknowledge wind turbines may cause annoyance, stress and sleep disturbance.[\[6\]](#)

Globally there are people reporting adverse health effects from exposure to industrial wind turbines. [\[7\]](#), [\[8\]](#),[\[9\]](#),[\[10\]](#) Families including children have abandoned their homes to protect their health. This cannot be denied.

In Ontario there are now over 100 family members reporting adverse health effects from exposure to industrial wind turbines. [\[11\]](#), [\[12\]](#)

Peer reviewed studies of European industrial wind turbine facilities have documented high annoyance and sleep disturbance in respondents.[\[13\]](#),[\[14\]](#),[\[15\]](#) and that wind turbine induced "Annoyance was further associated with lowered sleep quality and negative emotions. This, together with reduced restoration possibilities may adversely affect health." [\[16\]](#)

Annoyance may adversely affect physiological health. Research indicates that for "...chronically strong annoyance a causal chain exists between the three steps health – strong annoyance – increased

morbidity.”[17]

The subjective experience of noise annoyance and stress can, through central nervous processes, lead to an inadequate neuro-endocrine reaction and finally to regulation diseases.[18]

The World Health Organization recognizes annoyance and sleep disturbance as adverse health effects.  
[19]

“Health Canada advises...that there are peer-reviewed scientific articles indicating that wind turbines may have an adverse impact on human health.”[20]

The Renewable Energy Application (REA) and proposal for the **McLean’s Mountain Wind Farm** is inadequate and does not specifically address the risk of adverse human health effects associated with the operations of industrial wind turbines.

Therefore, this project cannot be approved.

Specific concerns about the REA include but are not limited to:

The REA does not specifically discuss the risk of human adverse health effects from exposure to industrial wind turbine operations. The REA does not expressly require **Northland Power Inc.** to address the risk of human adverse health effects from exposure to industrial wind turbine operations. This is a flaw in the REA process.

The ability of those individuals to rely on the shielding effect of an environmental assessment (REA) is greatly diminished by the elimination of the awareness of any flaws in the assessment procedure or grant of licence. It has been stated that such an awareness should trigger an intensive exercise of due diligence to ascertain and deal with the potential risks to others of the project. The REA does not address how the project proponent **Northland Power Inc.** intends to prevent the widely acknowledged wind turbine induced adverse health effects such as annoyance, stress and sleep disturbance and adverse physiological and psychological symptoms.

The REA indicates the **Northland Power Inc.** intends to adhere to Ontario wind turbine noise guidelines and regulations. **Northland Power Inc. is advised that adherence to government regulations does not guarantee that individuals will not experience adverse health effects and therefore does not remove responsibility.**

There is no scientific evidence that the current Ministry of Environment wind turbine noise guidelines and regulations are adequate to protect Ontario individuals from suffering wind turbine induced adverse health effects.

In addition the current Ministry of Environment wind turbine noise guidelines and regulations fail to incorporate key Noise Management strategies and protocols endorsed by the World Health Organization.

For example the World Health Organization considers enforcement of health based noise guidelines imperative to health protection.[21] According to the Ontario Ministry of Environment “There is currently no scientifically accepted field methodology to measure wind turbine noise to determine compliance or non compliance with a Certificate of Approval limits.” [22]

In a January 2010 request for proposal issued by The Ministry of Environment it states "Unlike typical industrial noise sources, measurement of audible noise from wind turbines in general raises technical

challenges" [23]

The request for proposal further states:

"...the MOE Noise Guidelines for Wind Farms, October 2008 do not contain a measurement method for assessing the actual noise impact." and that "The Ministry requires a consultant to assist in the development of a measurement procedure to assess noise compliance of existing wind farms with the applicable sound level limits"[24]

The A/CanWEA Panel Review also acknowledges that wind turbine low frequency noise may cause annoyance.[25]

The physiological and psychological symptoms caused by low frequency noise annoyance can be serious and "The claim that their "lives have been ruined" by the noise is not an exaggeration..." [26]

The current Ministry of Environment wind turbine noise guidelines and regulations do not have any science based guidelines or regulations to protect individuals from the adverse health effects of wind turbine low frequency noise. [27],[28]

This deficiency is further illustrated by the Ministry of Environment's January, 2010 request for proposal to solicit assistance in "determining how or whether to regulate low frequency noise emissions from wind turbines".[29]

It is acknowledged that wind turbine shadow flicker may cause annoyance in humans.[30] Annoyance is an adverse health effect.[31] In the past Ontario wind energy projects have included Shadow Flicker Reports as part of their Environmental Screening Reports / Environmental Review Reports. The REA does not require the wind energy proponent to address the risk of shadow flicker. A shadow flicker report based on authoritative guidelines designed to protect human health must be conducted before the **Northland Power Inc.** can be approved.

The current Ontario wind turbine noise guidelines or regulations are based on conservative computer modelling. They are not based on independent third party human health studies designed to protect human health. The MOE has not provided peer-reviewed scientific evidence detailing how the guidelines or regulations were derived. The MOE has not provided peer-reviewed scientific evidence to demonstrate that a minimum 550 m setback will protect humans from the acknowledged adverse physiological and psychological effects associated with industrial wind turbines. According to the MOE 2008 Guidelines, the noise limits allow up to 51 dBA at 10 m/s which is over a 10 fold increase in acoustic energy from that of 40 dBA.

Dr. R. Copes, member of the Ontario Agency for Public Health and Promotion, along with others have identified a number of research gaps related to industrial wind turbines and related adverse health effects. [32]

The research gaps include among others, investigation of 'health effects from long-term exposure to low levels of low frequency sound...practical measurement methods for attributing sound specifically to wind turbines...impact of wind turbine sound on sleep physiology...epidemiological data to assess health status before and after wind farm development."

The World Health Organization states "In all cases noise should be reduced to the lowest level achievable in a particular situation. When there is a reasonable possibility that the public health will be endangered, even though scientific proof may be lacking, action should be take to protect the public health, without awaiting the full scientific proof."[33]

In summary the American Wind Energy Association and Canadian Wind Energy Association sponsored report entitled “Wind Turbine Sound and Health Effects” and authoritative bodies including those in Ontario acknowledge that industrial wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological symptoms.

The government of Ontario has been advised about these adverse health effects and cannot claim ignorance. The REA ignores the risks to health and is an unconscionable approval process knowingly supported by the Ontario government.

**Northland Power Inc.** cannot proceed until the independent 3rd party human health studies have been conducted to determine authoritative setbacks and noise levels including that of low frequency noise. Please visit [www.WindVigilance.com](http://www.WindVigilance.com) for full details. I look forward to receiving a response, and/or at very least acknowledgement of receipt of my comments.

Yours truly,

Please be advised that this letter has also been sent to:

**James C. Temerty**, Chairman of the Board, Northland Power Inc. (**please distribute copies to all board members**),

Gord Miller, Environmental Commissioner of Ontario, Ministry of the Environment  
 Agatha Garcia-Wright, Director, Environmental Assessment and Approvals Branch, Rick Martin, McClean’s Mountain Wind Farm, Arlene King, Chief Medical Officer of Health, Ministry of Health and Long Term Care Public Health Division, Andre Marin, Ombudsman of Ontario, (please apply to file # 222-520) The Ontario Agency for Health Protection and Promotion, Brad Duguid Ministry of Energy and Infrastructure, Dalton McGuinty, Premier, The Town of North Eastern Manitoulin Island, John Gerretsen, Ministry of Environment, Don McKinnon Consulting, and David Cheung-Atkinson, Project Manager, Northland Power Inc.

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[1] W. David Colby, M.D et al., Wind Turbine Sound and Health Effects, An Expert Panel Review 2009, Prepared for American Wind Energy Association and Canadian Wind Energy Association

[2] W. David Colby, M.D., Sounding Board, 97.9 FM The Beach December 17, 2009

[3] W. David Colby, M.D et al., Wind Turbine Sound and Health Effects, An Expert Panel Review 2009, Prepared for American Wind Energy Association and Canadian Wind Energy Association

[4] Countryside News, Wind turbines set to get bigger, January 28 2010

<http://www.walesonline.co.uk/countryside-farming-news/countryside-news/2010/01/28/wind-turbines-setto-get-bigger-91466-25701853/>

[5] W. David Colby, M.D et al., Wind Turbine Sound and Health Effects, An Expert Panel Review 2009, Prepared for American Wind Energy Association and Canadian Wind Energy Association

[6] Arlene King M.D., Ontario Ministry of Health and Long Term Care Memorandum, October 21, 2009,

[http://windvigilance.com/primer\\_ahe.aspx](http://windvigilance.com/primer_ahe.aspx)

[7] Amanda Harry M.D., Wind Turbines Noise and Health, 2007 UK

[8] Michael A. Nissenbaum M.D., [http://windvigilance.com/mars\\_hill.aspx](http://windvigilance.com/mars_hill.aspx)

[9] WindVOiCe© <http://windvigilance.com/>

[10] Nina Pierpont M.D., Wind Turbine Syndrome, 2009

- [11] WindVOiCe© <http://windvigilance.com/>
- [12] Hansard Reports, proceedings from April 15th, and April 16th, 2009 The Green Energy Act, Bill 150, Standing Committee on General Government, Ontario [http://www.ontla.on.ca/web/committee-proceedings/committee\\_transcripts\\_details.do?locale=en&Date=2009-04-15&ParlCommID=8856&BillID=2145&Business=&DocumentID=23801](http://www.ontla.on.ca/web/committee-proceedings/committee_transcripts_details.do?locale=en&Date=2009-04-15&ParlCommID=8856&BillID=2145&Business=&DocumentID=23801)
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[http://www.euro.who.int/mediacentre/PR/2009/20091008\\_1](http://www.euro.who.int/mediacentre/PR/2009/20091008_1)
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[http://windvigilance.com/primer\\_ahe.aspx](http://windvigilance.com/primer_ahe.aspx)
- [21] World Health Organization, Guidelines for Community Noise, 1999  
[http://www.euro.who.int/mediacentre/PR/2009/20091008\\_1](http://www.euro.who.int/mediacentre/PR/2009/20091008_1)
- [22] Correspondence from Ministry of Environment Sept 30, 2009 ENV1283MC2009-4305
- [23] MERX 189608: MGS - RFP Provision of Expert Advice on Measuring Audible Noise from Wind Turbines - OSS-078695 [www.merx.ca](http://www.merx.ca)
- [24] ibid
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- [27] Ontario Regulation 359/09 Made Under The Environmental Protection Act Renewable Energy Approvals Under Part V.0.1 of the Act, September 24, 2009
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- [32] National Collaborating Center for Environmental Health, Wind Turbines and Health by Karen Rideout, Ray Copes, Constance Bos, January 2010
- [33] World Health Organization, Guidelines for Community Noise, 1999  
[http://www.euro.who.int/mediacentre/PR/2009/20091008\\_1](http://www.euro.who.int/mediacentre/PR/2009/20091008_1)



## **NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May 2011

[REDACTED]

### **RE: McLean's Mountain Wind Project and Community Concerns**

Thank you for your letter of April, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

Several of the northernmost turbines and southwestern perimeter turbines have been removed largely due to public input. This results in a reduction in the number of wind turbines. Northland Power Inc. (NPI) is also currently proposing the use of 100 metre wind turbine towers which will lower the number again to 24-26 units. The proposed project will require the construction of a transmission line to connect with the Hydro One transmission system that is located on Goat Island.

NPI has also entered into a 50/50 partnership with Mniidoo Mnisging Power, a company formed by the United Chiefs and Councils of Mniidoo Mnisging First Nations, to share equally in the McLean's Mountain Wind Farm.

NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

I trust that the following responses address the concerns and questions you have expressed in your letter.

### **Concerns and Responses Regarding Economic Impacts**

**Comment:** *"Manitoulin is a tourist based economy: With the Ontario Power Authority having just approved 60 MW of the McLean's Mountain project, with another 40 MW awaiting approval and another 100+ MW for future expansion as per the Ontario Power Authority web site, how can Northland and government officials assure residents and visitors that this island will not soon be covered with hundreds of Industrial Wind Turbines? (...)"*



### **NPI Response:**

The proposed McLean's Mountain Wind Farm is expected to have no negative impacts on Manitoulin Island Tourism. NPI has considered the potential for effects of the project on tourism and recreation activities. The project is well removed from the Lake Huron shoreline areas around the Island. The closest wind turbine (the westernmost turbine, turbine #42) is about 1.5 km from the Lake Huron shoreline. The easternmost wind turbine (turbine #9) of the project area is greater than 3 kilometres from the Lake Huron shoreline. Appreciating that tourist interests vary by individual, it is NPI's opinion that the view of the wind farm, especially from Honora Bay, will be complementary and will not negatively affect the viewscape.

Wind farms can have positive effects on the local tourism economy. There are 6,000 wind turbines in Denmark, which are used for marketing tourism. Local tourism associations may use wind turbines to promote "green tourism". This is particularly targeted towards the German market, where the public is known to have a high level of interest in both environmental issues and in new technology. In a Scottish study<sup>1</sup> 43% of respondents said a wind farm would have a positive effect on their inclination to visit the Argyll area, an area of high landscape value. About the same proportion of respondents said it would make no difference, while less than 8% felt that it would have a negative effect. Nine out of ten tourists visiting some of Scotland's top beauty spots say the presence of wind farms makes no difference to the enjoyment of their holiday. Twice as many people would return to an area because of the presence of a wind farm than would stay away, according to a poll carried out by MORI Scotland Commercial tour companies provide guided tours of several wind farms in the Pincher Creek, Alberta region. Several wind farms in Australia attract so many visitors that commercial tour operators provide opportunities for the public to get a close up view of the wind farms.

Back in 2004 I was involved in conducting a survey about the wind farm, requested by the municipality. The survey results indicated over 95% support of a wind farm by locals and visitors to Little Current. Boaters especially noted that the Turbines provide a landmark coming into the port of Little Current. NPI does not expect that the presence of the turbines would factor into a person's decision on whether to visit the Island. This project may have the potential to attract visitors. At NPI's Miller Mountain project in Quebec, 3500 tourists visited the project in 2008. The Providence Bay Wind Farm located to the south east of the MMWF project, approximately 45 kilometres away, established an interpretation centre for the project, which attracts numerous visitors over the summer visitor months

### **Concerns and Responses Regarding Natural Environment**

**Comment:** *"Soft rock and gas pockets all over the island: Manitoulin is known locally for the existence of extensive gas pockets and limestone rock. A fire burns yearly unless extinguished in Kagawong due to surface leakage (...)"*

### **NPI Response:**

Gas pockets are unlikely to be found during construction as the foundations extend to a depth of only three (3) meters. The initial tests show that the rock near the surface is fractured and permeable and

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<sup>1</sup> *Tourist Attitudes Toward Wind Farms*, MORI Summary Report, September 2002 [www.bwea.com/pdf/MORI.pdf](http://www.bwea.com/pdf/MORI.pdf)

therefore unlikely to contain gas. Care will be taken during the drilling of additional bore holes prior to construction and the excavation during construction to protect against the unlikely release of gas.

Additional geotechnical investigations have been initiated and will confirm the characteristics of the rock and provide input to the design for the turbine foundations to support the turbines. Wind turbines can be erected in a variety of soil/rock conditions. The foundations that will be used for the turbines on this site are the same as the ones used in locations with sandy soil. The large spread foundation disperses the mass of the turbine equally over a significant footprint to enhance its stability.

**Comment:** *“Surface ground water contamination due to extensive drilling for multiple anchor rods for each turbine to unknown depths, in soft, unstable limestone (...)”*

**NPI Response:**

Given the nature of a wind farm (and the specific mitigation measures proposed for this project), the project is highly unlikely to have any impact of surface or ground water resources. Given the shallow depth of the foundations, three (3) meters and the fractured and permeable nature of the geology, no measurable effects on ground water flow is expected. We are aware, previous to any construction; many people in the community are hauling water to their wells at various times of the year. Based on the bore holes information collected to date, the water table is expected to be well below the depth of turbine foundation excavation. There is no reason to expect that turbine excavation activities would have an effect on the underground water or surface water in the area given the shallow depth of the excavations.

**Comment:** *“Adverse consequences for soil, vegetation, trees, birds, bats and other wildlife both during construction and operational phases. With Manitoulin being home to so many rare species and plants, how can Northland possibly address and mitigate such extensive losses as a result of their project?”*

**NPI Response:**

Extensive studies on the natural environment have been conducted for the proposed project. These studies include the input of the Ministry of Natural Environment (MNR) and Environment Canada (EC) to ensure that the natural environment on Manitoulin Island is protected. A Natural Environment Assessment, in consultation with the MNR and EC was also conducted for this project. The assessment concluded that the risk to rare, threatened and endangered species in the area is low and minimal significant adverse effects are anticipated. Additional field work was conducted in 2010 as per the MNR direction. Some turbines have been removed and some changes were made to the turbine and road locations to avoid wetland areas that now have to be avoided under the REA process. The results of this work will contribute to the final Environmental Management and Protection Plan (EMPP). NPI will implement mitigation measure where required. A new natural heritage assessment document has been prepared and submitted to the Ministry of Natural Resources for review and comment.

**Concerns and Responses Regarding First Nations**

**Comment:** *“At Northland’s public consultation meeting on March 22, 2010 The United Chiefs and Councils of Manitoulin (UCCM) declared their continued opposition to the project until appropriate consultation with Island First Nations has been made (...)”*

*The AOK First Nation has also expressed opposition to this project, sighting concerns regarding improper consultation, and improper setbacks to protect the health of their community and First Nation Land. AOK is also calling for a minimum 2-2.5 km setback distance between turbines and the boundaries of their Nation (...)*

**NPI Response:**

Communication with First Nation communities that may have interests in the proposed project has been ongoing for several years and in compliance with government requirements. In February 2011, Mnidoo Mnising Power, a company formed by the United Chiefs and Councils of Mnidoo Mnising First Nations (UCCMM), has entered into a 50/50 partnership with Northland Power Inc. to share equity in the McLean's Mountain 60 MW Wind Farm Project and on-going renewable power developments.

Membership of UCCM include M'Chigeeng First Nation; Sheguiandah First Nation; Sheshegwaning First Nation; Aundeck-Omni-Kaning First Nation; Whitefish River First Nation; and Zhiibaahaasing First Nation. UCCMM formed Mnidoo Mnising Power to lead renewable energy projects on Manitoulin Island in order to protect First Nations' rights, heritage and ensure the future for First Nations' youth.

Band Council resolutions are in place with each band council supporting their position in this agreement.

**Concerns and Responses Regarding Decreased Property Values**

**Comment:** *“There is increasing evidence that Industrial Wind Turbines (IWT) cause significant loss of property values to nearby lands. Recently in Ontario an appeals review board through MPAC (Municipal Property Assessment Corporation) ruled in favour of a 50% assessed reduction in property value on a property due to excessive noise from a transformer station in a wind farm project (...)*”

**NPI Response:**

Based on the consultations undertaken with the local residents, NPI is aware of the public concerns over the loss of property values due to the proposed development of the McLean's' Mountain Wind Farm. The vast majority of evidence on the impact of wind farms on land values comes from Europe, Australia and United States of America (USA). The studies conducted in these countries indicate wind farms have no material effect on property values. Data from Ontario is beginning to emerge as more wind farms are constructed, and the experience from those projects also suggests that wind farms do not decrease property values.

A 2006 study conducted by Blake, Matlock and Marshal Ltd. for Windrush Energy suggests that wind farms have not negatively affected property values. “Property Value Study: the Relationship of Windmill Development and Market Prices” aimed to determine if the development of wind farms in the Melancthon area has had any impact on the growth of property values in the Township. Property values before and after wind farm development in the Township of Melancthon where compared to values in East Luther Grand Valley Township, a neighbouring and similar township except for its lack of wind farms. Property values in Melancthon were also compared to those in Dufferin County. The analysis showed that property values in the Township of Melancthon grew similarly to the rest of the County, and increased more than East Luther Grand Valley Township. Wind farm development was not found to have diminished property values.

The Canadian Hydro Developers Inc. also compared housing price ranges on Wolfe Island and Simcoe Island in Ontario, before and after the development of the wind farm ([http://www.shearwind.com/glen\\_dhu\\_community/fact\\_sheet.html](http://www.shearwind.com/glen_dhu_community/fact_sheet.html)). Findings indicate that Township of Melancthon experienced a stronger growth rate in sales price per property, than the adjoining East Luther Grand Valley Township. The findings of this particular research indicate that the presence of the Wind Farm in Melancthon Township has not had an adverse impact on values within that municipality.

A study conducted in the Chatham-Kent area, where there are a number of wind turbines, found no evidence that wind farms have any measurable affect on rural residential market values. The study was conducted during May and June of 2009 by John Simmons Realty Services Ltd. and Canning Consultants Inc. and was commissioned by the Canadian Wind Energy Association to review possible effects of wind energy developments on real estate values on near-by properties. This information was provided at the March 22<sup>nd</sup>, 2010 Public Information Centre (PIC) that was held in Little Current. To review the study, please visit:

<http://www.canwea.ca/pdf/talkwind/PropertyValuesConsultingReportFebruary42010.pdf>

The appeals review board through MPAC (Municipal Property Assessment Corporation) referred to a very specific case in which a particular transformer was not functioning properly, causing excess noise. MPAC uses market and sales analysis to determine property values and has provided an outline of how they assess properties. This information was displayed on a large panel at the March 22<sup>nd</sup>, 2010 PIC and states that "To date, MPAC's analysis of sales does not indicate that the presence of wind turbines that are either abutting or in proximity to a property has either a positive or negative impact on its value."

Our direct contact with real estate sales representatives have indicated that there has been no effect on property values as a result of the Prince Wind Farm near Sault Ste. Marie. This information was presented at the March 2010 PIC. It is also our understanding that since the McLean's Mountain Wind Farm has been in advanced development stages adjacent properties including Farms have been sold at quite appreciated values.

### **Concerns and Responses Regarding Infrasound and Human Health Impacts**

**Comment:** "(...) For full information, please visit [www.WindVigilance.com](http://www.WindVigilance.com)"

#### **NPI Response:**

Infrasound or low frequency noise emissions were characteristics of some of the earlier models of wind turbines. This was attributed to early designs in which the turbine blades are downwind of the main tower. This phenomenon does not occur with modern upwind turbine technology (MOE, 2005). Infrasound has been studied extensively for current wind turbine technologies (JCAA, June 2006; HGC, 2006; Defra, 2003). At present, there are a significant number of wind turbines in operation in Ontario, including in several in proximity to residences; with no adverse impact from infrasound.

A study performed by HCG (2006) conclude, "All in all, based on Canadian and international studies, infrasound generated by wind turbines should not be considered a concern to the health of nearby residences. At the closest distances at which residences are typically located near large wind turbines, approximately 300 meters, the infrasonic levels are low enough to not be of concern. In any event, the discussion of whether or not infrasound poses a health risk at low levels is somewhat academic since, in the absence of wind turbines, comparable infrasonic levels are present in the natural environment." The

evidence is that the current turbine technologies do not present any adverse impact related to the generation of infrasound.

The May 2010 report on *The Potential Health Impacts of Wind Turbines*, Chief Medical Officer of Health (CMOH) indicates that:

*“There is no scientific evidence, however, to indicate that low frequency sound generated from wind turbines causes adverse health effects. Low frequency sound and infrasound are everywhere in the environment. They are emitted from natural sources (e.g., wind, rivers) and from artificial sources including road traffic, aircraft, and ventilation systems. The most common source of infrasound is vehicles. Under many conditions, low frequency sound below 40Hz from wind turbines cannot be distinguished from environmental background noise from the wind itself (Leventhall 2006, Colby et al 2009).*

*Low frequency sound from environmental sources can produce annoyance in sensitive people, and infrasound at high sound pressure levels, above the threshold for human hearing, can cause severe ear pain. There is no evidence of adverse health effects from infrasound below the sound pressure level of 90dB (Leventhall 2003 and 2006).*

*Studies conducted to assess wind turbine noise indicate that infrasound and low frequency sounds from modern wind turbines are well below the level where known health effects occur, typically at 50 to 70dB. A small increase in sound level at low frequency can result in a large increase in perceived loudness. This may be difficult to ignore, even at relatively low sound pressures, increasing the potential for annoyance (Jakobsen 2005, Leventhall 2006) (...).”*

The report concludes that “low frequency sound and infrasound from current generation upwind model turbines are well below the pressure sound levels at which known health effects occur. Further, there is no scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects.

All of the proposed wind turbines are greater than 698 meters away from any residence, so there should clearly be no issue. The MOE noise standard also meets the range of the Health Canada guidelines of 40 dB(A) to residences.

### **Concerns and Responses Regarding Set-back Distances between Industrial Wind Turbines and Nearby Homes and Dwellings**

**Comment:** *“The 550 metre setback outlined in Ontario’s Green Energy Act is clearly not enough compared to other norms and standards around the world (see statements from the World Health Organization in the section below on Noise and Health Effects); I strongly urge Northland Power Inc. to exercise the Precautionary Principle and structure their project so that 2-2.5 km is the minimum distance between a turbine and any other dwelling such as a home, cottage or hunt camp.”*

#### **NPI Response:**

The Province of Ontario has some of the most stringent regulations in North America regarding wind turbine siting and sounds restrictions and Northland Power intends to meet or exceed these regulations. It is important to note that although wind energy is relatively new to Ontario, it’s a very well-established

and proven form of electrical generation around the world. For more than thirty (30) years, tens of thousands of people have been living near wind turbines with no ill effects.

The Ontario's Chief Medical Officer of Health, Dr. Arlene King, recently sent a memorandum to all Medical Officers of Health and Environmental Health Directors stating the following about wind energy and human health: "(...) there is no scientific evidence, to date, to demonstrate a causal association between wind turbine noise and adverse health effects."

I would like to bring your attention to a report released December 2009, authored by an international panel of medical doctors and sound experts titled "Wind Turbine Sound and Health Effects: An Expert Panel Review". It concluded that sound from wind turbines has no direct harmful effect on human health.

To see the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects.pdf)

To see an executive summary of the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects-Executive\\_Summary.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects-Executive_Summary.pdf)

For more information on the effects of sound from wind turbines on human health please refer to the comment response tables provided in the Draft Renewable Energy Approval (REA) package.

### **Concerns and Responses Regarding Adverse Health Effects and Industrial Wind Turbines**

**Comment:** "(...) *The December 2009 American Wind Energy Association and Canadian Wind Energy Association sponsored report entitled "Wind Turbine Sound and Health Effects" (A/CanWEA Panel Review) acknowledges that wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological symptoms (...)*"

#### **NPI Response:**

The Chief Medical Officer of Health (CMOH) Report "The Potential Health Impact of Wind Turbines" dated May 2010 concludes that "While some people living near wind turbines report symptoms such as dizziness, headaches, and sleep disturbance, the scientific evidence available to date does not demonstrate a direct causal link between wind turbine noise and adverse health effects" and that "The sound level from wind turbines at common residential setbacks is not sufficient to cause hearing impairment or other direct adverse health effects. However, some people might find it annoying. It has been suggested that annoyance may be a reaction to the characteristic "swishing" or fluctuating nature of wind turbine sound rather than to the intensity of sound.

The proposed project will require approval under Ontario Regulation 359/09 – Renewable Energy Approval (REA) under the *Green Energy Act* and NPI is complying with all of the REA requirements. Further, NPI will be required to meet the 40 dBA limit at all identified receptors and would be required to mitigate/resolve any exceedances as per the terms of the REA approval.

### **Additional Concerns and Comments**

In addition to the questions and comments raised in the form letter, your email of April 16<sup>th</sup> makes reference to several other issues.

The FIT program is facilitating the development of renewable energy projects in Ontario, which is also making it possible for micro generation projects of the kind you mention for homeowners, farmers and businesses to be successful on a small scale. You mention that wind technology is “grossly over subsidized and would not be acceptable if the true price of this method of power production was charged.” If only the true cost of electricity from coal and other fossil fuels could be calculated (including the cost of health care relating to respiratory related illness as a result of these facilities) I believe you would find that wind energy is cheap in comparison. Furthermore, the FIT program is modeled on a similar incentive program in Germany which has developed such a market for wind that costs have been driven down. I believe strongly that you will find that the FIT program will benefit the Ontario economy in the long run while making remarkable strides towards meeting greenhouse gas reduction targets.

You are also correct that over the course of a year, a turbine will generate about 30% of its theoretical maximum output. A modern wind turbine produces electricity 70-85% of the time, but it generates different outputs dependent on wind speed. This is known as its load factor. A modern wind turbine will generate enough electricity to meet the demands of more than a thousand homes over the course of a year. Furthermore, a wind turbine produces enough clean electricity in 3 to 5 months to offset all of the greenhouse gas emissions emitted in its manufacture – and it will produce clean electricity for another 20-25 years. A modern wind turbine is designed to operate for more than 20 years. Turbines are currently offsetting peak rather than base power and with a direct link to the grid, batteries are not needed. Most certainly a mix of renewable technologies (such as the ones mentioned in your email) are needed. NPI is a power company that develops wind farms but we support other forms of renewable generation and encourage you to discuss your suggestions with your local MPP.

Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is [rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca).

Thank you.



Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre



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**From:** [REDACTED]  
**Date:** Mon, 15 Mar 2010 22:21:06 -0400  
**To:** RickMartin<rick.martin@Northlandpower.ca>  
**Subject:** McLean's Mountain Wind Turbine Project Morphet Property on Morphet Side Road

Mr. Martin,

This letter is in response to the request of any objections to the wind turbine project on McLeans Mountain.

You asked me a question as to whether we intended on building on our property adjacent to the Wind Turbine Project. The answer at this time is YES, and we have obtained a building permit. We intend on constructing the house close to the barns on the property and ask that all wind turbines will be at least the 550 meters away from our house. The construction will be taking place within the next few months.

We also have concerns on the possibility of disturbances of ground water or well water caused by the blasting that will occur during the construction of the wind turbine project. The unknowns need to be answered so that any Environmental issues can be avoided. The clean waters of the inland lakes may be in jeopardy due to ground water disturbances. The blasting may cause oil, or sulphur to be directed into these lakes. Any wells that depend on the springs of the plateau may dry up or be made unusable with the same issues.







**NORTHLAND POWER**  
McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

[REDACTED]

**RE: McLean's Mountain Wind Project and Community Concerns**

Thank you for your letter of March, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

Several of the northernmost turbines and southwestern perimeter turbines have been removed largely due to public input. This results in a reduction in the number of wind turbines. Northland Power Inc. (NPI) is also currently proposing the use of 100 metre wind turbine towers which will lower the number again to 24-26 units. The proposed project will require the construction of a transmission line to connect with the Hydro One transmission system that is located on Goat Island.

NPI has also entered into a 50/50 partnership with Mnídoo Mnísing Power, a company formed by the United Chiefs and Councils of Mnídoo Mnísing First Nations to share equity in the McLean's Mountain Wind Farm.

NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

I trust that the following responses address the concerns and questions you have expressed in your letter.

**Comment and Response Regarding Building Permit**

**Comment:** *"(...) we [intend] on building on our property adjacent to the Wind Turbine Project. (...) and we have obtained a building permit. We intend on constructing the house close to the*

*barns on the property and ask that all wind turbines will be at least the 550 metres away from our house.”*

**NPI Response:**

NPI made efforts to identify all potential receptors in the study area. In the event that any receptors were missed, required changes to the layout will be made to maintain a minimum 550 m setback and meet applicable MOE noise guidelines. Specific setbacks are required and a criterion is in place to maintain these typical setbacks based on common building practices when relating to vacant lots. This has been followed on this project.

The MOE has made a decision that crystallization dates are acknowledged for all projects. A crystallization date is the date at which the project layout is publically announced and the public should have an understanding of where the turbines are to be located. If building permits are purchased after the crystallization date, they are being taken out with full knowledge of the expected placement of the turbines.

The MOE, in its letter dated, August 3, 2010 (copy enclosed) has confirmed that the crystallization date is when NPI issued its Notice of Completion, under the previous Electricity Act Regulation. It is expected that all noise receptors, at that time, were considered in the noise assessment for the project. The only exception would be is if a turbine was relocated after a building permit was taken out. That building permit has to describe a building that meets the criteria as a sensitive receptor by the Ministry of the Environment.

NPI published its Notice of Completion on July, 2009 in the Manitoulin Expositor. The Notice of Completion was also distributed to residents within and around the project area at that time through Canada Post Admail.

**Concerns and Responses Regarding Ground Water and Wells**

**Comment:** *“We also have concerns on the possibility of disturbances to ground water or well water caused by the blasting that will occur during the construction of the wind turbine project.*

*The clean waters of the inland lakes may be in jeopardy due to ground water disturbances. The blasting may cause oil, or sulphur to be directed into these lakes. Any wells that depend on the springs of the plateau may dry up or be made unusable with the same issues.”*

**NPI Response:**

Extensive studies on the natural environment have been conducted for the proposed project. These studies include the input of the Ministry of Natural Environment (MNR) and Environment Canada (EC) to ensure that the natural environment on Manitoulin Island is protected. A Natural Environment Assessment, in consultation with the MNR and EC was also conducted for this project. The assessment concluded that the risk to rare, threatened and endangered species in the area is low and minimal significant adverse effects are anticipated. Additional field work was conducted in 2010 as per the MNR direction. Some turbines have been removed and some changes were made to the turbine and road locations to avoid

wetland areas that now have to be avoided under the REA process. The results of this work will contribute to the final Environmental Management and Protection Plan (EMPP). NPI will implement mitigation measure where required. A new natural heritage assessment document has been prepared and submitted to the Ministry of Natural Resources for review and comment.

Given the nature of a wind farm (and the specific mitigation measures proposed for this project), the project is highly unlikely to have any impact of surface or ground water resources. Given the shallow depth of the foundations, three (3) meters and the fractured and permeable nature of the geology, no measurable effects on ground water flow is expected. We are aware, previous to any construction; many people in the community are hauling water to their wells at various times of the year. Based on the bore holes information collected to date, the water table is expected to be well below the depth of turbine foundation excavation. There is no reason to expect that turbine excavation activities would have an effect on the underground water or surface water in the area given the shallow depth of the excavations. Additional geotechnical investigations will confirm the characteristics of the rock and provide input to the design for the turbine foundations to support the turbines.

Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is [rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca).

Thank you.



Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre  
August 3, 2010 Letter from Doris Dumais, Director Environmental Approvals, MOE



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**Date:** Thu, 18 Mar 2010 19:12:20 -0400

**To:** RickMartin<rick.martin@Northlandpower.ca>; info@townofnemi.on.ca<info@townofnemi.on.ca>

**Cc:** Blair & Ann<blair.morphet@sympatico.ca>; beaudry, raymond<wrf@manitoulin.net>

**Subject:** McLeans Mountain Wind Farm

In August 2009, we wrote to both council and Northland Power expressing our objections to the McLeans Mountain Windfarm. As property owners within the boundaries of this project, we continue to object to it. Our objections to this project are based on the following points:

1. The actions of one property owner should not be allowed to affect the use of an adjoining property by that owner. The setback requirements for wind turbines should be the same for all non participating properties regardless of whether or not there is a receptor (dwelling) on that property. The wind turbine should be located a minimum of 550 metres from the lot line.
2. The most recent map from Northland Power (McLeans Mountain Windfarm REA Constraints, modified December 16, 2009) outlining the planned locations of the wind turbines does not reflect the construction of or the planned construction of dwellings (receptors) within the project boundaries that has occurred. Where then will the turbines be erected ?
3. In the past few months numerous concerns have been raised regarding the adverse health effects of wind turbines. While some may challenge the validity of these concerns, no one can definitively say that these concerns are unfounded. Ten years ago we had not heard of second hand smoke or scents in the workplace but today the adverse health effects of these two things have been established and are accepted as fact. The body of knowledge related to the impact of wind turbines on health is evolving and with study, the impact if any will become known. The health of people within the project boundaries should not be placed at risk for the sake of an increased tax base for the municipality.
4. The impact of vibration from the wind turbines on ground water, drainage and water flow is unknown. Many ratepayers within the project area depend on ground water for their drinking water.
5. One would assume that the turbines and their bases will be erected/constructed according to some standard or code, after all we as individuals must follow a code when a building is constructed. Who then is going to verify that such a standard or code is followed as the municipality should not allow substandard construction to take place.

The mayor and council of NEMI as elected representatives are tasked with acting in the best interests of the municipality while also representing/protecting its' ratepayers. Has this happened with the McLeans Mountain Windfarm ?



**NORTHLAND POWER**  
McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

**RE: McLean's Mountain Wind Project and Community Concerns**

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NPI has also entered into a 50/50 partnership with Mnidoo Mnising Power, a company formed by the United Chiefs and Councils of Mnidoo Mnising First Nations, to share equally in the McLean's Mountain Wind Farm.

NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

I trust that the following responses address the concerns and questions you have expressed in your letter.

**Concerns and Responses Regarding Property Rights**

**Comment:** *"The actions of one property owner should not be allowed to affect the use of an adjoining property by that owner."*

**NPI Response**

The wind turbines, once constructed, will not prevent landowners from constructing buildings in their vicinity. There are currently no by-laws preventing a landowner from doing this. NPI is siting its turbines a minimum of 550 m from sensitive noise receptors as required by provincial policy. The closest turbine to a receptor is 698 m in the current project layout.

### **Concerns and Responses Regarding Turbine Layout**

**Comment:** *“The most recent map from Northland Power (McLean’s Mountain Windfarm REA Constraints, modified December 16, 2009) ... does not reflect the construction of, or the planned construction of, dwellings (receptors) within the project boundaries (...)”*

#### **NPI Response:**

An updated layout will be available to view at the upcoming Public Information Centre. NPI has confirmed that the final turbine layout exceeds all required REA setbacks. The proposed project will require approval under Ontario Regulation 359/09 – Renewable Energy Approval (REA) under the *Green Energy Act* and NPI is complying with all of the REA requirements. Further, NPI will be required to meet the 40 dBA limit at all identified receptors and would be required to mitigate/resolve any exceedances as per the terms of the REA approval.

### **Concerns and Responses Human Health Impacts**

**Comment:** *“In the past few months numerous concerns have been raised regarding the adverse health effects of wind turbines (...)”*

#### **NPI Response:**

The May 2010 report on *The Potential Health Impacts of Wind Turbines*, Chief Medical Officer of Health (CMOH) indicates that:

*“There is no scientific evidence, however, to indicate that low frequency sound generated from wind turbines causes adverse health effects. Low frequency sound and infrasound are everywhere in the environment. They are emitted from natural sources (e.g., wind, rivers) and from artificial sources including road traffic, aircraft, and ventilation systems. The most common source of infrasound is vehicles. Under many conditions, low frequency sound below 40Hz from wind turbines cannot be distinguished from environmental background noise from the wind itself (Leventhall 2006, Colby et al 2009).*

*Low frequency sound from environmental sources can produce annoyance in sensitive people, and infrasound at high sound pressure levels, above the threshold for human hearing, can cause severe ear pain. There is no evidence of adverse health effects from infrasound below the sound pressure level of 90dB (Leventhall 2003 and 2006).*

*Studies conducted to assess wind turbine noise indicate that infrasound and low frequency sounds from modern wind turbines are well below the level where known health effects occur, typically at 50 to 70dB. A small increase in sound level at low frequency can result in a large increase in perceived loudness. This may be difficult to ignore, even at relatively low sound pressures, increasing the potential for annoyance (Jakobsen 2005, Leventhall 2006) (...).”*

The report concludes that “low frequency sound and infrasound from current generation upwind model turbines are well below the pressure sound levels at which known health effects occur. Further, there is no

scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects.

All of the proposed wind turbines are greater than 698 meters away from any residence, so there should clearly be no issue. The Ministry of Environment (MOE) noise standard also meets the range of the Health Canada guidelines of 40 dB(A) to residences. The Province of Ontario has some of the most stringent regulations in North America regarding wind turbine siting and sounds restrictions and Northland Power intends to meet or exceed these regulations. It is important to note that although wind energy is relatively new to Ontario, it's a very well-established and proven form of electrical generation around the world. For more than thirty (30) years, tens of thousands of people have been living near wind turbines with no ill effects.

The Ontario's Chief Medical Officer of Health, Dr. Arlene King, recently sent a memorandum to all Medical Officers of Health and Environmental Health Directors stating the following about wind energy and human health: "(...) there is no scientific evidence, to date, to demonstrate a causal association between wind turbine noise and adverse health effects."

The Chief Medical Officer of Health (CMOH) Report "The Potential Health Impact of Wind Turbines" dated May 2010 concludes that "While some people living near wind turbines report symptoms such as dizziness, headaches, and sleep disturbance, the scientific evidence available to date does not demonstrate a direct causal link between wind turbine noise and adverse health effects" and that "The sound level from wind turbines at common residential setbacks is not sufficient to cause hearing impairment or other direct adverse health effects. However, some people might find it annoying. It has been suggested that annoyance may be a reaction to the characteristic "swishing" or fluctuating nature of wind turbine sound rather than to the intensity of sound.

I would like to bring your attention to a report released December 2009, authored by an international panel of medical doctors and sound experts titled "Wind Turbine Sound and Health Effects: An Expert Panel Review". It concluded that sound from wind turbines has no direct harmful effect on human health.

To see the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects.pdf)

To see an executive summary of the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects-Executive\\_Summary.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects-Executive_Summary.pdf)

For more information on the effects of sound from wind turbines on human health please refer to the comment response tables provided in the Draft Renewable Energy Approval (REA) package.

### **Concerns and Responses Regarding Groundwater and Drilling**

**Comment:** *"The impact from the vibration from the wind turbines on ground water, drainage and water flow is unknown (...)"*

#### **NPI Response:**

Extensive studies on the natural environment have been conducted for the proposed project. These studies include the input of the Ministry of Natural Environment (MNR) and Environment Canada (EC) to ensure that the natural environment on Manitoulin Island is protected. A Natural Environment Assessment, in

consultation with the MNR and EC was also conducted for this project. The assessment concluded that the risk to rare, threatened and endangered species in the area is low and minimal significant adverse effects are anticipated. Additional field work was conducted in 2010 as per the MNR direction. Some turbines have been removed and some changes were made to the turbine and road locations to avoid wetland areas that now have to be avoided under the REA process. The results of this work will contribute to the final Environmental Management and Protection Plan (EMPP). NPI will implement mitigation measure where required. A new natural heritage assessment document has been prepared and submitted to the Ministry of Natural Resources for review and comment.

Detailed engineering will consider the propagation of vibrations. The initial tests indicate that there is nothing inherent in the geology to suggest that vibration propagation will be an issue. Given the nature of a wind farm (and the specific mitigation measures proposed for this project), the project is highly unlikely to have any impact of surface or ground water resources. Given the shallow depth of the foundations, (three (3) meters) and the fractured and permeable nature of the geology, no measurable effects on ground water flow is expected. We are aware, previous to any construction; many people in the community are hauling water to their wells at various times of the year. Further, the project will not reduce the rate of rainwater ground infiltration in the larger area. Based on the bore holes information collected to date, the water table is expected to be well below the depth of turbine foundation excavation. There is no reason to expect that turbine excavation activities would have an effect on the underground water or surface water in the area given the shallow depth of the excavations. Additional geotechnical investigations will confirm the characteristics of the rock and provide input to the design for the turbine foundations to support the turbines.

Additional geotechnical investigations will confirm the characteristics of the rock and provide input to the design for the turbine foundations to support the turbines.

### **Concerns and Responses Regarding Building Code/Standard**

**Comment:** *“One would assume that the turbines and their bases will be erected/constructed according to some standard or code (...) Who then is going to verify that such a standard or code is followed ...?”*

#### **NPI Response:**

The turbines will require a building permit from the municipality of Northeastern Manitoulin and the Islands.

Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is [rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca).

Thank you.



Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre



**Sent:** Tuesday, April 20, 2010 7:34 PM

**To:** jtem@northlandpower.ca; commissioner@eco.on.ca; agatha.garciawright@ontario.ca; rickmartin@northlandpower.ca; arleneking@ontario.ca; info@ombudsman.on.ca; info@oahpp.ca; bduguid.mpp.ola.org; dmcguinty.mpp.co@liberal.ola.org; info@townofemi.on.ca; minister.moe@ontario.ca; McKinnon, Don; dca@northlandpower.ca; bpascos@cogeco.ca

**Subject:** Fwd: Say no to windfarms

Begin forwarded message:

**Subject: Say no to windfarms**

April, 2010

To All Government and Company Officials:

**Re: McLean's Mountain Wind Project and Community Concerns**

The purpose of this letter is to advise you of the many concerns that people living on and off of Manitoulin Island have regarding the Industrial Wind Turbine Project that is being proposed by **Northland Power Inc.** As one of many concerned citizens, I would like to see the following issues addressed in full prior to any construction on this project beginning:

**Economic Impacts**

- Manitoulin is a tourist based economy: With the Ontario Power Authority having just approved 60 MW of the McLean's Mountain project, with another 40 MW awaiting approval and another 100+ MW for future expansion as per the Ontario Power Authority web site, how can Northland and government officials assure residents and visitors that this island will not soon be covered with hundreds of Industrial Wind Turbines? Once the infra-structure is approved for this first project, the road is already paved for many more companies to follow.

Firms such as Greenhead Energy and others will also be offered government subsidies and will easily be able to plug into the main grid (which has to first be upgraded for Northland's expansion). Vacationers and long time island residents who used to enjoy the peace and quiet of the natural world will leave and take their economic resources elsewhere.

### **Environmental Concerns**

- Soft rock and gas pockets all over the island: Manitoulin is known locally for the existence of extensive gas pockets and limestone rock. A fire burns yearly unless extinguished in Kagawong due to surface leakage. A camp in Bidwell road area is supplied by gas from the ground. A well driller in NEMI had his rig and a recently constructed large new home burn up when he was drilling for water well and struck a gas pocket. When Northland does test drilling and then digs large holes to form the bases for 43 separate turbines, such explosions could easily occur threatening project employees, equipment and nearby habitats. How will the company prevent and/or deal with such unplanned explosions? Will a soft limestone rock foundation support turbines the height of a 40 storey high building over the lifespan of the turbine? If they do stand for 20 years, who will pay for the turbines to be taken down when they have outlived their usefulness?
- Surface ground water contamination due to extensive drilling for multiple anchor rods for each turbine to unknown depths, in soft, unstable limestone: How can Northland assure other land owners that their ground water supplies will not be changed, disappear or become contaminated with all this drilling going on over such a large area? Drilling and construction activity would definitely adversely affect underground water flow which would contaminate many spring-fed lakes, ponds and drinking water sources.
- Adverse consequences for soil, vegetation, trees, birds, bats and other wildlife both during construction and operational phases. With Manitoulin being home to so many rare species and plants, how can Northland possibly address and mitigate such extensive losses as a result of their project?

### **First Nations Concerns**

- At Northland's public consultation meeting on March 22, 2010 The United Chiefs and Councils of Manitoulin (UCCM) declared their continued opposition to the project until appropriate consultation with Island First Nations has been made. A legal requirement of the Ontario government, as proclaimed by the Supreme Court of Canada, consultation, "has been ignored and continues to be ignored," said Chief Shining Turtle of Whitefish River First Nation and UCCM tribal chair.
- The AOK First Nation has also expressed opposition to this project, sighting concerns regarding improper consultation, and improper setbacks to protect the health of their community and First Nation Land. AOK is also calling for a minimum 2-2.5 km setback distance between turbines and the boundaries of their Nation. Recently the Sheguiandah First Nation supported this resolution made by AOK. The UCCM and the Wikwemikong Unceded First Nation all stated their

opposition to the Northland power project.

### **Decreased property values**

- There is increasing evidence that Industrial Wind Turbines(IWT) cause significant loss of property values to nearby lands. Recently in Ontario an appeals review board through MPAC (Municipal Property Assessment Corporation) ruled in favour of a 50% assessed reduction in property value on a property due to excessive noise from a transformer station in a wind farm project. Many people who have tried to move away from IWT's have found themselves unable to sell their properties. Others who have invested their life savings in their home or farm find they cannot afford to sell. This is a particularly bad predicament for those who are experiencing adverse health effects due to their close proximity to Industrial Wind Turbines.

### **Infrasound and Human Health Impacts**

- See below for details, including references. For full information, please visit [www.WindVigilance.com](http://www.WindVigilance.com)

### **Set-back distances between Industrial Wind Turbines and nearby homes and dwellings**

- The 550 metre setback outlined in Ontario's Green Energy Act is clearly not enough compared to other norms and standards around the world (see statements from the World Health Organization in the section below on Noise and Health Effects); I strongly urge Northland Power Inc. to exercise the Precautionary Principle and structure their project so that 2-2.5 km is the minimum distance between a turbine and any other dwelling such as a home, cottage or hunt camp.

### **Re: Response to the Project Proposal and the new Renewable Energy Approval application regarding Adverse Health Effects and Industrial Wind Turbines**

Further to these concerns, I would like to advise Northland Power Inc. and any other corporation, individual, consulting group, government ministry or agency involved in the obtainment and or granting of licence that you will be held responsible if I or any of my family members or group suffer adverse health effects or other negative consequences as a result of exposure to the industrial wind turbines in the **McLean's Mountain Wind Farm**.

The December 2009 American Wind Energy Association and Canadian Wind Energy Association sponsored report entitled "Wind Turbine Sound and Health Effects" (A/CanWEA Panel Review) acknowledges that wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological symptoms.<sup>1</sup>

In a radio interview an author of the A/CanWEA Panel Review W. David Colby, M.D. stated:

"We're not denying that there are people annoyed and that maybe some of them are getting stressed out enough about being annoyed that they're getting sick."<sup>2</sup>

The A/CanWEA Panel Review acknowledges wind turbine noise induced symptoms may include palpitations, insomnia, nose bleeds, dizziness, nausea, eye strain, feeling vibration and headache.<sup>3</sup>

In 2010 Geoff Leventhall an author of the A/CanWEA Panel Review is quoted as stating "... there was no doubt people living near the turbines suffered a range of symptoms, including abnormal heart beats, sleep disturbance, headaches, tinnitus, nausea, visual blurring, panic attacks and general irritability....it's ruining their lives – and it's genuine..."<sup>4</sup>

The A/CanWEA Panel Review does not provide any science based guidelines that would mitigate these health risks.<sup>5</sup>

The Ontario Ministry of Health and Long Term Care also acknowledge wind turbines may cause annoyance, stress and sleep disturbance.<sup>6</sup>

Globally there are people reporting adverse health effects from exposure to industrial wind turbines.<sup>7 8 9 10</sup> Families including children have abandoned their homes to protect their health. This cannot be denied.

In Ontario there are now over 100 family members reporting adverse health effects from exposure to industrial wind turbines.<sup>11 12</sup>

Peer reviewed studies of European industrial wind turbine facilities have documented high annoyance and sleep disturbance in respondents.<sup>13 14 15</sup> and that wind turbine induced "Annoyance was further associated with lowered sleep quality and negative emotions. This, together with reduced restoration possibilities may adversely affect health."<sup>16</sup>

Annoyance may adversely affect physiological health. Research indicates that for "...chronically strong annoyance a causal chain exists between the three steps health – strong annoyance – increased morbidity."<sup>17</sup> The subjective experience of noise annoyance and stress can, through central nervous processes, lead to an inadequate neuro-endocrine reaction and finally to regulation diseases.<sup>18</sup>

The World Health Organization recognizes annoyance and sleep disturbance as adverse health effects.<sup>19</sup>

"Health Canada advises...that there are peer-reviewed scientific articles indicating that wind turbines may have an adverse impact on human health."<sup>20</sup>

The Renewable Energy Application (REA) and proposal for the **McLean's Mountain Wind Farm** is inadequate and does not specifically address the risk of adverse human health effects associated with the operations of

industrial wind turbines.

Therefore, this project cannot be approved.

Specific concerns about the REA include but are not limited to:

The REA does not specifically discuss the risk of human adverse health effects from exposure to industrial wind turbine operations. The REA does not expressly require **Northland Power Inc.** to address the risk of human adverse health effects from exposure to industrial wind turbine operations. This is a flaw in the REA process.

The ability of those individuals to rely on the shielding effect of an environmental assessment (REA) is greatly diminished by the elimination of the awareness of any flaws in the assessment procedure or grant of licence. It has been stated that such an awareness should trigger an intensive exercise of due diligence to ascertain and deal with the potential risks to others of the project. The REA does not address how the project proponent **Northland Power Inc.** intends to prevent the widely acknowledged wind turbine induced adverse health effects such as annoyance, stress and sleep disturbance and adverse physiological and psychological symptoms.

The REA indicates the **Northland Power Inc.** intends to adhere to Ontario wind turbine noise guidelines and regulations. **Northland Power Inc.** is advised that adherence to government regulations does not guarantee that individuals will not experience adverse health effects and therefore does not remove responsibility.

There is no scientific evidence that the current Ministry of Environment wind turbine noise guidelines and regulations are adequate to protect Ontario individuals from suffering wind turbine induced adverse health effects.

In addition the current Ministry of Environment wind turbine noise guidelines and regulations fail to incorporate key Noise Management strategies and protocols endorsed by the World Health Organization.

For example the World Health Organization considers enforcement of health based noise guidelines imperative to health protection.<sup>21</sup> According to the Ontario Ministry of Environment "There is currently no scientifically accepted field methodology to measure wind turbine noise to determine compliance or non compliance with a Certificate of Approval limits."<sup>22</sup>

In a January 2010 request for proposal issued by The Ministry of Environment it states "Unlike typical industrial noise sources, measurement of audible noise from wind turbines in general raises technical challenges"<sup>23</sup>

The request for proposal further states:

"...the MOE Noise Guidelines for Wind Farms, October 2008 do not contain a measurement method for assessing the actual noise impact." and that "The Ministry requires a consultant to assist in the development of a measurement procedure to assess noise compliance of existing wind farms with the applicable sound level limits"<sup>24</sup>

The A/CanWEA Panel Review also acknowledges that wind turbine low frequency noise may cause annoyance.<sup>25</sup>

The physiological and psychological symptoms caused by low frequency noise annoyance can be serious and "The claim that their "lives have been ruined" by the noise is not an exaggeration..."<sup>26</sup>

The current Ministry of Environment wind turbine noise guidelines and regulations do not have any science based guidelines or regulations to protect individuals from the adverse health effects of wind turbine low frequency noise.<sup>27 28</sup>

This deficiency is further illustrated by the Ministry of Environment's January, 2010 request for proposal to solicit assistance in "determining how or whether to regulate low frequency noise emissions from wind turbines".<sup>29</sup>

It is acknowledged that wind turbine shadow flicker may cause annoyance in humans.<sup>30</sup> Annoyance is an adverse health effect.<sup>31</sup> In the past Ontario wind energy projects have included Shadow Flicker Reports as part of their Environmental Screening Reports / Environmental Review Reports. The REA does not require the wind energy proponent to address the risk of shadow flicker. A shadow flicker report based on authoritative guidelines designed to protect human health must be conducted before the **Northland Power Inc.** can be approved.

The current Ontario wind turbine noise guidelines or regulations are based on conservative computer modelling. They are not based on independent third party human health studies designed to protect human health. The MOE has not provided peer-reviewed scientific evidence detailing how the guidelines or regulations were derived. The MOE has not provided peer-reviewed scientific evidence to demonstrate that a minimum 550 m setback will protect humans from the acknowledged adverse physiological and psychological effects associated with industrial wind turbines. According to the MOE 2008 Guidelines, the noise limits allow up to 51 dBA at 10 m/s which is over a 10 fold increase in acoustic energy from that of 40 dBA.

Dr. R. Copes, member of the Ontario Agency for Public Health and Promotion, along with others have identified a number of research gaps related to industrial wind turbines and related adverse health effects.<sup>32</sup>

The research gaps include among others, investigation of 'health effects from long-term exposure to low levels of low frequency sound...practical measurement methods for attributing sound specifically to wind turbines... impact of wind turbine sound on sleep physiology...epidemiological data to assess health status before and after wind farm development."


The World Health Organization states "In all cases noise should be reduced to the lowest level achievable in a particular situation. When there is a reasonable possibility that the public health will be endangered, even though scientific proof may be lacking, action should be take to protect the public health, without awaiting the full scientific proof."<sup>33</sup>

In summary the American Wind Energy Association and Canadian Wind Energy Association sponsored report entitled "Wind Turbine Sound and Health Effects" and authoritative bodies including those in Ontario

acknowledge that industrial wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological symptoms.

The government of Ontario has been advised about these adverse health effects and cannot claim ignorance. The REA ignores the risks to health and is an unconscionable approval process knowingly supported by the Ontario government.

**Northland Power Inc.** cannot proceed until the independent 3rd party human health studies have been conducted to determine authoritative setbacks and noise levels including that of low frequency noise. Please visit [www.WindVigilance.com](http://www.WindVigilance.com) for full details. I look forward to receiving a response, and/or at very least acknowledgement of receipt of my comments.

Yours truly, 

Please be advised that this letter has also been sent to:

**James C. Temerty**, Chairman of the Board, Northland Power Inc. (**please distribute copies to all board members**),

Gord Miller, Environmental Commissioner of Ontario, Ministry of the Environment

Agatha Garcia-Wright, Director, Environmental Assessment and Approvals Branch, Rick Martin, McClean's Mountain Wind Farm, Arlene King, Chief Medical Officer of Health, Ministry of Health and Long Term Care Public Health Division, Andre Marin, Ombudsman of Ontario, (please apply to file # 222-520) The Ontario Agency for Health Protection and Promotion, Brad Duguid Ministry of Energy and Infrastructure, Dalton McGuinty, Premier, The Town of North Eastern Manitoulin Island, John Gerretsen, Ministry of Environment, Don McKinnon Consulting, and David Cheung-Atkinson, Project Manager, Northland Power Inc.

1 W. David Colby, M.D et al., Wind Turbine Sound and Health Effects, An Expert Panel Review 2009, Prepared for American Wind Energy Association and Canadian Wind Energy Association

2 W. David Colby, M.D., Sounding Board, 97.9 FM The Beach December 17, 2009

3 W. David Colby, M.D et al., Wind Turbine Sound and Health Effects, An Expert Panel Review 2009, Prepared for American Wind Energy Association and Canadian Wind Energy Association

4 Countryside News, Wind turbines set to get bigger, January 28 2010  
<http://www.walesonline.co.uk/countryside-farming-news/countryside-news/2010/01/28/wind-turbines-setto-get-bigger-91466-25701853/>

5 W. David Colby, M.D et al., Wind Turbine Sound and Health Effects, An Expert Panel Review 2009, Prepared for American Wind Energy Association and Canadian Wind Energy Association

6 Arlene King M.D., Ontario Ministry of Health and Long Term Care Memorandum, October 21, 2009,  
[http://windvigilance.com/primer\\_ahe.aspx](http://windvigilance.com/primer_ahe.aspx)

7 Amanda Harry M.D., Wind Turbines Noise and Health, 2007 UK

8 Michael A. Nissenbaum M.D., [http://windvigilance.com/mars\\_hill.aspx](http://windvigilance.com/mars_hill.aspx)

9 WindVOiCe© <http://windvigilance.com/>

- 10 Nina Pierpont M.D., Wind Turbine Syndrome, 2009
- 11 WindVOiCe© <http://windvigilance.com/>
- 12 Hansard Reports, proceedings from April 15th, and April 16th , 2009 The Green Energy Act, Bill 150, Standing Committee on General Government, Ontario [http://www.ontla.on.ca/web/committee-proceedings/committee\\_transcripts\\_details.do?locale=en&Date=2009-04-15&ParlCommID=8856&BillID=2145&Business=&DocumentID=23801](http://www.ontla.on.ca/web/committee-proceedings/committee_transcripts_details.do?locale=en&Date=2009-04-15&ParlCommID=8856&BillID=2145&Business=&DocumentID=23801)
- 13 Pedersen, E. and K. Persson Waye. 2004. Perception and annoyance due to wind turbine noise: A dose-response relationship, Journal of the Acoustical Society of America 116: 3460-3470.
- 14 Pedersen, E. and K. Persson Waye. 2007. Wind turbine noise, annoyance and self-reported health and well being in different living environments
- 15 Pedersen et al., 2008, Project WINDFARM perception Visual and acoustic impact of wind turbine farms on residents
- 16 Eja Pedersen and Kerstin Persson Waye , Wind turbine noise, annoyance and self-reported health and well-being in different living environments, February, 2007
- 17 Niemann, H, et al., WHO LARES Final report Noise effects and morbidity, 2004
- 18 Maschke, C., et al Health Effects of Annoyance Induced by Neighbour Noise, Noise Control Engineering Journal, 2007, 55(3): 348-356.
- 19 World Health Organization, Guidelines for Community Noise, 1999 [http://www.euro.who.int/mediacentre/PR/2009/20091008\\_1](http://www.euro.who.int/mediacentre/PR/2009/20091008_1)
- 20 Safe Environs Program, Health Canada Environmental Assessment Nova Scotia, August 6, 2009, [http://windvigilance.com/primer\\_ahe.aspx](http://windvigilance.com/primer_ahe.aspx)
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- 22 Correspondence from Ministry of Environment Sept 30, 2009 ENV1283MC2009-4305
- 23 MERX 189608: MGS - RFP Provision of Expert Advice on Measuring Audible Noise from Wind Turbines - OSS-078695 [www.merx.ca](http://www.merx.ca)
- 24 ibid
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- 27 Ontario Regulation 359/09 Made Under The Environmental Protection Act Renewable Energy Approvals Under Part V.0.1 of the Act, September 24, 2009
- 28 "October 2008 Noise Guidelines for Wind Farms" Ontario Ministry of Environment
- 29 MERX 189612: MGS - RFP Provision of Expert Advice on Low Frequency Noise from Wind Turbines - OSS-078696 [www.merx.ca](http://www.merx.ca)
- 30 National Research Council (NRC). Environmental Impacts of Wind-Energy Projects, 2007, NRC, Washington, DC
- 31 World Health Organization, Guidelines for Community Noise, 1999 [http://www.euro.who.int/mediacentre/PR/2009/20091008\\_1](http://www.euro.who.int/mediacentre/PR/2009/20091008_1)
- 32 National Collaborating Center for Environmental Health, Wind Turbines and Health by Karen Rideout, Ray Copes, Constance Bos, January 2010
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**NORTHLAND POWER**  
McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

[REDACTED]  
[REDACTED]  
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**RE: McLean's Mountain Wind Project and Community Concerns**

Thank you for your letter of April, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

Several of the northernmost turbines and southwestern perimeter turbines have been removed largely due to public input. This results in a reduction in the number of wind turbines. Northland Power Inc. (NPI) is also currently proposing the use of 100 metre wind turbine towers which will lower the number again to 24-26 units. The proposed project will require the construction of a transmission line to connect with the Hydro One transmission system that is located on Goat Island.

NPI has also entered into a 50/50 partnership with Mniidoo Mnisging Power, a company formed by the United Chiefs and Councils of Mniidoo Mnisging First Nations, to share equally in the McLean's Mountain Wind Farm.

NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

I trust that the following responses address the concerns and questions you have expressed in your letter.

**Concerns and Responses Regarding Economic Impacts**

**Comment:** *"Manitoulin is a tourist based economy: With the Ontario Power Authority having just approved 60 MW of the McLean's Mountain project, with another 40 MW awaiting approval and another 100+ MW for future expansion as per the Ontario Power Authority web site, how can Northland and government officials assure residents and visitors that this island will not soon be covered with hundreds of Industrial Wind Turbines? (...)"*

**NPI Response:**

The proposed McLean's Mountain Wind Farm is expected to have no negative impacts on Manitoulin Island Tourism. NPI has considered the potential for effects of the project on tourism and recreation activities. The project is well removed from the Lake Huron shoreline areas around the Island. The closest wind turbine (the westernmost turbine, turbine #42) is about 1.5 km from the Lake Huron shoreline. The easternmost wind turbine (turbine #9) of the project area is greater than 3 kilometres from the Lake Huron shoreline. Appreciating that tourist interests vary by individual, it is NPI's opinion that the view of the wind farm, especially from Honora Bay, will be complementary and will not negatively affect the viewscape.

Wind farms can have positive effects on the local tourism economy. There are 6,000 wind turbines in Denmark, which are used for marketing tourism. Local tourism associations may use wind turbines to promote "green tourism". This is particularly targeted towards the German market, where the public is known to have a high level of interest in both environmental issues and in new technology. In a Scottish study<sup>1</sup> 43% of respondents said a wind farm would have a positive effect on their inclination to visit the Argyll area, an area of high landscape value. About the same proportion of respondents said it would make no difference, while less than 8% felt that it would have a negative effect. Nine out of ten tourists visiting some of Scotland's top beauty spots say the presence of wind farms makes no difference to the enjoyment of their holiday. Twice as many people would return to an area because of the presence of a wind farm than would stay away, according to a poll carried out by MORI Scotland Commercial tour companies provide guided tours of several wind farms in the Pincher Creek, Alberta region. Several wind farms in Australia attract so many visitors that commercial tour operators provide opportunities for the public to get a close up view of the wind farms.

Back in 2004 I was involved in conducting a survey about the wind farm, requested by the municipality. The survey results indicated over 95% support of a wind farm by locals and visitors to Little Current. Boaters especially noted that the Turbines provide a landmark coming into the port of Little Current. NPI does not expect that the presence of the turbines would factor into a person's decision on whether to visit the Island. This project may have the potential to attract visitors. At NPI's Miller Mountain project in Quebec, 3500 tourists visited the project in 2008. The Providence Bay Wind Farm located to the south east of the MMWF project, approximately 45 kilometres away, established an interpretation centre for the project, which attracts numerous visitors over the summer visitor months

**Concerns and Responses Regarding Natural Environment**

**Comment:** *"Soft rock and gas pockets all over the island: Manitoulin is known locally for the existence of extensive gas pockets and limestone rock. A fire burns yearly unless extinguished in Kagawong due to surface leakage (...)"*

**NPI Response:**

Gas pockets are unlikely to be found during construction as the foundations extend to a depth of only three (3) meters. The initial geotechnical tests show that the rock near the surface is fractured and permeable and therefore unlikely to contain gas. Care will be taken during the drilling of additional bore

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<sup>1</sup> *Tourist Attitudes Toward Wind Farms*, MORI Summary Report, September 2002 [www.bwea.com/pdf/MORI.pdf](http://www.bwea.com/pdf/MORI.pdf)

holes prior to construction and the excavation during construction to protect against the unlikely release of gas.

Additional geotechnical investigations have been initiated and will confirm the characteristics of the rock and provide input to the design for the turbine foundations to support the turbines. Wind turbines can be erected in a variety of soil/rock conditions. The risk of turbine collapse is extremely low. The foundations that will be used for the turbines on this site are the same as the ones used in locations with sandy soil. The large spread foundation disperses the mass of the turbine equally over a significant footprint to enhance its stability.

**Comment:** *“Surface ground water contamination due to extensive drilling for multiple anchor rods for each turbine to unknown depths, in soft, unstable limestone (...)”*

**NPI Response:**

Given the nature of a wind farm (and the specific mitigation measures proposed for this project), the project is highly unlikely to have any impact of surface or ground water resources. Given the shallow depth of the foundations, three (3) meters and the fractured and permeable nature of the geology, no measurable effects on ground water flow is expected. We are aware, previous to any construction; many people in the community are hauling water to their wells at various times of the year. Further, the project will not reduce the rate of rainwater ground infiltration in the larger area. Based on the bore holes information collected to date; the water table is expected to be well below the depth of turbine foundation excavation. There is no reason to expect that turbine excavation activities would have an effect on the underground water or surface water in the area given the shallow depth of the excavations.

**Comment:** *“Adverse consequences for soil, vegetation, trees, birds, bats and other wildlife both during construction and operational phases. With Manitoulin being home to so many rare species and plants, how can Northland possibly address and mitigate such extensive losses as a result of their project?”*

Extensive studies on the natural environment have been conducted for the proposed project. These studies include the input of the Ministry of Natural Environment (MNR) and Environment Canada (EC) to ensure that the natural environment on Manitoulin Island is protected. A Natural Environment Assessment, in consultation with the MNR and EC was also conducted for this project. The assessment concluded that the risk to rare, threatened and endangered species in the area is low and minimal significant adverse effects are anticipated. Additional field work was conducted in 2010 as per the MNR direction. Some turbines have been removed and some changes were made to the turbine and road locations to avoid wetland areas that now have to be avoided under the REA process. The results of this work will contribute to the final Environmental Management and Protection Plan (EMPP). NPI will implement mitigation measure where required. A new natural heritage assessment document has been prepared and submitted to the Ministry of Natural Resources for review and comment.

**Concerns and Responses Regarding First Nations**

**Comment:** *“At Northland’s public consultation meeting on March 22, 2010 The United Chiefs and Councils of Manitoulin (UCCM) declared their continued opposition to the project until appropriate consultation with Island First Nations has been made (...)”*

*The AOK First Nation has also expressed opposition to this project, sighting concerns regarding improper consultation, and improper setbacks to protect the health of their community and First*

*Nation Land. AOK is also calling for a minimum 2-2.5 km setback distance between turbines and the boundaries of their Nation (...)*

**NPI Response:**

Communication with First Nation communities that may have interests in the proposed project has been ongoing for several years and in compliance with government requirements. In February 2011, Mnidoo Mnising Power, a company formed by the United Chiefs and Councils of Mnidoo Mnising First Nations (UCCMM), has entered into a 50/50 partnership with Northland Power Inc. to share equity in the McLean's Mountain 60 MW Wind Farm Project and on-going renewable power developments.

Membership of UCCM include M'Chigeeng First Nation; Sheguiandah First Nation; Sheshegwaning First Nation; Aundeck-Omni-Kaning First Nation; Whitefish River First Nation; and Zhiibaahaasing First Nation. UCCMM formed Mnidoo Mnising Power to lead renewable energy projects on Manitoulin Island in order to protect First Nations' rights, heritage and ensure the future for First Nations' youth.

Band Council resolutions are in place with each band council supporting their position in this agreement.

**Concerns and Responses Regarding Decreased Property Values**

**Comment:** *“There is increasing evidence that Industrial Wind Turbines (IWT) cause significant loss of property values to nearby lands. Recently in Ontario an appeals review board through MPAC (Municipal Property Assessment Corporation) ruled in favour of a 50% assessed reduction in property value on a property due to excessive noise from a transformer station in a wind farm project (...)*”

**NPI Response:**

Based on the consultations undertaken with the local residents, NPI is aware of the public concerns over the loss of property values due to the proposed development of the McLean's' Mountain Wind Farm. The vast majority of evidence on the impact of wind farms on land values comes from Europe, Australia and United States of America (USA). The studies conducted in these countries indicate wind farms have no material effect on property values. Data from Ontario is beginning to emerge as more wind farms are constructed, and the experience from those projects also suggests that wind farms do not decrease property values.

A 2006 study conducted by Blake, Matlock and Marshal Ltd. for Windrush Energy suggests that wind farms have not negatively affected property values. “Property Value Study: the Relationship of Windmill Development and Market Prices” aimed to determine if the development of wind farms in the Melancthon area has had any impact on the growth of property values in the Township. Property values before and after wind farm development in the Township of Melancthon were compared to values in East Luther Grand Valley Township, a neighbouring and similar township except for its lack of wind farms. Property values in Melancthon were also compared to those in Dufferin County. The analysis showed that property values in the Township of Melancthon grew similarly to the rest of the County, and increased more than East Luther Grand Valley Township. Wind farm development was not found to have diminished property values.

The Canadian Hydro Developers Inc. also compared housing price ranges on Wolfe Island and Simcoe Island in Ontario, before and after the development of the wind farm ([http://www.shearwind.com/glen\\_dhu\\_community/fact\\_sheet.html](http://www.shearwind.com/glen_dhu_community/fact_sheet.html)). Findings indicate that Township of Melancthon experienced a stronger growth rate in sales price per property, than the adjoining East Luther

Grand Valley Township. The findings of this particular research indicate that the presence of the Wind Farm in Melancthon Township has not had an adverse impact on values within that municipality.

A study conducted in the Chatham-Kent area, where there are a number of wind turbines, found no evidence that wind farms have any measurable affect on rural residential market values. The study was conducted during May and June of 2009 by John Simmons Realty Services Ltd. and Canning Consultants Inc. and was commissioned by the Canadian Wind Energy Association to review possible effects of wind energy developments on real estate values on near-by properties. This information was provided at the March 22<sup>nd</sup>, 2010 Public Information Centre (PIC) that was held in Little Current. To review the study, please visit:

<http://www.canwea.ca/pdf/talkwind/PropertyValuesConsultingReportFebruary42010.pdf>

The appeals review board through MPAC (Municipal Property Assessment Corporation) referred to a very specific case in which a particular transformer was not functioning properly, causing excess noise. MPAC uses market and sales analysis to determine property values and has provided an outline of how they assess properties. This information was displayed on a large panel at the March 22<sup>nd</sup>, 2010 PIC and states that "To date, MPAC's analysis of sales does not indicate that the presence of wind turbines that are either abutting or in proximity to a property has either a positive or negative impact on its value."

Our direct contact with real estate sales representatives have indicated that there has been no effect on property values as a result of the Prince Wind Farm near Sault Ste. Marie. This information was presented at the March 2010 PIC. It is also our understanding that since the McLean's Mountain Wind Farm has been in advanced development stages adjacent properties including Farms have been sold at quite appreciated values.

### **Concerns and Responses Regarding Infrasound and Human Health Impacts**

**Comment:** "(...) For full information, please visit [www.WindVigilance.com](http://www.WindVigilance.com)"

#### **NPI Response:**

Infrasound or low frequency noise emissions were characteristics of some of the earlier models of wind turbines. This was attributed to early designs in which the turbine blades are downwind of the main tower. This phenomenon does not occur with modern upwind turbine technology (MOE, 2005). Infrasound has been studied extensively for current wind turbine technologies (JCAA, June 2006; HGC, 2006; Defra, 2003). At present, there are a significant number of wind turbines in operation in Ontario, including in several in proximity to residences; with no adverse impact from infrasound.

A study performed by HCG (2006) conclude, "All in all, based on Canadian and international studies, infrasound generated by wind turbines should not be considered a concern to the health of nearby residences. At the closest distances at which residences are typically located near large wind turbines, approximately 300 meters, the infrasonic levels are low enough to not be of concern. In any event, the discussion of whether or not infrasound poses a health risk at low levels is somewhat academic since, in the absence of wind turbines, comparable infrasonic levels are present in the natural environment." The evidence is that the current turbine technologies do not present any adverse impact related to the generation of infrasound.

The May 2010 report on *The Potential Health Impacts of Wind Turbines*, Chief Medical Officer of Health (CMOH) indicates that:

*“There is no scientific evidence, however, to indicate that low frequency sound generated from wind turbines causes adverse health effects. Low frequency sound and infrasound are everywhere in the environment. They are emitted from natural sources (e.g., wind, rivers) and from artificial sources including road traffic, aircraft, and ventilation systems. The most common source of infrasound is vehicles. Under many conditions, low frequency sound below 40Hz from wind turbines cannot be distinguished from environmental background noise from the wind itself (Leventhall 2006, Colby et al 2009).*

*Low frequency sound from environmental sources can produce annoyance in sensitive people, and infrasound at high sound pressure levels, above the threshold for human hearing, can cause severe ear pain. There is no evidence of adverse health effects from infrasound below the sound pressure level of 90dB (Leventhall 2003 and 2006).*

*Studies conducted to assess wind turbine noise indicate that infrasound and low frequency sounds from modern wind turbines are well below the level where known health effects occur, typically at 50 to 70dB. A small increase in sound level at low frequency can result in a large increase in perceived loudness. This may be difficult to ignore, even at relatively low sound pressures, increasing the potential for annoyance (Jakobsen 2005, Leventhall 2006) (...).”*

The report concludes that “low frequency sound and infrasound from current generation upwind model turbines are well below the pressure sound levels at which known health effects occur. Further, there is no scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects.

All of the proposed wind turbines are greater than 698 meters away from any residence, so there should clearly be no issue. The MOE noise standard also meets the range of the Health Canada guidelines of 40 dB(A) to residences.

### **Concerns and Responses Regarding Set-back Distances between Industrial Wind Turbines and Nearby Homes and Dwellings**

**Comment:** *“The 550 metre setback outlined in Ontario’s Green Energy Act is clearly not enough compared to other norms and standards around the world (see statements from the World Health Organization in the section below on Noise and Health Effects); I strongly urge Northland Power Inc. to exercise the Precautionary Principle and structure their project so that 2-2.5 km is the minimum distance between a turbine and any other dwelling such as a home, cottage or hunt camp.”*

#### **NPI Response:**

The Province of Ontario has some of the most stringent regulations in North America regarding wind turbine siting and sounds restrictions and Northland Power intends to meet or exceed these regulations. It is important to note that although wind energy is relatively new to Ontario, it’s a very well-established and proven form of electrical generation around the world. For more than thirty (30) years, tens of thousands of people have been living near wind turbines with no ill effects.

The Ontario’s Chief Medical Officer of Health, Dr. Arlene King, recently sent a memorandum to all Medical Officers of Health and Environmental Health Directors stating the following about wind energy

and human health: “(...) there is no scientific evidence, to date, to demonstrate a causal association between wind turbine noise and adverse health effects.”

I would like to bring your attention to a report released December 2009, authored by an international panel of medical doctors and sound experts titled “Wind Turbine Sound and Health Effects: An Expert Panel Review”. It concluded that sound from wind turbines has no direct harmful effect on human health.

To see the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects.pdf)

To see an executive summary of the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects-Executive\\_Summary.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects-Executive_Summary.pdf)

For more information on the effects of sound from wind turbines on human health please refer to the comment response tables provided in the Draft Renewable Energy Approval (REA) package.

### **Concerns and Responses Regarding Adverse Health Effects and Industrial Wind Turbines**

**Comment:** “(...) *The December 2009 American Wind Energy Association and Canadian Wind Energy Association sponsored report entitled “Wind Turbine Sound and Health Effects” (A/CanWEA Panel Review) acknowledges that wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological symptoms (...)*”

#### **NPI Response:**

The Chief Medical Officer of Health (CMOH) Report “The Potential Health Impact of Wind Turbines” dated May 2010 concludes that “While some people living near wind turbines report symptoms such as dizziness, headaches, and sleep disturbance, the scientific evidence available to date does not demonstrate a direct causal link between wind turbine noise and adverse health effects” and that “The sound level from wind turbines at common residential setbacks is not sufficient to cause hearing impairment or other direct adverse health effects. However, some people might find it annoying. It has been suggested that annoyance may be a reaction to the characteristic “swishing” or fluctuating nature of wind turbine sound rather than to the intensity of sound”.

The proposed project will require approval under Ontario Regulation 359/09 – Renewable Energy Approval (REA) under the *Green Energy Act* and NPI is complying with all of the REA requirements. Further, NPI will be required to meet the 40 dBA limit at all identified receptors and would be required to mitigate/resolve any exceedances as per the terms of the REA approval.

Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is [rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca).



Thank you.

A handwritten signature in black ink, appearing to read "Rick Martin". The signature is fluid and cursive, with the first name "Rick" and last name "Martin" clearly distinguishable.

Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre

April, 2010

To All Government and Company Officials:

With the current controversy about wind turbines, I am reminded of the fluoridation of drinking water program that many communities have in place. Dr Hardy Limeback, at the University of Toronto's Faculty of Medicine, led the charge on fluoridating water in Canada. As a result of his research, in part on the damage fluoride does to bones, he has since publicly apologized and now is sought after to speak in communities considering a fluoridation program addressing the health issues that he has since come to recognize through his research. He now advises against ingesting fluoridated water. According to Limeback, the net effect of removing fluoride from drinking water would be an increase of ¼ cavity per mouth, not enough to outweigh the damage it is doing to bones and so forth.

I mention this to draw attention to the fact that some of our best intentions can end in negative, unforeseen and disastrous ways. How do municipalities remove fluoride without admitting liability? So...the damage continues and few of us have even been made aware of this issue.

It would be more than unfortunate for a similar situation to occur with wind turbines as a result of insufficient due diligence. I would beg you to ensure the appropriate health studies are done to ensure the safety of those most likely to be affected, and to ensure that those folks/areas likely to be affected are identified accurately so appropriate measures/regulations can be established to mediate and prevent problems. In fact, I would do more than beg. I would remind you that it is incumbent upon you as good corporate citizens and responsible and honourable politicians to do so. In the past few years, we have seen and experienced the fallout of a business ethic that placed the dollar ahead of peoples' welfare.

### **Re: McLean's Mountain Wind Project and Community Concerns**

The purpose of this letter is to advise you of the many concerns that people living on and off of Manitoulin Island have regarding the Industrial Wind Turbine Project that is being proposed by **Northland Power Inc.** As one of many concerned citizens, I would like to see the following issues addressed in full prior to any construction on this project beginning:

#### **Economic Impacts**

- Manitoulin is a tourist based economy: With the Ontario Power Authority having just approved 60 MW of the McLean's Mountain project, with another 40 MW awaiting approval and another 100+ MW for future expansion as per the Ontario Power Authority web site, how can Northland and government officials assure residents and visitors that this island will not soon be covered with hundreds of Industrial Wind Turbines? Once the infra-structure is approved for this first project, the road is already paved for many more companies to follow. Firms such as Greenhead Energy and others will also be offered government subsidies and will easily be able to plug into the main grid (which has to first be upgraded for Northland's expansion). Vacationers and long time island residents who used to enjoy the peace and quiet of the natural world will leave and take their economic resources elsewhere.

#### **Environmental Concerns**

- Soft rock and gas pockets all over the island: Manitoulin is known locally for the existence of extensive gas pockets and limestone rock. A fire burns yearly unless extinguished in Kagawong due to surface leakage. A camp in Bidwell road area is supplied by gas from the ground. A well driller in NEMI had his rig and a recently constructed large new home burn up when he was drilling for water well and struck a gas pocket. When Northland does test drilling

and then digs large holes to form the bases for 43 separate turbines, such explosions could easily occur threatening project employees, equipment and nearby habitats. How will the company prevent and/or deal with such unplanned explosions? Will a soft limestone rock foundation support turbines the height of a 40 storey high building over the lifespan of the turbine? If they do stand for 20 years, who will pay for the turbines to be taken down when they have outlived their usefulness?

- Surface ground water contamination due to extensive drilling for multiple anchor rods for each turbine to unknown depths, in soft, unstable limestone: How can Northland assure other land owners that their ground water supplies will not be changed, disappear or become contaminated with all this drilling going on over such a large area? Drilling and construction activity would definitely adversely affect underground water flow which would contaminate many spring-fed lakes, ponds and drinking water sources.
- Adverse consequences for soil, vegetation, trees, birds, bats and other wildlife both during construction and operational phases. With Manitoulin being home to so many rare species and plants, how can Northland possibly address and mitigate such extensive losses as a result of their project?

### **First Nations Concerns**

- At Northland's public consultation meeting on March 22, 2010 The United Chiefs and Councils of Manitoulin (UCCM) declared their continued opposition to the project until appropriate consultation with Island First Nations has been made. A legal requirement of the Ontario government, as proclaimed by the Supreme Court of Canada, consultation, "has been ignored and continues to be ignored," said Chief Shining Turtle of Whitefish River First Nation and UCCM tribal chair.
- The AOK First Nation has also expressed opposition to this project, sighting concerns regarding improper consultation, and improper setbacks to protect the health of their community and First Nation Land. AOK is also calling for a minimum 2-2.5 km setback distance between turbines and the boundaries of their Nation. Recently the Sheguiandah First Nation supported this resolution made by AOK. The UCCM and the Wikwemikong Unceded First Nation all stated their opposition to the Northland power project.

### **Decreased property values**

- There is increasing evidence that Industrial Wind Turbines(IWT) cause significant loss of property values to nearby lands. Recently in Ontario an appeals review board through MPAC (Municipal Property Assessment Corporation) ruled in favour of a 50% assessed reduction in property value on a property due to excessive noise from a transformer station in a wind farm project. Many people who have tried to move away from IWT's have found themselves unable to sell their properties. Others who have invested their life savings in their home or farm find they cannot afford to sell. This is a particularly bad predicament for those who are experiencing adverse health effects due to their close proximity to Industrial Wind Turbines.

### **Infrasound and Human Health Impacts**

- See below for details, including references. For full information, please visit [www.WindVigilance.com](http://www.WindVigilance.com)

### **Set-back distances between Industrial Wind Turbines and nearby homes and dwellings**

- The 550 metre setback outlined in Ontario's Green Energy Act is clearly not enough compared to other norms and standards around the world (see statements from the World Health Organization in the section below on Noise and Health Effects); I strongly urge Northland

Power Inc. to exercise the Precautionary Principle and structure their project so that 2-2.5 km is the minimum distance between a turbine and any other dwelling such as a home, cottage or hunt camp.

**Re: Response to the Project Proposal and the new Renewable Energy Approval application regarding Adverse Health Effects and Industrial Wind Turbines**

Further to these concerns, I would like to advise Northland Power Inc. and any other corporation, individual, consulting group, government ministry or agency involved in the obtainment and or granting of licence that you will be held responsible if I or any of my family members or group suffer adverse health effects or other negative consequences as a result of exposure to the industrial wind turbines in the **McLean's Mountain Wind Farm**.

The December 2009 American Wind Energy Association and Canadian Wind Energy Association sponsored report entitled "Wind Turbine Sound and Health Effects" (A/CanWEA Panel Review) acknowledges that wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological symptoms.<sup>1</sup>

In a radio interview an author of the A/CanWEA Panel Review W. David Colby, M.D. stated:

"We're not denying that there are people annoyed and that maybe some of them are getting stressed out enough about being annoyed that they're getting sick."<sup>2</sup>

The A/CanWEA Panel Review acknowledges wind turbine noise induced symptoms may include palpitations, insomnia, nose bleeds, dizziness, nausea, eye strain, feeling vibration and headache.<sup>3</sup>

In 2010 Geoff Leventhall an author of the A/CanWEA Panel Review is quoted as stating "... there was no doubt people living near the turbines suffered a range of symptoms, including abnormal heart beats, sleep disturbance, headaches, tinnitus, nausea, visual blurring, panic attacks and general irritability...it's ruining their lives – and it's genuine..."<sup>4</sup>

The A/CanWEA Panel Review does not provide any science based guidelines that would mitigate these health risks.<sup>5</sup>

The Ontario Ministry of Health and Long Term Care also acknowledge wind turbines may cause annoyance, stress and sleep disturbance.<sup>6</sup>

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<sup>1</sup> W. David Colby, M.D et al., Wind Turbine Sound and Health Effects, An Expert Panel Review 2009, Prepared for American Wind Energy Association and Canadian Wind Energy Association

<sup>2</sup> W. David Colby, M.D., Sounding Board, 97.9 FM The Beach December 17, 2009

<sup>3</sup> W. David Colby, M.D et al., Wind Turbine Sound and Health Effects, An Expert Panel Review 2009, Prepared for American Wind Energy Association and Canadian Wind Energy Association

<sup>4</sup> Countryside News, Wind turbines set to get bigger, January 28 2010

<http://www.walesonline.co.uk/countryside-farming-news/countryside-news/2010/01/28/wind-turbines-setto-get-bigger-91466-25701853/>

<sup>5</sup> W. David Colby, M.D et al., Wind Turbine Sound and Health Effects, An Expert Panel Review 2009, Prepared for American Wind Energy Association and Canadian Wind Energy Association

<sup>6</sup> Arlene King M.D., Ontario Ministry of Health and Long Term Care Memorandum, October 21, 2009,

[http://windvigilance.com/primer\\_ahe.aspx](http://windvigilance.com/primer_ahe.aspx)

Globally there are people reporting adverse health effects from exposure to industrial wind turbines.<sup>7, 8, 9, 10</sup> Families including children have abandoned their homes to protect their health. This cannot be denied.

In Ontario there are now over 100 family members reporting adverse health effects from exposure to industrial wind turbines.<sup>11, 12</sup>

Peer reviewed studies of European industrial wind turbine facilities have documented high annoyance and sleep disturbance in respondents.<sup>13, 14, 15</sup> and that wind turbine induced “Annoyance was further associated with lowered sleep quality and negative emotions. This, together with reduced restoration possibilities may adversely affect health.”<sup>16</sup>

Annoyance may adversely affect physiological health. Research indicates that for “...chronically strong annoyance a causal chain exists between the three steps health – strong annoyance – increased morbidity.”<sup>17</sup>

The subjective experience of noise annoyance and stress can, through central nervous processes, lead to an inadequate neuro-endocrine reaction and finally to regulation diseases.<sup>18</sup>

The World Health Organization recognizes annoyance and sleep disturbance as adverse health effects.<sup>19</sup>

“Health Canada advises...that there are peer-reviewed scientific articles indicating that wind turbines may have an adverse impact on human health.”<sup>20</sup>

The Renewable Energy Application (REA) and proposal for the **McLean’s Mountain Wind Farm** is inadequate and does not specifically address the risk of adverse human health effects associated with the operations of industrial wind turbines.

Therefore, this project cannot be approved.

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<sup>7</sup> Amanda Harry M.D., Wind Turbines Noise and Health, 2007 UK

<sup>8</sup> Michael A. Nissenbaum M.D., [http://windvigilance.com/mars\\_hill.aspx](http://windvigilance.com/mars_hill.aspx)

<sup>9</sup> WindVOiCe© <http://windvigilance.com/>

<sup>10</sup> Nina Pierpont M.D., Wind Turbine Syndrome, 2009

<sup>11</sup> WindVOiCe© <http://windvigilance.com/>

<sup>12</sup> Hansard Reports, proceedings from April 15th, and April 16th, 2009 The Green Energy Act, Bill 150, Standing Committee on General Government, Ontario [http://www.ontla.on.ca/web/committee-proceedings/committee\\_transcripts\\_details.do?locale=en&Date=2009-04-15&ParlCommID=8856&BillID=2145&Business=&DocumentID=23801](http://www.ontla.on.ca/web/committee-proceedings/committee_transcripts_details.do?locale=en&Date=2009-04-15&ParlCommID=8856&BillID=2145&Business=&DocumentID=23801)

<sup>13</sup> Pedersen, E. and K. Persson Waye. 2004. Perception and annoyance due to wind turbine noise: A dose–response relationship, Journal of the Acoustical Society of America 116: 3460–3470.

<sup>14</sup> Pedersen, E. and K. Persson Waye. 2007. Wind turbine noise, annoyance and self-reported health and well being in different living environments

<sup>15</sup> Pedersen et al., 2008, Project WINDFARM perception Visual and acoustic impact of wind turbine farms on residents

<sup>16</sup> Eja Pedersen and Kerstin Persson Waye, Wind turbine noise, annoyance and self-reported health and well-being in different living environments, February, 2007

<sup>17</sup> Niemann, H, et al., WHO LARES Final report Noise effects and morbidity, 2004

<sup>18</sup> Maschke, C., et al Health Effects of Annoyance Induced by Neighbour Noise, Noise Control Engineering Journal, 2007, 55(3): 348-356.

<sup>19</sup> World Health Organization, Guidelines for Community Noise, 1999 [http://www.euro.who.int/mediacentre/PR/2009/20091008\\_1](http://www.euro.who.int/mediacentre/PR/2009/20091008_1)

<sup>20</sup> Safe Environs Program, Health Canada Environmental Assessment Nova Scotia, August 6, 2009, [http://windvigilance.com/primer\\_ahe.aspx](http://windvigilance.com/primer_ahe.aspx)

Specific concerns about the REA include but are not limited to:

The REA does not specifically discuss the risk of human adverse health effects from exposure to industrial wind turbine operations. The REA does not expressly require **Northland Power Inc.** to address the risk of human adverse health effects from exposure to industrial wind turbine operations. This is a flaw in the REA process.

The ability of those individuals to rely on the shielding effect of an environmental assessment (REA) is greatly diminished by the elimination of the awareness of any flaws in the assessment procedure or grant of licence. It has been stated that such an awareness should trigger an intensive exercise of due diligence to ascertain and deal with the potential risks to others of the project. The REA does not address how the project proponent **Northland Power Inc.** intends to prevent the widely acknowledged wind turbine induced adverse health effects such as annoyance, stress and sleep disturbance and adverse physiological and psychological symptoms.

The REA indicates the **Northland Power Inc.** intends to adhere to Ontario wind turbine noise guidelines and regulations. **Northland Power Inc.** is advised that adherence to government regulations does not guarantee that individuals will not experience adverse health effects and therefore does not remove responsibility.

There is no scientific evidence that the current Ministry of Environment wind turbine noise guidelines and regulations are adequate to protect Ontario individuals from suffering wind turbine induced adverse health effects.

In addition the current Ministry of Environment wind turbine noise guidelines and regulations fail to incorporate key Noise Management strategies and protocols endorsed by the World Health Organization.

For example the World Health Organization considers enforcement of health based noise guidelines imperative to health protection.<sup>21</sup> According to the Ontario Ministry of Environment "There is currently no scientifically accepted field methodology to measure wind turbine noise to determine compliance or non compliance with a Certificate of Approval limits."<sup>22</sup>

In a January 2010 request for proposal issued by The Ministry of Environment it states "Unlike typical industrial noise sources, measurement of audible noise from wind turbines in general raises technical challenges"<sup>23</sup>

The request for proposal further states:

"...the MOE Noise Guidelines for Wind Farms, October 2008 do not contain a measurement method for assessing the actual noise impact." and that "The Ministry requires a consultant to assist in the development of a measurement procedure to assess noise compliance of existing wind farms with the applicable sound level limits"<sup>24</sup>

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<sup>21</sup> World Health Organization, Guidelines for Community Noise, 1999

[http://www.euro.who.int/mediacentre/PR/2009/20091008\\_1](http://www.euro.who.int/mediacentre/PR/2009/20091008_1)

<sup>22</sup> Correspondence from Ministry of Environment Sept 30, 2009 ENV1283MC2009-4305

<sup>23</sup> MERX 189608: MGS - RFP Provision of Expert Advice on Measuring Audible Noise from Wind Turbines - OSS-078695 [www.merx.ca](http://www.merx.ca)

<sup>24</sup> ibid

The A/CanWEA Panel Review also acknowledges that wind turbine low frequency noise may cause annoyance.<sup>25</sup>

The physiological and psychological symptoms caused by low frequency noise annoyance can be serious and “The claim that their "lives have been ruined" by the noise is not an exaggeration...”<sup>26</sup>

The current Ministry of Environment wind turbine noise guidelines and regulations do not have any science based guidelines or regulations to protect individuals from the adverse health effects of wind turbine low frequency noise.<sup>27 28</sup>

This deficiency is further illustrated by the Ministry of Environment’s January, 2010 request for proposal to solicit assistance in "determining how or whether to regulate low frequency noise emissions from wind turbines".<sup>29</sup>

It is acknowledged that wind turbine shadow flicker may cause annoyance in humans.<sup>30</sup> Annoyance is an adverse health effect.<sup>31</sup> In the past Ontario wind energy projects have included Shadow Flicker Reports as part of their Environmental Screening Reports / Environmental Review Reports. The REA does not require the wind energy proponent to address the risk of shadow flicker. A shadow flicker report based on authoritative guidelines designed to protect human health must be conducted before the **Northland Power Inc.** can be approved.

The current Ontario wind turbine noise guidelines or regulations are based on conservative computer modelling. They are not based on independent third party human health studies designed to protect human health. The MOE has not provided peer-reviewed scientific evidence detailing how the guidelines or regulations were derived. The MOE has not provided peer-reviewed scientific evidence to demonstrate that a minimum 550 m setback will protect humans from the acknowledged adverse physiological and psychological effects associated with industrial wind turbines. According to the MOE 2008 Guidelines, the noise limits allow up to 51 dBA at 10 m/s which is over a 10 fold increase in acoustic energy from that of 40 dBA.

Dr. R. Copes, member of the Ontario Agency for Public Health and Promotion, along with others have identified a number of research gaps related to industrial wind turbines and related adverse health effects.<sup>32</sup>

The research gaps include among others, investigation of ‘health effects from long-term exposure to low levels of low frequency sound...practical measurement methods for attributing sound specifically to wind turbines...impact of wind turbine sound on sleep physiology...epidemiological data to assess health status before and after wind farm development.’”

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<sup>25</sup> W. David Colby, M.D et al., Wind Turbine Sound and Health Effects, An Expert Panel Review 2009, Prepared for American Wind Energy Association and Canadian Wind Energy Association

<sup>26</sup> Leventhall HG. Low frequency noise and annoyance. Noise Health [serial online] 2004 [cited 2009 Dec 31];6:59-72. Available from: <http://www.noiseandhealth.org/text.asp?2004/6/23/59/31663>

<sup>27</sup> Ontario Regulation 359/09 Made Under The Environmental Protection Act Renewable Energy Approvals Under Part V.0.1 of the Act, September 24, 2009

<sup>28</sup> “October 2008 Noise Guidelines for Wind Farms” Ontario Ministry of Environment

<sup>29</sup> MERX 189612: MGS - RFP Provision of Expert Advice on Low Frequency Noise from Wind Turbines - OSS-078696 [www.merx.ca](http://www.merx.ca)

<sup>30</sup> National Research Council (NRC). Environmental Impacts of Wind-Energy Projects, 2007, NRC, Washington, DC

<sup>31</sup> World Health Organization, Guidelines for Community Noise, 1999

[http://www.euro.who.int/mediacentre/PR/2009/20091008\\_1](http://www.euro.who.int/mediacentre/PR/2009/20091008_1)

<sup>32</sup> National Collaborating Center for Environmental Health, Wind Turbines and Health by Karen Rideout, Ray Copes, Constance Bos, January 2010

The World Health Organization states “In all cases noise should be reduced to the lowest level achievable in a particular situation. When there is a reasonable possibility that the public health will be endangered, even though scientific proof may be lacking, action should be take to protect the public health, without awaiting the full scientific proof.”<sup>33</sup>

In summary the American Wind Energy Association and Canadian Wind Energy Association sponsored report entitled “Wind Turbine Sound and Health Effects” and authoritative bodies including those in Ontario acknowledge that industrial wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological symptoms.

The government of Ontario has been advised about these adverse health effects and cannot claim ignorance. The REA ignores the risks to health and is an unconscionable approval process knowingly supported by the Ontario government.

**Northland Power Inc.** cannot proceed until the independent 3rd party human health studies have been conducted to determine authoritative setbacks and noise levels including that of low frequency noise. Please visit [www.WindVigilance.com](http://www.WindVigilance.com) for full details. I look forward to receiving a response, and/or at very least acknowledgement of receipt of my comments.

Yours truly,



cc: Dalton McGuinty, Premier of Ontario  
John Gerretsen, Minister of the Environment  
Brad Duguid Minister of Energy and Infrastructure  
Gord Miller, Environmental Commissioner of Ontario, Ministry of the Environment  
Andre Marin, Ombudsman of Ontario, (please apply to file # 222-520)  
Agatha Garcia-Wright, Director, Environmental Assessment and Approvals Branch  
Arlene King, Chief Medical Officer of Health, Ministry of Health and Long Term Care Public Health Division  
The Ontario Agency for Health Protection and Promotion  
The Town of North Eastern Manitoulin Island  
James C. Temerty, Chairman of the Board, Northland Power Inc.  
Rick Martin, McClean’s Mountain Wind Farm  
Don McKinnon Consulting  
David Cheung-Atkinson, Project Manager, Northland Power Inc.

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<sup>33</sup> World Health Organization, Guidelines for Community Noise, 1999  
[http://www.euro.who.int/mediacentre/PR/2009/20091008\\_1](http://www.euro.who.int/mediacentre/PR/2009/20091008_1)





**NORTHLAND POWER**  
McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

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**RE: McLean's Mountain Wind Project – Community Concerns**

Thank you for your letter of April, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

Several of the northernmost turbines and southwestern perimeter turbines have been removed largely due to public input. This results in a reduction in the number of wind turbines. Northland Power Inc. (NPI) is also currently proposing the use of 100 metre wind turbine towers which will lower the number again to 24-26 units. The proposed project will require the construction of a transmission line to connect with the Hydro One transmission system that is located on Goat Island.

NPI has also entered into a 50/50 partnership with Mnidoo Mnising Power, a company formed by the United Chiefs and Councils of Mnidoo Mnising First Nations, to share equally in the McLean's Mountain Wind Farm.

NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

I trust that the following responses address the concerns and questions you have expressed in your letter.

**Concerns and Responses Regarding Economic Impacts**

**Comment:** *“Manitoulin is a tourist based economy: With the Ontario Power Authority having just approved 60 MW of the McLean's Mountain project, with another 40 MW awaiting approval and another 100+ MW for future expansion as per the Ontario Power Authority web site, how can Northland and government officials assure residents and visitors that this island will not soon be covered with hundreds of Industrial Wind Turbines? (...)”*

**NPI Response:**

The proposed McLean's Mountain Wind Farm is expected to have no negative impacts on Manitoulin Island Tourism. NPI has considered the potential for effects of the project on tourism and recreation

activities. The project is well removed from the Lake Huron shoreline areas around the Island. The closest wind turbine (the westernmost turbine, turbine #42) is about 1.5 km from the Lake Huron shoreline. The easternmost wind turbine (turbine #9) of the project area is greater than 3 kilometres from the Lake Huron shoreline. Appreciating that tourist interests vary by individual, it is NPI's opinion that the view of the wind farm, especially from Honora Bay, will be complementary and will not negatively affect the viewscape.

Wind farms can have positive effects on the local tourism economy. There are 6,000 wind turbines in Denmark, which are used for marketing tourism. Local tourism associations may use wind turbines to promote "green tourism". This is particularly targeted towards the German market, where the public is known to have a high level of interest in both environmental issues and in new technology. In a Scottish study<sup>1</sup> 43% of respondents said a wind farm would have a positive effect on their inclination to visit the Argyll area, an area of high landscape value. About the same proportion of respondents said it would make no difference, while less than 8% felt that it would have a negative effect. Nine out of ten tourists visiting some of Scotland's top beauty spots say the presence of wind farms makes no difference to the enjoyment of their holiday. Twice as many people would return to an area because of the presence of a wind farm than would stay away, according to a poll carried out by MORI Scotland Commercial tour companies provide guided tours of several wind farms in the Pincher Creek, Alberta region. Several wind farms in Australia attract so many visitors that commercial tour operators provide opportunities for the public to get a close up view of the wind farms.

Back in 2004 I was involved in conducting a survey about the wind farm, requested by the municipality. The survey results indicated over 95% support of a wind farm by locals and visitors to Little Current. Boaters especially noted that the Turbines provide a landmark coming into the port of Little Current. NPI does not expect that the presence of the turbines would factor into a person's decision on whether to visit the Island. This project may have the potential to attract visitors. At NPI's Miller Mountain project in Quebec, 3500 tourists visited the project in 2008. The Providence Bay Wind Farm located to the south east of the MMWF project, approximately 45 kilometres away, established an interpretation centre for the project, which attracts numerous visitors over the summer visitor months

### **Concerns and Responses Regarding Natural Environment**

**Comment:** *"Soft rock and gas pockets all over the island: Manitoulin is known locally for the existence of extensive gas pockets and limestone rock. A fire burns yearly unless extinguished in Kagawong due to surface leakage (...)"*

#### **NPI Response:**

Gas pockets are unlikely to be found during construction as the foundations extend to a depth of only three (3) meters. The initial geological tests show that the rock near the surface is fractured and permeable and therefore unlikely to contain gas. Care will be taken during the drilling of additional bore holes prior to construction and the excavation during construction to protect against the unlikely release of gas.

Additional geotechnical investigations have been initiated and will confirm the characteristics of the rock and provide input to the design for the turbine foundations to support the turbines. Wind turbines can be erected in a variety of soil/rock conditions. The risk of turbine collapse is extremely low. The

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<sup>1</sup> *Tourist Attitudes Toward Wind Farms*, MORI Summary Report, September 2002 [www.bwea.com/pdf/MORI.pdf](http://www.bwea.com/pdf/MORI.pdf)

foundations that will be used for the turbines on this site are the same as the ones used in locations with sandy soil. The large spread foundation disperses the mass of the turbine equally over a significant footprint to enhance its stability.

**Comment:** *“Surface ground water contamination due to extensive drilling for multiple anchor rods for each turbine to unknown depths, in soft, unstable limestone (...)”*

**NPI Response:**

Given the nature of a wind farm (and the specific mitigation measures proposed for this project), the project is highly unlikely to have any impact of surface or ground water resources. Given the shallow depth of the foundations, three (3) meters and the fractured and permeable nature of the geology, no measurable effects on ground water flow is expected. We are aware, previous to any construction; many people in the community are hauling water to their wells at various times of the year. Further, the project will not reduce the rate of rainwater ground infiltration in the larger area. Based on the bore holes information collected to date, the water table is expected to be well below the depth of turbine foundation excavation. There is no reason to expect that turbine excavation activities would have an effect on the underground water or surface water in the area given the shallow depth of the excavations.

**Comment:** *“Adverse consequences for soil, vegetation, trees, birds, bats and other wildlife both during construction and operational phases. With Manitoulin being home to so many rare species and plants, how can Northland possibly address and mitigate such extensive losses as a result of their project?”*

**NPI Response:**

Extensive studies on the natural environment have been conducted for the proposed project. These studies include the input of the Ministry of Natural Environment (MNR) and Environment Canada (EC) to ensure that the natural environment on Manitoulin Island is protected. A Natural Environment Assessment, in consultation with the MNR and EC was also conducted for this project. The assessment concluded that the risk to rare, threatened and endangered species in the area is low and minimal significant adverse effects are anticipated. Additional field work was conducted in 2010 as per the MNR direction. Some turbines have been removed and some changes were made to the turbine and road locations to avoid wetland areas that now have to be avoided under the REA process. The results of this work will contribute to the final Environmental Management and Protection Plan (EMPP). NPI will implement mitigation measure where required. A new natural heritage assessment document has been prepared and submitted to the Ministry of Natural Resources for review and comment.

**Comment:** *“At Northland’s public consultation meeting on March 22, 2010 The United Chiefs and Councils of Manitoulin (UCCM) declared their continued opposition to the project until appropriate consultation with Island First Nations has been made (...)”*

*The AOK First Nation has also expressed opposition to this project, sighting concerns regarding improper consultation, and improper setbacks to protect the health of their community and First Nation Land. AOK is also calling for a minimum 2-2.5 km setback distance between turbines and the boundaries of their Nation (...)”*

**NPI Response:**

Communication with First Nation communities that may have interests in the proposed project has been ongoing for several years and in compliance with government requirements. In February 2011, Mnidoo Mnising Power, a company formed by the United Chiefs and Councils of Mnidoo Mnising First Nations (UCCMM), has entered into a 50/50 partnership with Northland Power Inc. to share equity in the McLean's Mountain 60 MW Wind Farm Project and on-going renewable power developments.

Membership of UCCM include M'Chigeeng First Nation; Sheguiandah First Nation; Sheshegwaning First Nation; Aundeck-Omni-Kaning First Nation; Whitefish River First Nation; and Zhiibaahaasing First Nation. UCCMM formed Mnidoo Mnising Power to lead renewable energy projects on Manitoulin Island in order to protect First Nations' rights, heritage and ensure the future for First Nations' youth.

Band Council resolutions are in place with each band council supporting their position in this agreement.

**Concerns and Responses Regarding Decreased Property Values**

**Comment:** *"There is increasing evidence that Industrial Wind Turbines (IWT) cause significant loss of property values to nearby lands. Recently in Ontario an appeals review board through MPAC (Municipal Property Assessment Corporation) ruled in favour of a 50% assessed reduction in property value on a property due to excessive noise from a transformer station in a wind farm project (...)"*

**NPI Response:**

Based on the consultations undertaken with the local residents, NPI is aware of the public concerns over the loss of property values due to the proposed development of the McLean's' Mountain Wind Farm. The vast majority of evidence on the impact of wind farms on land values comes from Europe, Australia and United States of America (USA). The studies conducted in these countries indicate wind farms have no material effect on property values. Data from Ontario is beginning to emerge as more wind farms are constructed, and the experience from those projects also suggests that wind farms do not decrease property values.

A 2006 study conducted by Blake, Matlock and Marshal Ltd. for Windrush Energy suggests that wind farms have not negatively affected property values. "Property Value Study: the Relationship of Windmill Development and Market Prices" aimed to determine if the development of wind farms in the Melancthon area has had any impact on the growth of property values in the Township. Property values before and after wind farm development in the Township of Melancthon were compared to values in East Luther Grand Valley Township, a neighbouring and similar township except for its lack of wind farms. Property values in Melancthon were also compared to those in Dufferin County. The analysis showed that property values in the Township of Melancthon grew similarly to the rest of the County, and increased more than East Luther Grand Valley Township. Wind farm development was not found to have diminished property values.

The Canadian Hydro Developers Inc. also compared housing price ranges on Wolfe Island and Simcoe Island in Ontario, before and after the development of the wind farm ([http://www.shearwind.com/glen\\_dhu\\_community/fact\\_sheet.html](http://www.shearwind.com/glen_dhu_community/fact_sheet.html)). Findings indicate that Township of Melancthon experienced a stronger growth rate in sales price per property, than the adjoining East Luther Grand Valley Township. The findings of this particular research indicate that the presence of the Wind Farm in Melancthon Township has not had an adverse impact on values within that municipality.

A study conducted in the Chatham-Kent area, where there are a number of wind turbines, found no evidence that wind farms have any measurable affect on rural residential market values. The study was conducted during May and June of 2009 by John Simmons Realty Services Ltd. and Canning Consultants Inc. and was commissioned by the Canadian Wind Energy Association to review possible effects of wind energy developments on real estate values on near-by properties. This information was provided at the March 22<sup>nd</sup>, 2010 Public Information Centre (PIC) that was held in Little Current. To review the study, please visit:

<http://www.canwea.ca/pdf/talkwind/PropertyValuesConsultingReportFebruary42010.pdf>

The appeals review board through MPAC (Municipal Property Assessment Corporation) referred to a very specific case in which a particular transformer was not functioning properly, causing excess noise. MPAC uses market and sales analysis to determine property values and has provided an outline of how they assess properties. This information was displayed on a large panel at the March 22<sup>nd</sup>, 2010 PIC and states that "To date, MPAC's analysis of sales does not indicate that the presence of wind turbines that are either abutting or in proximity to a property has either a positive or negative impact on its value."

Our direct contact with real estate sales representatives have indicated that there has been no effect on property values as a result of the Prince Wind Farm near Sault Ste. Marie. This information was presented at the March 2010 PIC. It is also our understanding that since the McLean's Mountain Wind Farm has been in advanced development stages adjacent properties including Farms have been sold at quite appreciated values.

### **Concerns and Responses Regarding Infrasound and Human Health Impacts**

**Comment:** "(...) For full information, please visit [www.WindVigilance.com](http://www.WindVigilance.com)"

#### **NPI Response:**

Infrasound or low frequency noise emissions were characteristics of some of the earlier models of wind turbines. This was attributed to early designs in which the turbine blades are downwind of the main tower. This phenomenon does not occur with modern upwind turbine technology (MOE, 2005). Infrasound has been studied extensively for current wind turbine technologies (JCAA, June 2006; HGC, 2006; Defra, 2003). At present, there are a significant number of wind turbines in operation in Ontario, including in several in proximity to residences; with no adverse impact from infrasound.

A study performed by HCG (2006) conclude, "All in all, based on Canadian and international studies, infrasound generated by wind turbines should not be considered a concern to the health of nearby residences. At the closest distances at which residences are typically located near large wind turbines, approximately 300 meters, the infrasonic levels are low enough to not be of concern. In any event, the discussion of whether or not infrasound poses a health risk at low levels is somewhat academic since, in the absence of wind turbines, comparable infrasonic levels are present in the natural environment." The evidence is that the current turbine technologies do not present any adverse impact related to the generation of infrasound.

The May 2010 report on *The Potential Health Impacts of Wind Turbines*, Chief Medical Officer of Health (CMOH) indicates that:

*"There is no scientific evidence, however, to indicate that low frequency sound generated from wind turbines causes adverse health effects. Low frequency sound and infrasound are everywhere*

*in the environment. They are emitted from natural sources (e.g., wind, rivers) and from artificial sources including road traffic, aircraft, and ventilation systems. The most common source of infrasound is vehicles. Under many conditions, low frequency sound below 40Hz from wind turbines cannot be distinguished from environmental background noise from the wind itself (Leventhall 2006, Colby et al 2009).*

*Low frequency sound from environmental sources can produce annoyance in sensitive people, and infrasound at high sound pressure levels, above the threshold for human hearing, can cause severe ear pain. There is no evidence of adverse health effects from infrasound below the sound pressure level of 90dB (Leventhall 2003 and 2006).*

*Studies conducted to assess wind turbine noise indicate that infrasound and low frequency sounds from modern wind turbines are well below the level where known health effects occur, typically at 50 to 70dB. A small increase in sound level at low frequency can result in a large increase in perceived loudness. This may be difficult to ignore, even at relatively low sound pressures, increasing the potential for annoyance (Jakobsen 2005, Leventhall 2006) (...).”*

The report concludes that “low frequency sound and infrasound from current generation upwind model turbines are well below the pressure sound levels at which known health effects occur. Further, there is no scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects.

All of the proposed wind turbines are greater than 698 meters away from any residence, so there should clearly be no issue. The MOE noise standard also meets the range of the Health Canada guidelines of 40 dB(A) to residences.

### **Concerns and Responses Regarding Set-back Distances between Industrial Wind Turbines and Nearby Homes and Dwellings**

**Comment:** *“The 550 metre setback outlined in Ontario’s Green Energy Act is clearly not enough compared to other norms and standards around the world (see statements from the World Health Organization in the section below on Noise and Health Effects); I strongly urge Northland Power Inc. to exercise the Precautionary Principle and structure their project so that 2-2.5 km is the minimum distance between a turbine and any other dwelling such as a home, cottage or hunt camp.”*

#### **NPI Response:**

The Province of Ontario has some of the most stringent regulations in North America regarding wind turbine siting and sounds restrictions and Northland Power intends to meet or exceed these regulations. It is important to note that although wind energy is relatively new to Ontario, it’s a very well-established and proven form of electrical generation around the world. For more than thirty (30) years, tens of thousands of people have been living near wind turbines with no ill effects.

The Ontario’s Chief Medical Officer of Health, Dr. Arlene King, recently sent a memorandum to all Medical Officers of Health and Environmental Health Directors stating the following about wind energy and human health: “(...) there is no scientific evidence, to date, to demonstrate a causal association between wind turbine noise and adverse health effects.”

I would like to bring your attention to a report released December 2009, authored by an international panel of medical doctors and sound experts titled “Wind Turbine Sound and Health Effects: An Expert Panel Review”. It concluded that sound from wind turbines has no direct harmful effect on human health.

To see the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects.pdf)

To see an executive summary of the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects-Executive\\_Summary.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects-Executive_Summary.pdf)

For more information on the effects of sound from wind turbines on human health please refer to the comment response tables provided in the Draft Renewable Energy Approval (REA) package.

**Concerns and Responses Regarding “Response to the Project Proposal and the new Renewable Energy Approval application regarding Adverse Health Effects and Industrial Wind Turbines**

**Comment:** “(...) *The December 2009 American Wind Energy Association and Canadian Wind Energy Association sponsored report entitled “Wind Turbine Sound and Health Effects” (A/CanWEA Panel Review) acknowledges that wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological symptoms (...)*”

**NPI Response:**

The Chief Medical Officer of Health (CMOH) Report “The Potential Health Impact of Wind Turbines” dated May 2010 concludes that “While some people living near wind turbines report symptoms such as dizziness, headaches, and sleep disturbance, the scientific evidence available to date does not demonstrate a direct causal link between wind turbine noise and adverse health effects” and that “The sound level from wind turbines at common residential setbacks is not sufficient to cause hearing impairment or other direct adverse health effects. However, some people might find it annoying. It has been suggested that annoyance may be a reaction to the characteristic “swishing” or fluctuating nature of wind turbine sound rather than to the intensity of sound.

The proposed project will require approval under Ontario Regulation 359/09 – Renewable Energy Approval (REA) under the *Green Energy Act* and NPI is complying with all of the REA requirements. Further, NPI will be required to meet the 40 dBA limit at all identified receptors and would be required to mitigate/resolve any exceedances as per the terms of the REA approval.

Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is [rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca).

Thank you.

A handwritten signature in black ink, appearing to read "Rick Martin". The signature is fluid and cursive, with the first name "Rick" and last name "Martin" clearly distinguishable.

Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre



April, 2010

To All Government and Company Officials:

**Re: McLean's Mountain Wind Project and Community Concerns**

The purpose of this letter is to advise you of the many concerns that people living on and off of Manitoulin Island have regarding the Industrial Wind Turbine Project that is being proposed by **Northland Power Inc.** As one of many concerned citizens, I would like to see the following issues addressed in full prior to any construction on this project beginning:

**Economic Impacts**

- Manitoulin is a tourist based economy: With the Ontario Power Authority having just approved 60 MW of the McLean's Mountain project, with another 40 MW awaiting approval and another 100+ MW for future expansion as per the Ontario Power Authority web site, how can Northland and government officials assure residents and visitors that this island will not soon be covered with hundreds of Industrial Wind Turbines? Once the infra-structure is approved for this first project, the road is already paved for many more companies to follow. Firms such as Greenhead Energy and others will also be offered government subsidies and will easily be able to plug into the main grid (which has to first be upgraded for Northland's expansion). Vacationers and long time island residents who used to enjoy the peace and quiet of the natural world will leave and take their economic resources elsewhere.

**Environmental Concerns**

- Soft rock and gas pockets all over the island: Manitoulin is known locally for the existence of extensive gas pockets and limestone rock. A fire burns yearly unless extinguished in Kagawong due to surface leakage. A camp in Bidwell road area is supplied by gas from the ground. A well driller in NEMI had his rig and a recently constructed large new home burn up when he was drilling for water well and struck a gas pocket. When Northland does test drilling and then digs large holes to form the bases for 43 separate turbines, such explosions could easily occur threatening project employees, equipment and nearby habitats. How will the company prevent and/or deal with such unplanned explosions? Will a soft limestone rock foundation support turbines the height of a 40 storey high building over the lifespan of the turbine? If they do stand for 20 years, who will pay for the turbines to be taken down when they have outlived their usefulness?
- Surface ground water contamination due to extensive drilling for multiple anchor rods for each turbine to unknown depths, in soft, unstable limestone: How can Northland assure other land owners that their ground water supplies will not be changed, disappear or become contaminated with all this drilling going on over such a large area? Drilling and construction activity would definitely adversely affect underground water flow which would contaminate many spring-fed lakes, ponds and drinking water sources.
- Adverse consequences for soil, vegetation, trees, birds, bats and other wildlife both during construction and operational phases. With Manitoulin being home to so many rare species and plants, how can Northland possibly address and mitigate such extensive losses as a result of their project?

**First Nations Concerns**

- At Northland's public consultation meeting on March 22, 2010 The United Chiefs and Councils of Manitoulin (UCCM) declared their continued opposition to the project until appropriate

consultation with Island First Nations has been made. A legal requirement of the Ontario government, as proclaimed by the Supreme Court of Canada, consultation, "has been ignored and continues to be ignored," said Chief Shining Turtle of Whitefish River First Nation and UCCM tribal chair.

- The AOK First Nation has also expressed opposition to this project, sighting concerns regarding improper consultation, and improper setbacks to protect the health of their community and First Nation Land. AOK is also calling for a minimum 2-2.5 km setback distance between turbines and the boundaries of their Nation. Recently the Sheguiandah First Nation supported this resolution made by AOK. The UCCM and the Wikwemikong Unceded First Nation all stated their opposition to the Northland power project.

### **Decreased property values**

- There is increasing evidence that Industrial Wind Turbines(IWT) cause significant loss of property values to nearby lands. Recently in Ontario an appeals review board through MPAC (Municipal Property Assessment Corporation) ruled in favour of a 50% assessed reduction in property value on a property due to excessive noise from a transformer station in a wind farm project. Many people who have tried to move away from IWT's have found themselves unable to sell their properties. Others who have invested their life savings in their home or farm find they cannot afford to sell. This is a particularly bad predicament for those who are experiencing adverse health effects due to their close proximity to Industrial Wind Turbines.

### **Infrasound and Human Health Impacts**

- See below for details, including references. For full information, please visit [www.WindVigilance.com](http://www.WindVigilance.com)

### **Set-back distances between Industrial Wind Turbines and nearby homes and dwellings**

- The 550 metre setback outlined in Ontario's Green Energy Act is clearly not enough compared to other norms and standards around the world (see statements from the World Health Organization in the section below on Noise and Health Effects); I strongly urge Northland Power Inc. to exercise the Precautionary Principle and structure their project so that 2-2.5 km is the minimum distance between a turbine and any other dwelling such as a home, cottage or hunt camp.

### **Re: Response to the Project Proposal and the new Renewable Energy Approval application regarding Adverse Health Effects and Industrial Wind Turbines**

Further to these concerns, I would like to advise Northland Power Inc. and any other corporation, individual, consulting group, government ministry or agency involved in the obtainment and or granting of licence that you will be held responsible if I or any of my family members or group suffer adverse health effects or other negative consequences as a result of exposure to the industrial wind turbines in the **McLean's Mountain Wind Farm**.

The December 2009 American Wind Energy Association and Canadian Wind Energy Association sponsored report entitled "Wind Turbine Sound and Health Effects" (A/CanWEA Panel Review) acknowledges that wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological symptoms.<sup>1</sup>

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<sup>1</sup> W. David Colby, M.D et al., Wind Turbine Sound and Health Effects, An Expert Panel Review 2009, Prepared for American Wind Energy Association and Canadian Wind Energy Association

In a radio interview an author of the A/CanWEA Panel Review W. David Colby, M.D. stated:

“We’re not denying that there are people annoyed and that maybe some of them are getting stressed out enough about being annoyed that they’re getting sick.”<sup>2</sup>

The A/CanWEA Panel Review acknowledges wind turbine noise induced symptoms may include palpitations, insomnia, nose bleeds, dizziness, nausea, eye strain, feeling vibration and headache.<sup>3</sup>

In 2010 Geoff Leventhall an author of the A/CanWEA Panel Review is quoted as stating “... there was no doubt people living near the turbines suffered a range of symptoms, including abnormal heart beats, sleep disturbance, headaches, tinnitus, nausea, visual blurring, panic attacks and general irritability.... it’s ruining their lives – and it’s genuine...”<sup>4</sup>

The A/CanWEA Panel Review does not provide any science based guidelines that would mitigate these health risks.<sup>5</sup>

The Ontario Ministry of Health and Long Term Care also acknowledge wind turbines may cause annoyance, stress and sleep disturbance.<sup>6</sup>

Globally there are people reporting adverse health effects from exposure to industrial wind turbines.<sup>7, 8, 9, 10</sup> Families including children have abandoned their homes to protect their health. This cannot be denied.

In Ontario there are now over 100 family members reporting adverse health effects from exposure to industrial wind turbines.<sup>11, 12</sup>

Peer reviewed studies of European industrial wind turbine facilities have documented high annoyance and sleep disturbance in respondents.<sup>13, 14, 15</sup> and that wind turbine induced “Annoyance was further

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<sup>2</sup> W. David Colby, M.D., Sounding Board, 97.9 FM The Beach December 17, 2009

<sup>3</sup> W. David Colby, M.D et al., Wind Turbine Sound and Health Effects, An Expert Panel Review 2009, Prepared for American Wind Energy Association and Canadian Wind Energy Association

<sup>4</sup> Countryside News, Wind turbines set to get bigger, January 28 2010

<http://www.walesonline.co.uk/countryside-farming-news/countryside-news/2010/01/28/wind-turbines-setto-get-bigger-91466-25701853/>

<sup>5</sup> W. David Colby, M.D et al., Wind Turbine Sound and Health Effects, An Expert Panel Review 2009, Prepared for American Wind Energy Association and Canadian Wind Energy Association

<sup>6</sup> Arlene King M.D., Ontario Ministry of Health and Long Term Care Memorandum, October 21, 2009,

[http://windvigilance.com/primer\\_ahe.aspx](http://windvigilance.com/primer_ahe.aspx)

<sup>7</sup> Amanda Harry M.D., Wind Turbines Noise and Health, 2007 UK

<sup>8</sup> Michael A. Nissenbaum M.D., [http://windvigilance.com/mars\\_hill.aspx](http://windvigilance.com/mars_hill.aspx)

<sup>9</sup> WindVOiCe© <http://windvigilance.com/>

<sup>10</sup> Nina Pierpont M.D., Wind Turbine Syndrome, 2009

<sup>11</sup> WindVOiCe© <http://windvigilance.com/>

<sup>12</sup> Hansard Reports, proceedings from April 15th, and April 16th , 2009 The Green Energy Act, Bill 150, Standing Committee on General Government, Ontario [http://www.ontla.on.ca/web/committee-proceedings/committee\\_transcripts\\_details.do?locale=en&Date=2009-04-15&ParlCommID=8856&BillID=2145&Business=&DocumentID=23801](http://www.ontla.on.ca/web/committee-proceedings/committee_transcripts_details.do?locale=en&Date=2009-04-15&ParlCommID=8856&BillID=2145&Business=&DocumentID=23801)

<sup>13</sup> Pedersen, E. and K. Persson Waye. 2004. Perception and annoyance due to wind turbine noise: A dose–response relationship, Journal of the Acoustical Society of America 116: 3460–3470.

<sup>14</sup> Pedersen, E. and K. Persson Waye. 2007. Wind turbine noise, annoyance and self-reported health and well being in different living environments

<sup>15</sup> Pedersen et al., 2008, Project WINDFARM perception Visual and acoustic impact of wind turbine farms on residents

associated with lowered sleep quality and negative emotions. This, together with reduced restoration possibilities may adversely affect health.”<sup>16</sup>

Annoyance may adversely affect physiological health. Research indicates that for “...chronically strong annoyance a causal chain exists between the three steps health – strong annoyance – increased morbidity.”<sup>17</sup>

The subjective experience of noise annoyance and stress can, through central nervous processes, lead to an inadequate neuro-endocrine reaction and finally to regulation diseases.<sup>18</sup>

The World Health Organization recognizes annoyance and sleep disturbance as adverse health effects.<sup>19</sup>

“Health Canada advises...that there are peer-reviewed scientific articles indicating that wind turbines may have an adverse impact on human health.”<sup>20</sup>

The Renewable Energy Application (REA) and proposal for the **McLean’s Mountain Wind Farm** is inadequate and does not specifically address the risk of adverse human health effects associated with the operations of industrial wind turbines.

Therefore, this project cannot be approved.

Specific concerns about the REA include but are not limited to:

The REA does not specifically discuss the risk of human adverse health effects from exposure to industrial wind turbine operations. The REA does not expressly require **Northland Power Inc.** to address the risk of human adverse health effects from exposure to industrial wind turbine operations. This is a flaw in the REA process.

The ability of those individuals to rely on the shielding effect of an environmental assessment (REA) is greatly diminished by the elimination of the awareness of any flaws in the assessment procedure or grant of licence. It has been stated that such an awareness should trigger an intensive exercise of due diligence to ascertain and deal with the potential risks to others of the project. The REA does not address how the project proponent **Northland Power Inc.** intends to prevent the widely acknowledged wind turbine induced adverse health effects such as annoyance, stress and sleep disturbance and adverse physiological and psychological symptoms.

The REA indicates the **Northland Power Inc.** intends to adhere to Ontario wind turbine noise guidelines and regulations. **Northland Power Inc.** is advised that adherence to government regulations does not guarantee that individuals will not experience adverse health effects and therefore does not remove responsibility.

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<sup>16</sup> Eja Pedersen and Kerstin Persson Waye ,Wind turbine noise, annoyance and self-reported health and well-being in different living environments, February, 2007

<sup>17</sup> Niemann, H, et al., WHO LARES Final report Noise effects and morbidity, 2004

<sup>18</sup> Maschke, C., et al Health Effects of Annoyance Induced by Neighbour Noise, Noise Control Engineering Journal, 2007, 55(3): 348-356.

<sup>19</sup> World Health Organization, Guidelines for Community Noise,1999

[http://www.euro.who.int/mediacentre/PR/2009/20091008\\_1](http://www.euro.who.int/mediacentre/PR/2009/20091008_1)

<sup>20</sup> Safe Environs Program, Health Canada Environmental Assessment Nova Scotia, August 6, 2009, [http://windvigilance.com/primer\\_ahe.aspx](http://windvigilance.com/primer_ahe.aspx)

There is no scientific evidence that the current Ministry of Environment wind turbine noise guidelines and regulations are adequate to protect Ontario individuals from suffering wind turbine induced adverse health effects.

In addition the current Ministry of Environment wind turbine noise guidelines and regulations fail to incorporate key Noise Management strategies and protocols endorsed by the World Health Organization.

For example the World Health Organization considers enforcement of health based noise guidelines imperative to health protection.<sup>21</sup> According to the Ontario Ministry of Environment “There is currently no scientifically accepted field methodology to measure wind turbine noise to determine compliance or non compliance with a Certificate of Approval limits.”<sup>22</sup>

In a January 2010 request for proposal issued by The Ministry of Environment it states "Unlike typical industrial noise sources, measurement of audible noise from wind turbines in general raises technical challenges"<sup>23</sup>

The request for proposal further states:

"...the MOE Noise Guidelines for Wind Farms, October 2008 do not contain a measurement method for assessing the actual noise impact." and that "The Ministry requires a consultant to assist in the development of a measurement procedure to assess noise compliance of existing wind farms with the applicable sound level limits"<sup>24</sup>

The A/CanWEA Panel Review also acknowledges that wind turbine low frequency noise may cause annoyance.<sup>25</sup>

The physiological and psychological symptoms caused by low frequency noise annoyance can be serious and “The claim that their "lives have been ruined" by the noise is not an exaggeration...”<sup>26</sup>

The current Ministry of Environment wind turbine noise guidelines and regulations do not have any science based guidelines or regulations to protect individuals from the adverse health effects of wind turbine low frequency noise.<sup>27, 28</sup>

This deficiency is further illustrated by the Ministry of Environment’s January, 2010 request for proposal to solicit assistance in "determining how or whether to regulate low frequency noise emissions from wind turbines".<sup>29</sup>

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<sup>21</sup> World Health Organization, Guidelines for Community Noise, 1999

[http://www.euro.who.int/mediacentre/PR/2009/20091008\\_1](http://www.euro.who.int/mediacentre/PR/2009/20091008_1)

<sup>22</sup> Correspondence from Ministry of Environment Sept 30, 2009 ENV1283MC2009-4305

<sup>23</sup> MERX 189608: MGS - RFP Provision of Expert Advice on Measuring Audible Noise from Wind Turbines - OSS-078695  
[www.merx.ca](http://www.merx.ca)

<sup>24</sup> ibid

<sup>25</sup> W. David Colby, M.D et al., Wind Turbine Sound and Health Effects, An Expert Panel Review 2009, Prepared for American Wind Energy Association and Canadian Wind Energy Association

<sup>26</sup> Leventhall HG. Low frequency noise and annoyance. Noise Health [serial online] 2004 [cited 2009 Dec 31];6:59-72. Available from: <http://www.noiseandhealth.org/text.asp?2004/6/23/59/31663>

<sup>27</sup> Ontario Regulation 359/09 Made Under The Environmental Protection Act Renewable Energy Approvals Under Part V.0.1 of the Act, September 24, 2009

<sup>28</sup> “October 2008 Noise Guidelines for Wind Farms” Ontario Ministry of Environment

<sup>29</sup> MERX 189612: MGS - RFP Provision of Expert Advice on Low Frequency Noise from Wind Turbines - OSS-078696  
[www.merx.ca](http://www.merx.ca)

It is acknowledged that wind turbine shadow flicker may cause annoyance in humans.<sup>30</sup> Annoyance is an adverse health effect.<sup>31</sup> In the past Ontario wind energy projects have included Shadow Flicker Reports as part of their Environmental Screening Reports / Environmental Review Reports. The REA does not require the wind energy proponent to address the risk of shadow flicker. A shadow flicker report based on authoritative guidelines designed to protect human health must be conducted before the **Northland Power Inc.** can be approved.

The current Ontario wind turbine noise guidelines or regulations are based on conservative computer modelling. They are not based on independent third party human health studies designed to protect human health. The MOE has not provided peer-reviewed scientific evidence detailing how the guidelines or regulations were derived. The MOE has not provided peer-reviewed scientific evidence to demonstrate that a minimum 550 m setback will protect humans from the acknowledged adverse physiological and psychological effects associated with industrial wind turbines. According to the MOE 2008 Guidelines, the noise limits allow up to 51 dBA at 10 m/s which is over a 10 fold increase in acoustic energy from that of 40 dBA.

Dr. R. Copes, member of the Ontario Agency for Public Health and Promotion, along with others have identified a number of research gaps related to industrial wind turbines and related adverse health effects.<sup>32</sup>

The research gaps include among others, investigation of ‘health effects from long-term exposure to low levels of low frequency sound...practical measurement methods for attributing sound specifically to wind turbines...impact of wind turbine sound on sleep physiology...epidemiological data to assess health status before and after wind farm development.’”

The World Health Organization states “In all cases noise should be reduced to the lowest level achievable in a particular situation. When there is a reasonable possibility that the public health will be endangered, even though scientific proof may be lacking, action should be take to protect the public health, without awaiting the full scientific proof.”<sup>33</sup>

In summary the American Wind Energy Association and Canadian Wind Energy Association sponsored report entitled “Wind Turbine Sound and Health Effects” and authoritative bodies including those in Ontario acknowledge that industrial wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological symptoms.

The government of Ontario has been advised about these adverse health effects and cannot claim ignorance. The REA ignores the risks to health and is an unconscionable approval process knowingly supported by the Ontario government.

**Northland Power Inc.** cannot proceed until the independent 3rd party human health studies have been conducted to determine authoritative setbacks and noise levels including that of low frequency noise.

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<sup>30</sup> National Research Council (NRC). Environmental Impacts of Wind-Energy Projects, 2007, NRC, Washington, DC

<sup>31</sup> World Health Organization, Guidelines for Community Noise, 1999

[http://www.euro.who.int/mediacentre/PR/2009/20091008\\_1](http://www.euro.who.int/mediacentre/PR/2009/20091008_1)

<sup>32</sup> National Collaborating Center for Environmental Health, Wind Turbines and Health by Karen Rideout, Ray Copes, Constance Bos, January 2010

<sup>33</sup> World Health Organization, Guidelines for Community Noise, 1999

[http://www.euro.who.int/mediacentre/PR/2009/20091008\\_1](http://www.euro.who.int/mediacentre/PR/2009/20091008_1)

Please visit [www.WindVigilance.com](http://www.WindVigilance.com) for full details. I look forward to receiving a response, and/or at very least acknowledgement of receipt of my comments.

Yours truly,

Please be advised that this letter has also been sent to:

**James C. Temerty**, Chairman of the Board, Northland Power Inc. (**please distribute copies to all board members**),

Gord Miller, Environmental Commissioner of Ontario, Ministry of the Environment  
Agatha Garcia-Wright, Director, Environmental Assessment and Approvals Branch, Rick Martin,  
McClean's Mountain Wind Farm, Arlene King, Chief Medical Officer of Health, Ministry of Health and  
Long Term Care Public Health Division, Andre Marin, Ombudsman of Ontario, (please apply to file #  
222-520) The Ontario Agency for Health Protection and Promotion, Brad Duguid Ministry of Energy and  
Infrastructure, Dalton McGuinty, Premier, The Town of North Eastern Manitoulin Island, John  
Gerretsen, Ministry of Environment, Don McKinnon Consulting, and David Cheung-Atkinson, Project  
Manager, Northland Power Inc.



**NORTHLAND POWER**  
McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

[REDACTED]  
[REDACTED]  
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[REDACTED]

**RE: McLean's Mountain Wind Project and Community Concerns**

Thank you for your letter of March, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

Several of the northernmost turbines and southwestern perimeter turbines have been removed largely due to public input. This results in a reduction in the number of wind turbines. Northland Power Inc. (NPI) is also currently proposing the use of 100 metre wind turbine towers which will lower the number again to 24-26 units. The proposed project will require the construction of a transmission line to connect with the Hydro One transmission system that is located on Goat Island.

NPI has also entered into a 50/50 partnership with Mniidoo Mnisging Power, a company formed by the United Chiefs and Councils of Mniidoo Mnisging First Nations, to share equally in the McLean's Mountain Wind Farm.

NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

I trust that the following responses address the concerns and questions you have expressed in your letter.

**Concerns and Responses Regarding Economic Impacts**

**Comment:** *"Manitoulin is a tourist based economy: With the Ontario Power Authority having just approved 60 MW of the McLean's Mountain project, with another 40 MW awaiting approval and another 100+ MW for future expansion as per the Ontario Power Authority web site, how can Northland and government officials assure residents and visitors that this island will not soon be covered with hundreds of Industrial Wind Turbines? (...)"*



## **NPI Response:**

The proposed McLean's Mountain Wind Farm is expected to have no negative impacts on Manitoulin Island Tourism. NPI has considered the potential for effects of the project on tourism and recreation activities. The project is well removed from the Lake Huron shoreline areas around the Island. The closest wind turbine (the westernmost turbine, turbine #42) is about 1.5 km from the Lake Huron shoreline. The easternmost wind turbine (turbine #9) of the project area is greater than 3 kilometres from the Lake Huron shoreline. Appreciating that tourist interests vary by individual, it is NPI's opinion that the view of the wind farm, especially from Honora Bay, will be complementary and will not negatively affect the viewscape.

Wind farms can have positive effects on the local tourism economy. There are 6,000 wind turbines in Denmark, which are used for marketing tourism. Local tourism associations may use wind turbines to promote "green tourism". This is particularly targeted towards the German market, where the public is known to have a high level of interest in both environmental issues and in new technology. In a Scottish study<sup>1</sup> 43% of respondents said a wind farm would have a positive effect on their inclination to visit the Argyll area, an area of high landscape value. About the same proportion of respondents said it would make no difference, while less than 8% felt that it would have a negative effect. Nine out of ten tourists visiting some of Scotland's top beauty spots say the presence of wind farms makes no difference to the enjoyment of their holiday. Twice as many people would return to an area because of the presence of a wind farm than would stay away, according to a poll carried out by MORI Scotland Commercial tour companies provide guided tours of several wind farms in the Pincher Creek, Alberta region. Several wind farms in Australia attract so many visitors that commercial tour operators provide opportunities for the public to get a close up view of the wind farms.

Back in 2004 I was involved in conducting a survey about the wind farm, requested by the municipality. The survey results indicated over 95% support of a wind farm by locals and visitors to Little Current. Boaters especially noted that the Turbines provide a landmark coming into the port of Little Current. NPI does not expect that the presence of the turbines would factor into a person's decision on whether to visit the Island. This project may have the potential to attract visitors. At NPI's Miller Mountain project in Quebec, 3500 tourists visited the project in 2008. The Providence Bay Wind Farm located to the south east of the MMWF project, approximately 45 kilometres away, established an interpretation centre for the project, which attracts numerous visitors over the summer visitor months

## **Concerns and Responses Regarding Natural Environment**

**Comment:** *"Soft rock and gas pockets all over the island: Manitoulin is known locally for the existence of extensive gas pockets and limestone rock. A fire burns yearly unless extinguished in Kagawong due to surface leakage (...)"*

## **NPI Response:**

Gas pockets are unlikely to be found during construction as the foundations extend to a depth of only three (3) meters. The initial geotechnical tests show that the rock near the surface is fractured and permeable and therefore unlikely to contain gas. Care will be taken during the drilling of additional bore

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<sup>1</sup> *Tourist Attitudes Toward Wind Farms*, MORI Summary Report, September 2002 [www.bwea.com/pdf/MORI.pdf](http://www.bwea.com/pdf/MORI.pdf)

holes prior to construction and the excavation during construction to protect against the unlikely release of gas.

Additional geotechnical investigations have been initiated and will confirm the characteristics of the rock and provide input to the design for the turbine foundations to support the turbines. Wind turbines can be erected in a variety of soil/rock conditions. The risk of turbine collapse is extremely low. The foundations that will be used for the turbines on this site are the same as the ones used in locations with sandy soil. The large spread foundation disperses the mass of the turbine equally over a significant footprint to enhance its stability.

**Comment:** *“Surface ground water contamination due to extensive drilling for multiple anchor rods for each turbine to unknown depths, in soft, unstable limestone (...)”*

**NPI Response:**

Given the nature of a wind farm (and the specific mitigation measures proposed for this project), the project is highly unlikely to have any impact of surface or ground water resources. Given the shallow depth of the foundations, three (3) meters and the fractured and permeable nature of the geology, no measurable effects on ground water flow is expected. We are aware, previous to any construction; many people in the community are hauling water to their wells at various times of the year. Further, the project will not reduce the rate of rainwater ground infiltration in the larger area. Based on the bore holes information collected to date, the water table is expected to be well below the depth of turbine foundation excavation. There is no reason to expect that turbine excavation activities would have an effect on the underground water or surface water in the area given the shallow depth of the excavations.

**Comment:** *“Adverse consequences for soil, vegetation, trees, birds, bats and other wildlife both during construction and operational phases. With Manitoulin being home to so many rare species and plants, how can Northland possibly address and mitigate such extensive losses as a result of their project?”*

Extensive studies on the natural environment have been conducted for the proposed project. These studies include the input of the Ministry of Natural Environment (MNR) and Environment Canada (EC) to ensure that the natural environment on Manitoulin Island is protected. A Natural Environment Assessment, in consultation with the MNR and EC was also conducted for this project. The assessment concluded that the risk to rare, threatened and endangered species in the area is low and minimal significant adverse effects are anticipated. Additional field work was conducted in 2010 as per the MNR direction. Some turbines have been removed and some changes were made to the turbine and road locations to avoid wetland areas that now have to be avoided under the REA process. The results of this work will contribute to the final Environmental Management and Protection Plan (EMPP). NPI will implement mitigation measure where required. A new natural heritage assessment document has been prepared and submitted to the Ministry of Natural Resources for review and comment.

**Concerns and Responses Regarding First Nations**

*“At Northland’s public consultation meeting on March 22, 2010 The United Chiefs and Councils of Manitoulin (UCCM) declared their continued opposition to the project until appropriate consultation with Island First Nations has been made (...)”*

*The AOK First Nation has also expressed opposition to this project, sighting concerns regarding improper consultation, and improper setbacks to protect the health of their community and First*

*Nation Land. AOK is also calling for a minimum 2-2.5 km setback distance between turbines and the boundaries of their Nation (...)*”

Communication with First Nation communities that may have interests in the proposed project has been ongoing for several years and in compliance with government requirements. In February 2011, Mnidoo Mnising Power, a company formed by the United Chiefs and Councils of Mnidoo Mnising First Nations (UCCMM), has entered into a 50/50 partnership with Northland Power Inc. to share equity in the McLean’s Mountain 60 MW Wind Farm Project and on-going renewable power developments.

Membership of UCCM include M’Chigeeng First Nation; Sheguiandah First Nation; Sheshegwaning First Nation; Aundeck-Omni-Kaning First Nation; Whitefish River First Nation; and Zhiibaahaasing First Nation. UCCMM formed Mnidoo Mnising Power to lead renewable energy projects on Manitoulin Island in order to protect First Nations’ rights, heritage and ensure the future for First Nations’ youth.

Band Council resolutions are in place with each band council supporting their position in this agreement.

### **Concerns and Responses Regarding Decreased Property Values**

*“There is increasing evidence that Industrial Wind Turbines (IWT) cause significant loss of property values to nearby lands. Recently in Ontario an appeals review board through MPAC (Municipal Property Assessment Corporation) ruled in favour of a 50% assessed reduction in property value on a property due to excessive noise from a transformer station in a wind farm project (...)*”

Based on the consultations undertaken with the local residents, NPI is aware of the public concerns over the loss of property values due to the proposed development of the McLean’s’ Mountain Wind Farm. The vast majority of evidence on the impact of wind farms on land values comes from Europe, Australia and United States of America (USA). The studies conducted in these countries indicate wind farms have no material effect on property values. Data from Ontario is beginning to emerge as more wind farms are constructed, and the experience from those projects also suggests that wind farms do not decrease property values.

A 2006 study conducted by Blake, Matlock and Marshal Ltd. for Windrush Energy suggests that wind farms have not negatively affected property values. “Property Value Study: the Relationship of Windmill Development and Market Prices” aimed to determine if the development of wind farms in the Melancthon area has had any impact on the growth of property values in the Township. Property values before and after wind farm development in the Township of Melancthon where compared to values in East Luther Grand Valley Township, a neighbouring and similar township except for its lack of wind farms. Property values in Melancthon were also compared to those in Dufferin County. The analysis showed that property values in the Township of Melancthon grew similarly to the rest of the County, and increased more than East Luther Grand Valley Township. Wind farm development was not found to have diminished property values.

The Canadian Hydro Developers Inc. also compared housing price ranges on Wolfe Island and Simcoe Island in Ontario, before and after the development of the wind farm ([http://www.shearwind.com/glen\\_dhu\\_community/fact\\_sheet.html](http://www.shearwind.com/glen_dhu_community/fact_sheet.html)). Findings indicate that Township of Melancthon experienced a stronger growth rate in sales price per property, than the adjoining East Luther Grand Valley Township. The findings of this particular research indicate that the presence of the Wind Farm in Melancthon Township has not had an adverse impact on values within that municipality.

A study conducted in the Chatham-Kent area, where there are a number of wind turbines, found no evidence that wind farms have any measurable affect on rural residential market values. The study was conducted during May and June of 2009 by John Simmons Realty Services Ltd. and Canning Consultants Inc. and was commissioned by the Canadian Wind Energy Association to review possible effects of wind energy developments on real estate values on near-by properties. This information was provided at the March 22<sup>nd</sup>, 2010 Public Information Centre (PIC) that was held in Little Current. To review the study, please visit:

<http://www.canwea.ca/pdf/talkwind/PropertyValuesConsultingReportFebruary42010.pdf>

The appeals review board through MPAC (Municipal Property Assessment Corporation) referred to a very specific case in which a particular transformer was not functioning properly, causing excess noise. MPAC uses market and sales analysis to determine property values and has provided an outline of how they assess properties. This information was displayed on a large panel at the March 22<sup>nd</sup>, 2010 PIC and states that "To date, MPAC's analysis of sales does not indicate that the presence of wind turbines that are either abutting or in proximity to a property has either a positive or negative impact on its value."

Our direct contact with real estate sales representatives have indicated that there has been no effect on property values as a result of the Prince Wind Farm near Sault Ste. Marie. This information was presented at the March 2010 PIC. It is also our understanding that since the McLean's Mountain Wind Farm has been in advanced development stages adjacent properties including Farms have been sold at quite appreciated values.

### **Concerns and Responses Regarding Infrasound and Human Health Impacts**

*"(...) For full information, please visit [www.WindVigilance.com](http://www.WindVigilance.com)"*

Infrasound or low frequency noise emissions were characteristics of some of the earlier models of wind turbines. This was attributed to early designs in which the turbine blades are downwind of the main tower. This phenomenon does not occur with modern upwind turbine technology (MOE, 2005). Infrasound has been studied extensively for current wind turbine technologies (JCAA, June 2006; HGC, 2006; Defra, 2003). At present, there are a significant number of wind turbines in operation in Ontario, including in several in proximity to residences; with no adverse impact from infrasound.

A study performed by HCG (2006) conclude, "All in all, based on Canadian and international studies, infrasound generated by wind turbines should not be considered a concern to the health of nearby residences. At the closest distances at which residences are typically located near large wind turbines, approximately 300 meters, the infrasonic levels are low enough to not be of concern. In any event, the discussion of whether or not infrasound poses a health risk at low levels is somewhat academic since, in the absence of wind turbines, comparable infrasonic levels are present in the natural environment." The evidence is that the current turbine technologies do not present any adverse impact related to the generation of infrasound.

The May 2010 report on *The Potential Health Impacts of Wind Turbines*, Chief Medical Officer of Health (CMOH) indicates that:

*"There is no scientific evidence, however, to indicate that low frequency sound generated from wind turbines causes adverse health effects. Low frequency sound and infrasound are everywhere in the environment. They are emitted from natural sources (e.g., wind, rivers) and from artificial sources including road traffic, aircraft, and ventilation systems. The most common source of*

*infrasound is vehicles. Under many conditions, low frequency sound below 40Hz from wind turbines cannot be distinguished from environmental background noise from the wind itself (Leventhall 2006, Colby et al 2009).*

*Low frequency sound from environmental sources can produce annoyance in sensitive people, and infrasound at high sound pressure levels, above the threshold for human hearing, can cause severe ear pain. There is no evidence of adverse health effects from infrasound below the sound pressure level of 90dB (Leventhall 2003 and 2006).*

*Studies conducted to assess wind turbine noise indicate that infrasound and low frequency sounds from modern wind turbines are well below the level where known health effects occur, typically at 50 to 70dB. A small increase in sound level at low frequency can result in a large increase in perceived loudness. This may be difficult to ignore, even at relatively low sound pressures, increasing the potential for annoyance (Jakobsen 2005, Leventhall 2006) (...)."*

The report concludes that "low frequency sound and infrasound from current generation upwind model turbines are well below the pressure sound levels at which known health effects occur. Further, there is no scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects.

All of the proposed wind turbines are greater than 698 metres away from any residence, so there should clearly be no issue. The MOE noise standard also meets the range of the Health Canada guidelines of 40 dB(A) to residences.

### **Concerns and Responses Regarding Set-back Distances between Industrial Wind Turbines and Nearby Homes and Dwellings**

*"The 550 metre setback outlined in Ontario's Green Energy Act is clearly not enough compared to other norms and standards around the world (see statements from the World Health Organization in the section below on Noise and Health Effects); I strongly urge Northland Power Inc. to exercise the Precautionary Principle and structure their project so that 2-2.5 km is the minimum distance between a turbine and any other dwelling such as a home, cottage or hunt camp."*

The Province of Ontario has some of the most stringent regulations in North America regarding wind turbine siting and sounds restrictions and Northland Power intends to meet or exceed these regulations. It is important to note that although wind energy is relatively new to Ontario, it's a very well-established and proven form of electrical generation around the world. For more than thirty (30) years, tens of thousands of people have been living near wind turbines with no ill effects.

The Ontario's Chief Medical Officer of Health, Dr. Arlene King, recently sent a memorandum to all Medical Officers of Health and Environmental Health Directors stating the following about wind energy and human health: "(...) there is no scientific evidence, to date, to demonstrate a causal association between wind turbine noise and adverse health effects."

I would like to bring your attention to a report released December 2009, authored by an international panel of medical doctors and sound experts titled "Wind Turbine Sound and Health Effects: An Expert Panel Review". It concluded that sound from wind turbines has no direct harmful effect on human health.

To see the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects.pdf)

To see an executive summary of the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects-Executive\\_Summary.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects-Executive_Summary.pdf)

For more information on the effects of sound from wind turbines on human health please refer to the comment response tables provided in the Draft Renewable Energy Approval (REA) package.

### **Concerns and Responses Regarding Adverse Health Effects and Industrial Wind Turbines**

*“(...) The December 2009 American Wind Energy Association and Canadian Wind Energy Association sponsored report entitled “Wind Turbine Sound and Health Effects” (A/CanWEA Panel Review) acknowledges that wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological symptoms (...)”*

The Chief Medical Officer of Health (CMOH) Report “The Potential Health Impact of Wind Turbines” dated May 2010 concludes that “While some people living near wind turbines report symptoms such as dizziness, headaches, and sleep disturbance, the scientific evidence available to date does not demonstrate a direct causal link between wind turbine noise and adverse health effects” and that “The sound level from wind turbines at common residential setbacks is not sufficient to cause hearing impairment or other direct adverse health effects. However, some people might find it annoying. It has been suggested that annoyance may be a reaction to the characteristic “swishing” or fluctuating nature of wind turbine sound rather than to the intensity of sound.

The proposed project will require approval under Ontario Regulation 359/09 – Renewable Energy Approval (REA) under the *Green Energy Act* and NPI is complying with all of the REA requirements. Further, NPI will be required to meet the 40 dBA limit at all identified receptors and would be required to mitigate/resolve any exceedances as per the terms of the REA approval.

Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is [rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca).

Thank you.



Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre

Feb. 27,2010

John Brace, Management, Board and shareholders

Northland Power, Inc.

Dear Mr Brace,

Re McLeans Mountain Industrial Wind project

I am disappointed that NPI chose not to answer my letter dated Dec. 9, 2009. In the letter I asked you whether NP would be willing to accept responsibility for the adverse consequences that may result from the building of very large industrial wind turbines to the south and west of our property. Your company has stated it does not believe there will be adverse effects on human health, property values, the environment or to the tourist industry. You do admit there will be significant noise impacts on my property. As a medical doctor I am well aware of the large body of knowledge which shows that noise has the potential for serious impacts on human health mainly mediated through chronic sleep disturbance. I am sure you are aware that proper independent controlled studies have not yet been done but that increasing uncontrolled evidence and one small controlled study have suggested that the current setbacks in Ontario are not adequate. You may be interested to know that there will be a definitive paper by Dr. Chris Hanning released in the next few days which will review the science in this area. I am also aware that there is a divergence of opinion regarding the effect on land values with the newer studies suggesting significant adverse effects. I think it is fair to say that Northland Power stands to achieve significant financial gain from this project while we the local residents bear the risk of serious disruption to our lives. In my last letter I asked you if Northland was willing to "put its money where its mouth is" so to speak and assure local residents that NPI would accept responsibility for compensating us for damages to our health and properties should they occur as a result of this project. This seems fair to me as in this way the persons standing to gain (Northland investors) are also taking the risk. If you believe as you say that there is no risk, it should be an easy decision for you.

Because I do not expect Northland will choose to respond to this request, I will make the following points quite plainly:

1. I believe that there is now plenty of evidence that noise causes chronic sleep disturbance and significant health effects and that Northland Power is aware of this.
2. I believe that the noise study done by Northland Power significantly underestimates the noise impact on my property and that Northland Power is aware of this.
3. The provincial ministry of environment has admitted that they lack the ability to monitor and enforce noise regulations.

4. The MOE and the MOHLTC and the federal Health Canada have indicated that the current guidelines are not evidence-based. I believe that as the evidence accumulates a 2km setback will be implemented.
5. If Northland Power proceeds with this project I will be establishing an approved noise monitoring station at several locations. I will also monitor health consequences and effects on property values.
6. I will use the collected evidence in court to ensure that any of us who have harmful effects, predicted by any reasonable interpretation of the current evidence but currently denied by Northland Power, are fully compensated for damages caused by this project.

In April, 2000, the Supreme Court of Canada, in its decision ADGA v. Valcom, confirmed the principle that directors, officers and senior managers are personally responsible for the torts they participate in on behalf of their corporation. Generally speaking the ability of those individuals to rely on the shielding effect of an environmental assessment is greatly diminished and eliminated if there is an awareness of any flaws in the assessment procedure or grant of licence. It has been stated that such an awareness should trigger an intensive exercise of due diligence to ascertain and deal with the potential risks to others of the project. Failure to exercise due diligence in this situation has resulted in the finding of corporate and personal responsibility as well as Punitive Damages which are not covered by insurance.

This letter is intended to put you on notice of the necessity of exercising your own independent due diligence particularly with regards to increasing evidence of health related effects from too-close placement of wind turbines and to the very real possibility of significant property devaluation following the commissioning of the turbines. I would be grateful for an acknowledgement of the receipt of the same.

Yours Truly,



Cc Northland Power  
Municipal Council  
MOE  
Rick Martin, NPI





## **NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

[REDACTED]

### **RE: McLean's Mountain Wind Project**

Thank you for your letter of February, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

Several of the northernmost turbines and southwestern perimeter turbines have been removed largely due to public input. This results in a reduction in the number of wind turbines. Northland Power Inc. (NPI) is also currently proposing the use of 100 metre wind turbine towers which will lower the number again to 24-26 units. The proposed project will require the construction of a transmission line to connect with the Hydro One transmission system that is located on Goat Island.

NPI has also entered into a 50/50 partnership with Mniidoo Mnising Power, a company formed by the United Chiefs and Councils of Mniidoo Mnising First Nations, to share equally in the McLean's Mountain Wind Farm.

NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

I trust that the following responses address the concerns and questions you have expressed in your letter.

### **Concerns and Responses Regarding Human Health**

**Comment:** *"(...) As a medical doctor I am well aware of the large body of knowledge which shows that noise has the potential for serious impacts on human health (...)"*

### **NPI Response:**

The Chief Medical Officer of Health (CMOH) Report "The Potential Health Impact of Wind Turbines" dated May 2010 concludes that "While some people living near wind turbines report symptoms such as

dizziness, headaches, and sleep disturbance, the scientific evidence available to date does not demonstrate a direct causal link between wind turbine noise and adverse health effects” and that “The sound level from wind turbines at common residential setbacks is not sufficient to cause hearing impairment or other direct adverse health effects. However, some people might find it annoying. It has been suggested that annoyance may be a reaction to the characteristic “swishing” or fluctuating nature of wind turbine sound rather than to the intensity of sound.

The Province of Ontario has some of the most stringent regulations in North America regarding wind turbine sighting and sounds restrictions and Northland Power intends to meet or exceed these regulations. It is important to note that although wind energy is relatively new to Ontario, it’s a very well-established and proven form of electrical generation around the world. For more than thirty (30) years, tens of thousands of people have been living near wind turbines with no ill effects.

The Ontario’s Chief Medical Officer of Health, Dr. Arlene King, recently sent a memorandum to all Medical Officers of Health and Environmental Health Directors stating the following about wind energy and human health: “(...) there is no scientific evidence, to date, to demonstrate a causal association between wind turbine noise and adverse health effects.”

I would like to bring your attention to a report released December 2009, authored by an international panel of medical doctors and sound experts titled “Wind Turbine Sound and Health Effects: An Expert Panel Review”. It concluded that sound from wind turbines has no direct harmful effect on human health.

To see the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects.pdf)

To see an executive summary of the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects-Executive\\_Summary.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects-Executive_Summary.pdf)

The proposed project will require approval under Ontario Regulation 359/09 – Renewable Energy Approval (REA) under the *Green Energy Act* and NPI is complying with all of the REA requirements. Further, NPI will be required to meet the 40 dBA limit at all identified receptors and would be required to mitigate/resolve any exceedances as per the terms of the REA approval.

### **Concerns and Responses Regarding Decreased Property Values**

**Comment:** “(...) assure local residents that NPI would accept responsibility for compensating us for damages to our health and properties should they occur as a result of this project”

#### **NPI Response:**

Based on the consultations undertaken with the local residents, NPI is aware of the public concerns over the loss of property values due to the proposed development of the McLean’s’ Mountain Wind Farm. The vast majority of evidence on the impact of wind farms on land values comes from Europe, Australia and United States of America (USA). The studies conducted in these countries indicate wind farms have no material effect on property values. Data from Ontario is beginning to emerge as more wind farms are constructed, and the experience from those projects also suggests that wind farms do not decrease property values.

A 2006 study conducted by Blake, Matlock and Marshal Ltd. for Windrush Energy suggests that wind farms have not negatively affected property values. "Property Value Study: the Relationship of Windmill Development and Market Prices" aimed to determine if the development of wind farms in the Melancthon area has had any impact on the growth of property values in the Township. Property values before and after wind farm development in the Township of Melancthon were compared to values in East Luther Grand Valley Township, a neighbouring and similar township except for its lack of wind farms. Property values in Melancthon were also compared to those in Dufferin County. The analysis showed that property values in the Township of Melancthon grew similarly to the rest of the County, and increased more than East Luther Grand Valley Township. Wind farm development was not found to have diminished property values.

The Canadian Hydro Developers Inc. also compared housing price ranges on Wolfe Island and Simcoe Island in Ontario, before and after the development of the wind farm ([http://www.shearwind.com/glen\\_dhu\\_community/fact\\_sheet.html](http://www.shearwind.com/glen_dhu_community/fact_sheet.html)). Findings indicate that Township of Melancthon experienced a stronger growth rate in sales price per property, than the adjoining East Luther Grand Valley Township. The findings of this particular research indicate that the presence of the Wind Farm in Melancthon Township has not had an adverse impact on values within that municipality.

A study conducted in the Chatham-Kent area, where there are a number of wind turbines, found no evidence that wind farms have any measurable affect on rural residential market values. The study was conducted during May and June of 2009 by John Simmons Realty Services Ltd. and Canning Consultants Inc. and was commissioned by the Canadian Wind Energy Association to review possible effects of wind energy developments on real estate values on near-by properties. This information was provided at the March 22<sup>nd</sup>, 2010 Public Information Centre (PIC) that was held in Little Current. To review the study, please visit: <http://www.canwea.ca/pdf/talkwind/PropertyValuesConsultingReportFebruary42010.pdf>

Our direct contact with real estate sales representatives have indicated that there has been no effect on property values as a result of the Prince Wind Farm near Sault Ste. Marie. This information was presented at the March 2010 PIC. It is also our understanding that since the McLean's Mountain Wind Farm has been in advanced development stages adjacent properties including Farms have been sold at quite appreciated values.

As noted above, negative effects are not expected with regard to health, environment and land values. However, if such effects were to occur and they were proven to be a direct result of the wind farm as a result of negligence on the part of NPI, appropriate action would be taken.

Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is [rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca).

Thank you.



Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre

March 17, 2010

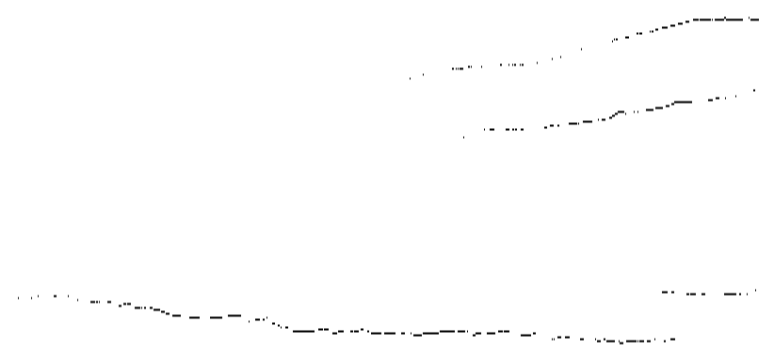
Attention:

Don McKinnon, REA Project Manager  
Dillon Consulting Limited

Please find attached a letter regarding Northland Power Inc.'s Draft Renewable Energy Application Submission Package, which proposes the McLean's Mountain Wind Farm (MMWF), to be located in the Municipality of Northeastern Manitoulin and the Islands, District of Manitoulin, Ontario.

I would appreciate if you would keep this document on file for future reference.

Sincerely,



March 17, 2010

Northland Power Inc.  
30 St. Clair Avenue West, 17<sup>th</sup> Floor  
Toronto, ON M4V 3A1

CC: Ms. Agatha Garcia-Wright, Director, Environmental Assessment and Approvals  
Branch, Ministry of the Environment  
CC: Don McKinnon, REA Project Manager  
Dillon Consulting Limited

Dear Sirs,

I would like to take this opportunity to comment on your Draft Renewable Energy Application Submission Package, which proposes the McLean's Mountain Wind Farm (MMWF), to be located in the Municipality of Northeastern Manitoulin and the Islands, District of Manitoulin, Ontario.

The Wind Farm Layout and Infrastructure Map (Figure 2-1) submitted with your draft application has neglected to indicate a number of Receptors in the proposed project area. By doing so, you have unfortunately placed certain turbines closer than the 550 metre set back distance stipulated in the Green Energy Act. I believe these turbines will have to be relocated to a distance that conforms to GEA regulations, in order for your application to be successful.

Specific locations I am aware of are:

Tower Number: 21 Receptor Location: Lot 19, Concession 3. Ray and Patty Beaudry of Little Current own this Lot.

Tower Number: 25 Receptor Location: Lot 33, Concession 3. Mike and Jennifer Machum of Honora Bay own this Lot.

Tower Number: 17 Receptor Location: Lot 19, Concession 5. Brad and Michelle Bond of Little Current own this Lot.

Thank you for looking into this matter. I am sure Northland Power Inc. is keen to follow the regulations articulated in the Green Energy Act. Should you need to contact me please do so through Canada Post at the address below.





## **NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

[REDACTED]

### **RE: McLean's Mountain Wind Project**

Thank you for your letter of March, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

Several of the northernmost turbines and southwestern perimeter turbines have been removed largely due to public input. This results in a reduction in the number of wind turbines. Northland Power Inc. (NPI) is also currently proposing the use of 100 metre wind turbine towers which will lower the number again to 24-26 units. The proposed project will require the construction of a transmission line to connect with the Hydro One transmission system that is located on Goat Island.

NPI has also entered into a 50/50 partnership with Mnidoo Mnising Power, a company formed by the United Chiefs and Councils of Mnidoo Mnising First Nations, to share equally in the McLean's Mountain Wind Farm.

NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

Please note that NPI made efforts to identify all potential receptors in the study area. Based on the revised layout, all wind turbines are located at least 698 metres from a receptor. NPI has considered the existing building permits as this is required based on correspondence from the MOE (MOE letters dated March 19 and 22, 2010). The MOE has reviewed and commented on the matters regarding noise receptors in relation to hunt camps. From their March 22 letter, "It was not intended that the definition of noise receptor would apply in respect of things like hunt camps...Given the temporary use of hunt camp, there is limited potential for long term exposure to noise from wind turbines or transformers..."

Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is [rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca).

Thank you.

A handwritten signature in black ink, appearing to read "Rick Martin". The signature is fluid and cursive, with the first name "Rick" and last name "Martin" clearly distinguishable.

Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre  
March 22, 2010 Letter from MOE re: Hunt Camps



18 March, 2010

Rick Martin  
Project Manager  
Northland Power Inc.  
Little Current, Ontario

Dear Mr. Martin:

It is very challenging to write a suitably meaningful response to submit for the public record on Northland Power's proposal for Manitoulin's McLean's Mountain. I make this point, because to do an appropriately meaningful job of critiquing what NPI has presented would really take just as many as the hundreds of pages the NPI has offered as its supporting documents – there are that many problems with the proposal. It is also challenging knowing that regardless what comments or issues are raised, NPI proceeds with its standard practice of trivializing, dismissing, or just plain ignoring anything that doesn't support your unfettered intentions of early approval and completion of this project.

Contrary to an actual practice of public consultation, NPI has done anything but this. On August 19, 2009 I submitted comments about NPI's proposal for McLean's Mountain. I asked for acknowledgement and to be copied on any communications regarding the subjects I had raised. I received acknowledgment of the copy of my submission that went to the Director of the Environmental and Assessments and Approvals branch of the MOE, however to date have heard nothing from NPI. Neither have the comments I made shown up in NPI's Jan 18, 2010 Comments/Response Table documentation submitted as part of the Renewable Energy Approval. Though the MOE had notified me that the old ESR process is no longer applicable to renewable energy approvals, this does not release NPI from necessary consideration of all public commentary on this project.

In my August, 2009 letter I identified several particular points of the many that this project leaves wanting of proper consideration. One of these is NPI's failure to properly consult. I refer here to Webster's dictionary, whose definition for the word consult is: to ask the advice or opinion of; to refer to; to have regard to; to deliberate together. I am aware of the check boxes on the ministry's REA application form that requires NPI, as the applicant, to confirm having followed though with public consultation. Unfortunately, it seems that NPI's definition of the word consult is to apply trivialization, disregard, and dismissal to any public commentary coming its way on the project, and it remains vastly separated from any meaningful process of asking advice of, referring to, or even deliberating together. The lack of acknowledgement of my letter, and its exclusion from any documentation, is a case in point.



A further example of NPI's disregard, or even disdain, for meaningful consultation is its systematic dismissal of virtually all the input commentary tabulated in the Comment/Response Table document. Nowhere has NPI acknowledged the smallest of oversight, or an interest or willingness for any sort of project modification, even in the wake of unprecedented hundreds of response letters to this project, as well as earlier requests for elevation to and environmental assessment. Instead, NPI publishes documents such as its Appendix B Stakeholder Consultation Report, which offers little value in helping to identify examples of actual and meaningful consultation for this proposed project. The Consultation Report in effect is a huge amount of pages attempting to disguise an emptiness of substance. In fact 286 pages or a full 64% of the 446 pages of this document, in which NPI supposedly outlines how they did their public consultation, consists of continuous repetitions of the same 3 form letters written by Don McKinnon of Dillon Consulting advising various parties of such things as project restart, and announcement of a Public Information Centre. The remaining 36% consists of similarly empty content in terms of how NPI actually (and meaningfully) responded to anything. In fact there is an extended section of reproduced emails tracing how members of the public mostly weren't responded to by NPI. This document more reflects a grade school attempt to pass off an empty book for a missed composition assignment in the hopes that the teacher would never actually open it in the grading process. NPI can only do better than this, since the bar has no room to be further lowered.

There are many issues that need to be readdressed by NPI within all those tabulated dismissals in the Comment/Response table. There are so very few responses there that are suitable that NPI might just as well start from the beginning again with them all, but this time along with a copy of Webster's open to the definition of the word consult. And so, I will further elaborate on only one of the many issues of concern with this project proposal, which is your failure to properly consider the Manitoulin (and area) tourism economy.

NPI is required to seriously consider impacts to natural, social and cultural environment and to scope any project to minimize any negative influences. This requirement has nowhere near been met since NPI has yet to show any meaningful analysis or assessment of the impacts this project will have on this major part of the Manitoulin economy. The most primary of starting points here would be to attempt to quantify the tourism component of Manitoulin's economy, then carry through with a meaningful inquiry about how that economy will be impacted. And it will be impacted; tourists don't come to Manitoulin because there is industrial development here, they come because it is *not* developed with such things as smokestacks and wind turbines.

The amount of NPI's supporting material on this issue is trivial considering its importance to the social and cultural environment of Manitoulin, and the little that it does provide shows NPI's extent of confusion and lack of understanding, or its intent to confuse and therefore diffuse a genuine issue. NPI's reference to LaCloche Provincial Park in its documents is an example. It is very instructive to note here that Ontario Parks listing for LaCloche Provincial Park States "there are no visitor facilities". Using LaCloche Provincial Park (which very few people have even heard of since it has no facilities to use) as an example argument for how this project would have no tourism impact shows how little regard NPI has for seriously considering this issue. NPI would have been better to a more appropriate example, such as the impact on visitors to Killarney Provincial Park, being one of the most highly regarded provincial parks in Ontario. The

western skyline from any point of elevation from Killarney Provincial Park is dominated by the Niagara Escarpment on the northwest corner of Manitoulin, which is exactly the area of McLean's Mountain. The distance from the point of Killarney's Blue Ridge to McLean's Mountain is 18km, an even shorter distance than the LaCloche Provincial Park example that NPI chose to use. Killarney Park, if anyone doesn't remember, has played a significant role in the recognition Canada's natural heritage, since it is the reason that the Group of Seven artists came into being. We can all be pretty certain that this outcome had much to do with the *undisturbed* nature of the place, which is why people still come to places like Killarney, and Manitoulin. It's highly unlikely that a phenomena such as the Group of Seven would hatch out of a reverence for the scenery of an industrial wind development on McLean's mountain.

NPI states that "perceptions regarding the visibility of wind turbines are subjective", and therefore dismisses concern about the visual impact. But it is just that, subjective interpretations, which make up most of our social and cultural environments. That the Mona Lisa has any meaning in the world is entirely through subjective interpretation, and similarly the attractions for tourism. The dangerous area here is that Manitoulin, as one of the lowest per-capita income areas of the province, also has one of the most fragile. And the largest parts of this fragile economy, and therefore local subsistence here, is based on tourism that comes through subjective interpretation and valuing for the place, its people, ambiance and it's unfettered landscape. This proposal would vastly alter the natural landscape, and along with it the social, cultural, and economic environment.

Where Northland Power seems so sure that it's proposed project will have no impacts on the tourism economy here, then it would be fairly simple for NPI to put its money where its mouth is. As a good corporate citizen NPI would do good to determine, along with local organizations, a value for Manitoulin's annual tourism economy. Then post a bond for maybe half of that amount, accumulated over the 20 years of your project life expectancy with a community determined structure to appropriately distribute the funds to those impacted by the projects effects. Should easy to do if you're right about no impacts – you get to keep the money. Might be a different story if you're not; but still honest and fair.

I am looking forward to your meaningful response to my comments.

Sincerely,



cc Don McKinnon  
Gord Miller  
Andre Marin  
Agatha Garcia-Wright



**NORTHLAND POWER**  
McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

**RE: McLean's Mountain Wind Project and Community Concerns**

Thank you for your letter of April, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

Several of the northernmost turbines and southwestern perimeter turbines have been removed largely due to public input. This results in a reduction in the number of wind turbines. Northland Power Inc. (NPI) is also currently proposing the use of 100 metre wind turbine towers which will lower the number again to 24-26 units. The proposed project will require the construction of a transmission line to connect with the Hydro One transmission system that is located on Goat Island.

NPI has also entered into a 50/50 partnership with Mniidoo Mnising Power, a company formed by the United Chiefs and Councils of Mniidoo Mnising First Nations, to share equally in the McLean's Mountain Wind Farm.

NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

I trust that the following responses address the concerns and questions you have expressed in your letter.

**Concerns and Responses Regarding Public Consultation**

**Comment:** *"Contrary to an actual practice of public consultation, NPI has done anything but this. (...)"*

**NPI Response:**

We are of the opinion that the consultation with the local community exceeds what is required by applicable legislation. NPI acknowledged and addressed questions and concerns regarding the proposed project that were raised by the public.

## **Concerns and Responses Regarding Natural Environment, Tourism and Local Economy**

**Comment:** “NPI is required to seriously consider impacts to natural, social and cultural environment and to scope any project to minimize any negative influences. (...)”

### **NPI Response:**

Extensive studies on the natural environment have been conducted for the proposed project. These studies include the input of the Ministry of Natural Environment (MNR) and Environment Canada (EC) to ensure that the natural environment on Manitoulin Island is protected. A Natural Environment Assessment, in consultation with the MNR and EC was also conducted for this project.

The proposed McLean’s Mountain Wind Farm is expected to have no negative impacts on Manitoulin Island Tourism. NPI has considered the potential for effects of the project on tourism and recreation activities. The project is well removed from the Lake Huron shoreline areas around the Island. The closest wind turbine (the westernmost turbine, turbine #42) is about 1.5 km from the Lake Huron shoreline. The easternmost wind turbine (turbine #9) of the project area is greater than 3 kilometres from the Lake Huron shoreline. Appreciating that tourist interests vary by individual, it is NPI’s opinion that the view of the wind farm, especially from Honora Bay, will be complementary and will not negatively affect the viewscape.

Wind farms can have positive effects on the local tourism economy. There are 6,000 wind turbines in Denmark, which are used for marketing tourism. Local tourism associations may use wind turbines to promote “green tourism”. This is particularly targeted towards the German market, where the public is known to have a high level of interest in both environmental issues and in new technology. In a Scottish study<sup>1</sup> 43% of respondents said a wind farm would have a positive effect on their inclination to visit the Argyll area, an area of high landscape value. About the same proportion of respondents said it would make no difference, while less than 8% felt that it would have a negative effect. Nine out of ten tourists visiting some of Scotland’s top beauty spots say the presence of wind farms makes no difference to the enjoyment of their holiday. Twice as many people would return to an area because of the presence of a wind farm than would stay away, according to a poll carried out by MORI Scotland Commercial tour companies provide guided tours of several wind farms in the Pincher Creek, Alberta region. Several wind farms in Australia attract so many visitors that commercial tour operators provide opportunities for the public to get a close up view of the wind farms.

Back in 2004 I was involved in conducting a survey about the wind farm, requested by the municipality. The survey results indicated over 95% support of a wind farm by locals and visitors to Little Current. Boaters especially noted that the Turbines provide a landmark coming into the port of Little Current. NPI does not expect that the presence of the turbines would factor into a person’s decision on whether to visit the Island. This project may have the potential to attract visitors. At NPI’s Miller Mountain project in Quebec, 3500 tourists visited the project in 2008. The Providence Bay Wind Farm located to the south east of the MMWF project, approximately 45 kilometres away, established an interpretation centre for the project, which attracts numerous visitors over the summer visitor months

NPI does not anticipate that the McLean’s Mountain Wind farm would vastly alter the easting landscape

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<sup>1</sup> *Tourist Attitudes Toward Wind Farms*, MORI Summary Report, September 2002 [www.bwea.com/pdf/MORI.pdf](http://www.bwea.com/pdf/MORI.pdf)

or that it will stop visitors from coming to Manitoulin Island.

Please feel free to contact me should you wish to discuss further. My phone number is 705-271-5358 and my email is [rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca).

Thank you.

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Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre

March 17, 2010



Dear Mr. Martin,

I sit down to write this letter to you but, I find my words have already been used by so many people speaking out to us from years of research. But, yet we still do not heed their warnings. I am asking you to sit down and revisit the decision to place a windmill farm in one of the few pristine places left in our world today. These are places that can never again be brought back to life. As a citizen of this small (1,068 square miles) unique biosphere I feel it is the duty of the people here to be the stewards of this location just as you are steward to the area in which you choose to reside.

It is the fourth law of ecology in which I wish to bring to your attention. "There is no such thing as a free lunch." Every gain is won at some cost. People cannot, for example, extract fossil fuels and convert them into carbon dioxide, carbon monoxide, atmospheric particles without a price paid somewhere down the line. An ecosystem is thrown out of balance by environmental change. Chances are that life will recover from the stress or collapse of an ecosystem but, the cost may be greater than we would choose to pay when we threaten and endanger other forms of life, we threaten and endanger ourselves. Which brings us full circle to the first Law of Ecology: Every thing is connected to everything else." (Aldo Leopold) Do we need to make a second mistake?

So yes, Mr. Martin even though this is not in your backyard you are being affected negatively by this decision.

Can the land sustain itself in the face of man-made changes? This almost worldwide display of disorganization in the land seems to be similar to disease in an animal, except that it never culminates in complete disorganization or death. The land recovers but at some reduced level of complexity and with a reduced carrying capacity for people, plants, and animals. Are we willing to pay this price for a wind farm on Manitoulin Island? The stewards of this area are not.

In the words of Barry Commoner "human beings have broken out of the circle of life, driven not by biological need but, by the social organization which they have devised to conquer nature: means of gaining wealth that are governed by requirements conflicting with those that govern nature. The end result is the environmental crisis, a crisis of survival. Once more, to survive, we must close the circle. We must restore to nature the wealth we borrow from it." These are strong words which make us think about our actions and our embrace of the world we live in. These words can be used to discuss the many cancers that plague our world today. The one of the greatest concern is the lack of ethics in our world today. It is this lack of ethics and morality which drive the decisions

made today. Decisions that are made from human beings out of the circle of life. We are creating a generation of entitlement and consumerism without regard to the circle of life. This again brings us back to the first law," Everything is connected to everything else". The circle of life! WE see the results already of these negative actions.

So with the research that has been completed for wind farms we must look to see the negative affects far out ride the potential benefits for placing a wind farm in such a small fragile area so close to residential dwellings. Yes, you can go to sleep at night and think you are not affected by the decision to place a wind farm on Manitoulin Island but, we are all connected and the affects will come back to haunt even you as we are all interconnected to everything else in the world.

In the words of Chief Seattle," We are here to embrace and not conquer the world. All things are connected."

The facts must be faced: WE are out of touch with the planet that sustains our lives. Man has broken out of the circle of life. We need to think Global, local, and personal because our choices will affect the range of choices available to our children and their children and all children to come .Up until now the past stewards of Manitoulin have fought hard and successfully to keep Manitoulin Island the pristine setting for our children and grandchildren to enjoy. What are the stewards of this generation doing to follow the example set for us? Are we thinking in terms of wealth gains or by the ethical stewardship entrusted to us to protect one of the few pristine islands left in the world?

So it is with the words of key ecologists, chiefs I request you hear and understand their message and reconsider the decision to place a wind farm in an area that we should be protecting from the dangers of social organization which they have devised to conquer nature as a means of gaining wealth.

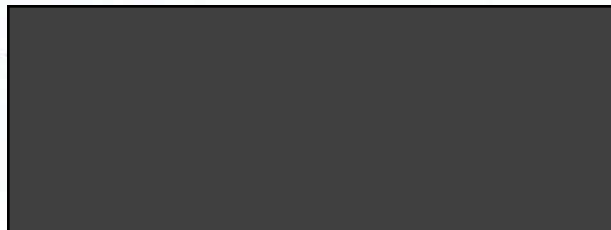
Stewards of Manitoulin Island I ask you," What will be our grade by the generations to come as they evaluate the job we have done?"

Yes, Mr. Martin you too are a Steward as you are a member of the human race?

"Never doubt that a small group of thoughtful committed citizens can change the world. Indeed, it is the only thing that ever has. (Margaret Mead)

Your decision is a key decision to the lasting beauty of this planet we call home. Please reconsider- and think about what you are doing? Are wind farms for a small residential island of 1068 square miles? I think if you really looked into your soul you will find the connective ness to life that we are all born with and you will reconnect to the circle we call life and find that it really is not a good decision!

Sincerely,





## **NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

[REDACTED]

### **RE: McLean's Mountain Wind Project**

Thank you for your letter of March, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

Several of the northernmost turbines and southwestern perimeter turbines have been removed largely due to public input. This results in a reduction in the number of wind turbines. Northland Power Inc. (NPI) is also currently proposing the use of 100 metre wind turbine towers which will lower the number again to 24-26 units. The proposed project will require the construction of a transmission line to connect with the Hydro One transmission system that is located on Goat Island.

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NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

The purpose of the McLean's Mountain Wind Farm is to generate energy from wind. People have been harnessing the wind's energy for hundreds of years and we believe it is one of most sustainable forms of energy.



Please feel free to contact me should you wish to discuss further. My phone number is 705-271-5358 and my email is [rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca).

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Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre

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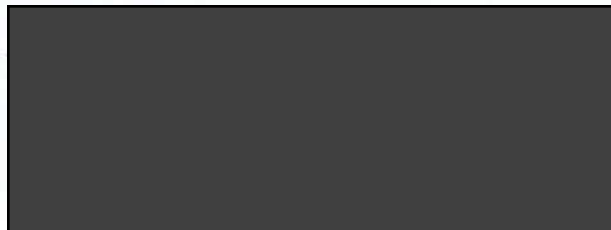
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P.O. Box 73, Little Current ON, P0P 1K0

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[REDACTED]

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Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre

The Honourable Dalton McGuinty  
Premier of Ontario  
Legislative Building  
Queen's Park  
Toronto, Ontario  
Canada  
M7A 1A1

CC:  
Minister Brad Duguid  
Ministry of Energy and Infrastructure  
Legislative Building  
Queen's Park  
Toronto, Ontario  
Canada  
M7A 1A1

CC:  
Rick Martin, Project Manager  
Northland Power Inc. Little Current Office  
MacLean's Mountain Wind Farm Office  
P.O. Box 73  
Little Current ON, P0P1K0

CC:  
Don McKinnon, REA Project Manager  
Dillon Consulting Limited  
235 Yorkland Blvd, Suite 800  
Toronto, ON, M2J 4Y8

**Re: McLean's Mountain Wind Development**

March 15, 2010

Dear Premier McGuinty,

While I do not live in the vicinity of McLean's Mountain, nor do I even live on or near Manitoulin Island, I am constantly drawn to this area for its wonderful small-town atmosphere, freedom from corporate interests, and fantastic recreational opportunities. I think that all of these features are jeopardized by wind farm projects.

It is clear to me that such developments serve the political and consumptive problems of southern Ontario. These developments could never stand up to a rigorous environmental impact study, and it is politically expedient for your government to rubber stamp such projects to appease the ignorance of your average voter.

Personally, I do not understand why the Standard Offer did not entice more Ontarians to enter into the solar market. I imagine that this must also frustrate a government that has committed to increasing the supply of renewable power in the province. However, I think that pushing wind farms and nuclear plants is absolutely not the right strategy.

While I may not have any great solutions to the looming energy crisis in Ontario, I do have several reasonable suggestions. The first is to continue encouraging a culture of energy conservation in the province, starting with government. We need to see governments play a greater tangible role in engaging in a wide range of energy reduction technologies such as LED streetlighting, energy-efficient office lighting, better work-from-home opportunities, smaller government vehicle fleets composed of more efficient vehicles, and government building renovations that incorporate solar energy production, grey-water recycling, solar hot water, renewable building materials, etc, etc, etc.

Ontario's power grid doesn't need expanding. It needs contraction, compartmentalization, integration, more on-site power production, and most importantly conservation.

Will development of McLean's Mountain help Manitoulin Island produce more local energy, or will it feed the larger provincial grid? Is it a symbol of progress, or development? Is it environmentally sustainable, or is it green-washed corporate devilry?

I think that you understand the larger picture and the greater stakes than one relatively small wind development. We need to get away from burdening rural communities with urban Ontario's power problems. Let's move forward with intelligent solutions. Let's recognize the importance of the environment in ALL of our decisions and insist on proper environmental impact assessments of all developments. Let's do things right.

Sincerely,





## **NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

[REDACTED]

### **RE: McLean's Mountain Wind Project and Community Concerns**

Thank you for your letter of March, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

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NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

I trust that the following responses address the concerns and questions you have expressed in your letter.

### **Concerns and Responses Regarding Natural Environment**

**Comment:** *"(...) McLean's mountain contains many unique ecological features that I believe were missed in the biological portion of the watered-down Environmental Impact Assessment (...)"*

**NPI Response:**

Extensive studies on the natural environment have been conducted for the proposed project. These studies include the input of the Ministry of Natural Environment (MNR) and Environment Canada (EC) to ensure that the natural environment on Manitoulin Island is protected. A Natural Environment Assessment, in consultation with the MNR and EC was also conducted for this project. The assessment concluded that the risk to rare, threatened and endangered species in the area is low and minimal significant adverse effects are anticipated. Additional field work was conducted in 2010 as per the MNR direction. Some turbines have been removed and some changes were made to the turbine and road locations to avoid wetland areas that now have to be avoided under the REA process. The results of this work will contribute to the final Environmental Management and Protection Plan (EMPP). A new natural heritage assessment document has been prepared and submitted to the Ministry of Natural Resources for review and comment.

NPI will implement mitigation measures where required. An assessment of avifauna and wildlife in the project area was conducted in accordance with Ministry of Natural Resources and Environment Canada guidelines. The assessment concludes that the potential effects of the proposed project in the avian and other wildlife populations are minimal. Vegetation surveys in the Study Area indicate that, in general, alvar habitats sited at turbine locations have been previously altered through cattle grazing. While each proposed turbine will remove a small amount of vegetation, the overall impact to alvar habitat will be low.

NPI is aware of the potential presence of a rare plant species in the Study Area (e.g., Houghton's goldenrod) and pre-construction surveys at turbine locations in potential habitat for these species are planned. Though not observed in the Study Area during fieldwork, NPI is aware of the potential presence of Blanding's Turtle. Recent observations of this species have been documented at Perch Lake. In addition, NPI is aware of the potential presence of Massasauga rattlesnake. Mitigation is planned in the event that herptile Species at Risk or their habitat are discovered within or in proximity to turbine and project infrastructure locations. Henslow's Sparrow was not recorded during fieldwork in the Study Area and was not recorded on Manitoulin Island during the Ontario Breeding bird atlas project. The chances of this species regularly occurring in the Study Area, and thus being affected by the project, are remote.

There is a large amount of information available regarding the effects of wind farms of birds and this base of information continues to grow. From the experience of existing wind farms, the effects to birds are generally minimal during operation. The bat monitoring for the proposed project was conducted in accordance to guidelines provided by the Ministry of Natural Resources. As requested by the MNR additional bat monitoring was undertaken as a post ESR submission activity (August-Sept 2009). The findings of this additional survey work have been made available for the MNR to review. Post-construction monitoring studies will also be conducted to confirm the impact of the project on bats.

**Concerns and Responses Regarding Decreased Property Values**

**Comment:** *"In terms of land values of impacted properties, I believe we will see a decline in property values (...)"*

**NPI Response:**

Based on the consultations undertaken with the local residents, NPI is aware of the public concerns over the loss of property values due to the proposed development of the McLean's Mountain Wind Farm. The



vast majority of evidence on the impact of wind farms on land values comes from Europe, Australia and United States of America (USA). The studies conducted in these countries indicate wind farms have no material effect on property values. Data from Ontario is beginning to emerge as more wind farms are constructed, and the experience from those projects also suggests that wind farms do not decrease property values.

A 2006 study conducted by Blake, Matlock and Marshal Ltd. for Windrush Energy suggests that wind farms have not negatively affected property values. "Property Value Study: the Relationship of Windmill Development and Market Prices" aimed to determine if the development of wind farms in the Melancthon area has had any impact on the growth of property values in the Township. Property values before and after wind farm development in the Township of Melancthon were compared to values in East Luther Grand Valley Township, a neighbouring and similar township except for its lack of wind farms. Property values in Melancthon were also compared to those in Dufferin County. The analysis showed that property values in the Township of Melancthon grew similarly to the rest of the County, and increased more than East Luther Grand Valley Township. Wind farm development was not found to have diminished property values.

The Canadian Hydro Developers Inc. also compared housing price ranges on Wolfe Island and Simcoe Island in Ontario, before and after the development of the wind farm ([http://www.shearwind.com/glen\\_dhu\\_community/fact\\_sheet.html](http://www.shearwind.com/glen_dhu_community/fact_sheet.html)). Findings indicate that Township of Melancthon experienced a stronger growth rate in sales price per property, than the adjoining East Luther Grand Valley Township. The findings of this particular research indicate that the presence of the Wind Farm in Melancthon Township has not had an adverse impact on values within that municipality.

A study conducted in the Chatham-Kent area, where there are a number of wind turbines, found no evidence that wind farms have any measurable affect on rural residential market values. The study was conducted during May and June of 2009 by John Simmons Realty Services Ltd. and Canning Consultants Inc. and was commissioned by the Canadian Wind Energy Association to review possible effects of wind energy developments on real estate values on near-by properties. This information was provided at the March 22<sup>nd</sup>, 2010 Public Information Centre (PIC) that was held in Little Current. To review the study, please visit: <http://www.canwea.ca/pdf/talkwind/PropertyValuesConsultingReportFebruary42010.pdf>

The appeals review board through MPAC (Municipal Property Assessment Corporation) referred to a very specific case in which a particular transformer was not functioning properly, causing excess noise. MPAC uses market and sales analysis to determine property values and has provided an outline of how they assess properties. This information was displayed on a large panel at the March 22<sup>nd</sup>, 2010 PIC and states that "To date, MPAC's analysis of sales does not indicate that the presence of wind turbines that are either abutting or in proximity to a property has either a positive or negative impact on its value."

Our direct contact with real estate sales representatives have indicated that there has been no effect on property values as a result of the Prince Wind Farm near Sault Ste. Marie. This information was presented at the March 2010 PIC. It is also our understanding that since the McLean's Mountain Wind Farm has been in advanced development stages adjacent properties including Farms have been sold at quite appreciated values.

### **Concerns and Responses Regarding Tourism Impacts**

**Comment:** "(...) I believe we will see a decline in .... tourism interest, and recreational opportunities (...)"

**NPI Response:**

The proposed McLean's Mountain Wind Farm is expected to have no negative impacts on Manitoulin Island Tourism. NPI has considered the potential for effects of the project on tourism and recreation activities. The project is well removed from the Lake Huron shoreline areas around the Island. The closest wind turbine (the westernmost turbine, turbine #42) is about 1.5 km from the Lake Huron shoreline. The easternmost wind turbine (turbine #9) of the project area is greater than 3 kilometres from the Lake Huron shoreline. Appreciating that tourist interests vary by individual, it is NPI's opinion that the view of the wind farm, especially from Honora Bay, will be complementary and will not negatively affect the viewscape.

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an interpretation centre for the project, which attracts numerous visitors over the summer visitor months.

**Concerns and Responses Regarding Municipal Roads**

**Comment:** *"Municipalities will be stuck servicing roads that otherwise would have remained undeveloped, and repairing damages to existing roads due to the intensive traffic of heavy machinery."*

**NPI Response:**

Any damaged roads will be repaired to their pre-construction condition (or better) at the expense of NPI. The road use agreement with NEMI has clearly identified that Northland Power is responsible for maintaining roads and even snow removal from any additional roads utilized for this project. No unopened roads will be opened for the project for travel on a regular basis.

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<sup>1</sup> *Tourist Attitudes Toward Wind Farms*, MORI Summary Report, September 2002 [www.bwea.com/pdf/MORI.pdf](http://www.bwea.com/pdf/MORI.pdf)

### **Concerns and Responses Regarding Alternatives to Wind Development**

**Comment:** “(...) I think that the driving forces [for alternative power] should stem from community and be complemented with a culture of energy conservation. (...) I believe that there are better alternatives to a wind development. Manitoulin Island has many barn, shed, and house roofs available for solar development (...)”

#### **NPI Response:**

NPI encourages the community to conserve energy and participate in the micro-FIT program. The wind development will not preclude community participation in employing solar, micro-hydro and other green energy initiatives. However, not all communities have the desire or ability to employ renewable energies. As a result, there is a need for larger alternative energy developments in Ontario. Furthermore, to meet greenhouse gas emission reduction targets and support the energy needs of Manitoulin and Ontario, a mix of energy sources and renewable technologies will be required. Solar power can be used to produce some of this energy; however, currently the efficiency of solar modules is less than that of wind turbines. With the quality of the wind resource on Manitoulin, in order to produce the same amount of power from solar panels as from wind turbines a large percentage of the land on Manitoulin (far greater than just roofs) would have to be covered with panels, leading to a much greater environmental impact.

Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is rickmartin@northlandpower.ca.

Thank you.



Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre



RECEIVED  
17/03/10  
*[Signature]*

March 12, 2010

McLean's Mountain Wind Farm Project  
Box 73,  
Little Current, Ontario  
POP 1K0

Attn: Rick Martin

Dear Mr. Martin:

I am writing about an area which has not been addressed in the current debate about the proposed Wind Farm on McLean's Mountain: the problem of subsurface drainage. McLean's Mountain is a cuesta which has been modified by erosion creating a plateau-like topography which is essentially flat-lying on the top, having escarpments on the north and south sides and sloping sides on the east and west. The top layer of limestone strata has a jointed or fractured surface which is both vertical and horizontal allowing water to circulate horizontally and vertically at depth. Below the limestone strata are a series of inter-bedded limestone and shales which are strongly foliated horizontally allowing water to circulate freely. Some of these shales are badly fractured, leaving even more space for subsurface waters. Over thousands of years, subsurface drainage patterns have evolved and a large percentage of the water draining off the plateau ends up providing water to the land surrounding the base of the escarpment.

With the advent of widespread construction, drilling, blasting, and excavation on the top of McLean's Mountain, there is a great risk of disturbing the established subsurface drainage patterns. This could lead to all kinds of problems for landowners of not only adjacent properties but properties well beyond the base of the mountain. Some of these problems could be dried up wells, dried up wetlands, new wetlands, soil erosion, flooding, changes in natural vegetation and much more. The worst case, however, is the unlikely but possible release of oil into the system caused by the intersecting of oil bearing strata during drilling operations. The worst part of all this is the fact that many of these problems would not be noticed immediately and may take years to have any noticeable effect.

When the well runs dry or develops an oil slick, or when the trees start to die, or when any of the other problems related to changed drainage patterns occur, where does the landowner go for compensation? Would it be Northland Power (the direct cause of these potential problems); the Ministry of the Environment who have simply ignored or overlooked the problem; or the NEMI Town Council who have been led by their nose by the lure of a large tax base; or will the landowners just be left to "hang out to dry?"

I would suggest that before any construction takes place, the whole project should be put on hold until it can be shown that none of the outlined problems will ever take place **OR** that one of the three parties (NPI, MOE or NEMI) take full responsibility and be accountable for any damages done to property within the project area and beyond.

Yours truly,



cc to NEMI Town Council  
Ministry of the Environment



## **NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

[REDACTED]

### **RE: McLean's Mountain Wind Project and Community Concerns**

Thank you for your letter of March, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

Several of the northernmost turbines and southwestern perimeter turbines have been removed largely due to public input. This results in a reduction in the number of wind turbines. Northland Power Inc. (NPI) is also currently proposing the use of 100 metre wind turbine towers which will lower the number again to 24-26 units. The proposed project will require the construction of a transmission line to connect with the Hydro One transmission system that is located on Goat Island.

NPI has also entered into a 50/50 partnership with Mnidoo Mnising Power, a company formed by the United Chiefs and Councils of Mnidoo Mnising First Nations, to share equally in the McLean's Mountain Wind Farm.

NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

I trust that the following responses address the concerns and questions you have expressed in your letter.

#### **Concerns and Responses Regarding Subsurface Drainage**

**Comment:** *"(...) With the advent of widespread construction, drilling, blasting, and excavation on the top of McLean's Mountain, there is a great risk of disturbing the established subsurface drainage patterns. This could lead to all kinds of problems (...)"*

**NPI Response:**

Extensive studies on the natural environment have been conducted for the proposed project. These studies include the input of the Ministry of Natural Environment (MNR) and Environment Canada (EC) to ensure that the natural environment on Manitoulin Island is protected. A Natural Environment Assessment, in consultation with the MNR and EC was also conducted for this project. The assessment concluded that the risk to rare, threatened and endangered species in the area is low and minimal significant adverse effects are anticipated. Additional field work was conducted in 2010 as per the MNR direction. Some turbines have been removed and some changes were made to the turbine and road locations to avoid wetland areas that now have to be avoided under the REA process. The results of this work will contribute to the final Environmental Management and Protection Plan (EMPP). NPI will implement mitigation measure where required. A new natural heritage assessment document has been prepared and submitted to the Ministry of Natural Resources for review and comment. NPI will implement mitigation measure where required.

There is no reason to expect that turbine excavation activities would have an effect on the groundwater or surface water in the area given the shallow depth of the foundations (three (3) meters), the specific mitigation measures proposed for this project and the fractured and permeable nature of the geology. We are aware, previous to any construction; many people in the community are hauling water to their wells at various times of the year. Further, the project will not reduce the rate of rainwater ground infiltration in the larger area. Based on the borehole information collected to date, the water table is expected to be well below the depth of turbine foundation excavation.

Additional geotechnical investigations have been initiated and will confirm the characteristics of the rock and provide input to the design for the turbine foundations to support the turbines. There is no reason to expect that turbine excavation activities would have an effect on the hydrologic regime of wetlands in the area given the shallow depth of the excavations. As per above, given the turbine foundation would only be excavated to a depth of 3 m, it is very unlikely that oil would be encountered.

**Comment and Response Regarding Liability**

**Comment:** *“(...) when any of the ... problems related to changed drainage patterns occur, where does the landowner go for compensation?”*

**NPI Response:**

As noted above, negative effects are not expected with regard to the environment and drainage patterns. However, if such effects were to occur and they were proven to be a direct result of the wind farm as a result of negligence on the part of NPI, appropriate action would be taken.

Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is rickmartin@northlandpower.ca.

Thank you.

A handwritten signature in black ink, appearing to read "Rick Martin". The signature is fluid and cursive, with the first name "Rick" and last name "Martin" clearly distinguishable.

Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre



March 18, 2010

To: Rick Martin, Northland Power, Inc.  
CC: Gord Miller, Environmental Commissioner of Ontario  
Andre Marin, Ombudsman of Ontario  
John Gerretson, Minister of the Environment  
Agatha Garcia-Wright, Energy Assessment and Approvals Branch, Ministry of the Environment

To all concerned:

I am writing to express my disapproval of the process that Northland Power, Inc. (NPI) has followed in pursuing the McLean's Mountain Wind Project on Manitoulin Island. For the ombudsman, this refers to File number 222-520.

To repeat what I stated in my letter written to Northland Power in October 2009, NPI's public consultation process has not been adequate or responsible. NPI has not responded at ALL to many of the concerns and questions raised by many many residents of Manitoulin regarding this project, and in those that they *have* responded to, their responses have been insubstantial, showing that they have not done adequate research to truly assess the potential impacts of the project.

I am in support of wind power in principle, and also of wind power on Manitoulin Island, however, in order to be truly beneficial toward creating a more "sustainable" future for Ontario, the process by which a wind project is to come into being, and the scale at which it takes place, must be respectful of the human and natural environment in which it exists. Otherwise it is simply "greenwash". This EA process is in place to ensure that projects are truly beneficial from a multitude of perspectives, but the EA process can only be helpful if the project proponents and the regulators involved all actually engage with integrity and true due diligence in the process. The disrespect of our community which NPI has shown during what are supposed to be the preparation and planning phases of the McLeans Mountain project lead me to a large concern about whether NPI will be accountable if serious issues of safety, health, or ecological concern do arise during the actual construction or implementation of the project.

One primary area of concern is the geological context of McLeans Mountain project area. The limestone base of the project area contains many fissures and cracks that affect hydrology. The geological study that NPI commissioned was based on only three study locations in the project area, and the conclusion of the study was that additional sites must be tested. This testing has not been done, and MUST be done to determine the feasibility of the project, BEFORE the project is approved, NOT afterward. Water sources and land stability are all at risk of being impacted by the scale of drilling, blasting and incursion into the limestone that will take place if this project goes forward, and in the limestone there is a great likelihood that oil will be encountered, which can create additional problems. A more through study of these geological questions must be undertaken BEFORE the towers are raised.

I would like a clear answer as to who will be accountable if wells or water quality or other geological impacts are incurred by landowners inside or adjacent to the project area. Will this be Northland Power, the Ministry of the Environment, or the Town of NEMI, or will the landowners who have the towers sited on their property be personally responsible?

A second concern I would like to raise is the safety hazard presented by the location of turbine #37

located along Hwy 540 at the west end of the project area. This turbine is to be sited very close to the roadway, and there is a major risk of ice fall off of the blades of the turbines in winter. Again, my question is: who exactly will I come to for reimbursement for damages if I am driving and there are ice sheets flung at my vehicle, creating an accident? Please clarify for me whether Northland Power is the entity who will be accountable for any damage such as this. The McLeans Mountain project has been portrayed as being “away from inhabited areas”, however Hwy 540 is the only major road between Little Current and points west on the north shore of Manitoulin, and so the traffic on that road is frequent and this issue merits further consideration.

Other concerns have been raised by hundreds of other letters regarding this project, so I simply want to express again my disappointment and discouragement about the tactics of avoidance and disrespect that have emerged throughout this process with Northland Power on Manitoulin Island. Wind power CAN be a positive contribution to communities and societies, however the way that this process has taken place has not illustrated those benefits.

I request to be copied on all correspondence or response concerning the issues I have raised here.  
Thank you.

Sincerely,





## **NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

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[REDACTED]  
[REDACTED]  
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[REDACTED]

### **RE: McLean's Mountain Wind Project**

Thank you for your letter of March, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

Several of the northernmost turbines and southwestern perimeter turbines have been removed largely due to public input. This results in a reduction in the number of wind turbines. Northland Power Inc. (NPI) is also currently proposing the use of 100 metre wind turbine towers which will lower the number again to 24-26 units. The proposed project will require the construction of a transmission line to connect with the Hydro One transmission system that is located on Goat Island.

NPI has also entered into a 50/50 partnership with Mnidoo Mnising Power, a company formed by the United Chiefs and Councils of Mnidoo Mnising First Nations to share equity in the McLean's Mountain Wind Farm.

NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

I trust that the following responses address the concerns and questions you have expressed in your letter.

### **Concerns and Responses Regarding Geology**

**Comment:** *"One primary area of concern is the geological context of McLean's Mountain project area (...) Water sources and land stability are all at risk of being impacted by the scale of drilling, blasting and incursion into the limestone that will take place (...)"*

**NPI Response:**

Extensive studies on the natural environment have been conducted for the proposed project. These studies include the input of the Ministry of Natural Environment (MNR) and Environment Canada (EC) to ensure that the natural environment on Manitoulin Island is protected. A Natural Environment Assessment, in consultation with the MNR and EC was also conducted for this project. The assessment concluded that the risk to rare, threatened and endangered species in the area is low and minimal significant adverse effects are anticipated. Additional field work was conducted in 2010 as per the MNR direction. Some turbines have been removed and some changes were made to the turbine and road locations to avoid wetland areas that now have to be avoided under the REA process. The results of this work will contribute to the final Environmental Management and Protection Plan (EMPP). NPI will implement mitigation measure where required. A new natural heritage assessment document has been prepared and submitted to the Ministry of Natural Resources for review and comment. NPI will implement mitigation measure where required.

There is no reason to expect that turbine excavation activities would have an effect on the groundwater or surface water in the area given the shallow depth of the foundations (three (3) meters), the specific mitigation measures proposed for this project and the fractured and permeable nature of the geology. Further, the project will not reduce the rate of rainwater ground infiltration in the larger area. Based on the borehole information collected to date, the water table is expected to be well below the depth of turbine foundation excavation.

Additional geotechnical investigations will confirm the characteristics of the rock and provide input to the design for the turbine foundations to support the turbines. There is no reason to expect that turbine excavation activities would have an effect on the hydrologic regime of wetlands in the area given the shallow depth of the excavations. As per above, given the turbine foundation would only be excavated to a depth of 3 m, it is very unlikely that oil would be encountered.

**Comment and Response Regarding Ice Throw**

**Comment:** *“A second concern ... is the safety hazard presented by the location of turbine #37 located along Hwy 540 at the west end of the project area. This turbine is to be sited very close to the roadway, and there is a major risk of ice fall off the blades (...)”*

**NPI Response:**

Ice throw is uncommon. Turbines are equipped with a computer-controlled sensor which will shut down the turbine automatically when even small amounts of ice buildup are present. However, as a result of input from the community, such as yourselves, turbine # 37 has been completely removed from the project.

**Comment and Response Regarding the Consultation Process**

**Comment:** *“NPI’s public consultation process has not been adequate or responsible (...) and the process ... must be respectful of the human and natural environment (...)”*

**NPI Response:**

It is NPI’s opinion that the consultation program exceeds what is required by applicable legislation. Responses to key issues have been included in the REA report package.

NPI has great regard for the Manitoulin community and is making every attempt to protect the environmental, economic and social fabric of the community. Consultation activities and natural environment studies conducted to date have met and exceeded the requirements of the applicable regulations.

**Comment and Response Regarding Accountability**

**Comment:** *“I would like a clear answer as to who will be accountable if wells or water quality or other geological impacts are incurred by landowners (...) who exactly will I come to for reimbursement for damages if I am driving and there are ice sheets flung [from a turbine] at my vehicle, creating an accident?”*

**NPI Response:**

As noted above, negative effects are not expected with regard to the environment, drainage patterns, or ice throw. However, if such effects were to occur and they were proven to be a direct result of the wind farm as a result of negligence on the part of NPI, appropriate action would be taken.

Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is [rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca).

Thank you.



Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre



**NORTHLAND POWER**

**McLean's Mountain Wind Farm  
Public Information Centre  
March 22, 2010**

**COMMENT SHEET**

THANK YOU for attending our Public Information Centre. We are interested in hearing your comments, questions, concerns and suggestions regarding the proposed project. Please take a few minutes and provide us with your thoughts on the information presented here this evening. Comments received will be considered during completion of the study process.

- ① Concern re: \$1 Million
  - 400,000 to landowners (713)
  - 10 jobs.
  - 100,000 taxes - 400k to the govt for 43 Windmills
  - Should be similar to homeowners - taxes + cover all the land not just the base of the windmill + surrounding area
  - Taxpayers are subsidizing project directly & indirectly via our annual taxes
- ② concern (about tourism) - we may lose our Manitoulin ambience - we own a tourist camp.
- ③ let TO wind energy stay in TO on the lake (TO = Toronto) & generate energy here only for Manitoulin (16MW.)
- ④ This project is causing feuds among Man. families





## **NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

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### **RE: McLean's Mountain Wind Project and Community Concerns**

Thank you for your letter of March, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

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I trust that the following responses address the concerns and questions you have expressed in your letter.

### **Concerns and Responses Regarding Natural Environment**

**Comment:** *"(...) many unanswered questions with regard to the environment (...)"*

#### **NPI Response:**

Extensive studies on the natural environment have been conducted for the proposed project. These studies include the input of the Ministry of Natural Environment (MNR) and Environment Canada (EC) to ensure that the natural environment on Manitoulin Island is protected. A Natural Environment Assessment, in

consultation with the MNR and EC was also conducted for this project. The assessment concluded that the risk to rare, threatened and endangered species in the area is low and minimal significant adverse effects are anticipated. Additional field work was conducted in 2010 as per the MNR direction. Some turbines have been removed and some changes were made to the turbine and road locations to avoid wetland areas that now have to be avoided under the REA process. The results of this work will contribute to the final Environmental Management and Protection Plan (EMPP). NPI will implement mitigation measure where required. A new natural heritage assessment document has been prepared and submitted to the Ministry of Natural Resources for review and comment. NPI will implement mitigation measure where required.

An assessment of avifauna and wildlife in the project area was conducted in accordance with Ministry of Natural Resources and Environment Canada guidelines. The assessment concludes that the potential effects of the proposed project in the avian and other wildlife populations are minimal. There is a large amount of information available regarding the effects of wind farms on birds and this base of information continues to grow. From the experience of existing wind farms, the effects on birds are generally minimal during operation. While some construction activities could result in deer and other species moving out of the immediate area during the construction period, once the turbines are operational there is no evidence to suggest that the turbines would reduce deer population in the area, or that deer would no longer frequent the area.

### **Concerns and Responses Human Health Impacts**

**Comment:** “(...) many unanswered questions with regard to (...) health issues (...)”

#### **NPI Response:**

The May 2010 report on *The Potential Health Impacts of Wind Turbines*, Chief Medical Officer of Health (CMOH) indicates that:

*“There is no scientific evidence, however, to indicate that low frequency sound generated from wind turbines causes adverse health effects. Low frequency sound and infrasound are everywhere in the environment. They are emitted from natural sources (e.g., wind, rivers) and from artificial sources including road traffic, aircraft, and ventilation systems. The most common source of infrasound is vehicles. Under many conditions, low frequency sound below 40Hz from wind turbines cannot be distinguished from environmental background noise from the wind itself (Leventhall 2006, Colby et al 2009).*

*Low frequency sound from environmental sources can produce annoyance in sensitive people, and infrasound at high sound pressure levels, above the threshold for human hearing, can cause severe ear pain. There is no evidence of adverse health effects from infrasound below the sound pressure level of 90dB (Leventhall 2003 and 2006).*

*Studies conducted to assess wind turbine noise indicate that infrasound and low frequency sounds from modern wind turbines are well below the level where known health effects occur, typically at 50 to 70dB. A small increase in sound level at low frequency can result in a large increase in perceived loudness. This may be difficult to ignore, even at relatively low sound pressures, increasing the potential for annoyance (Jakobsen 2005, Leventhall 2006) (...).”*



The report concludes that “low frequency sound and infrasound from current generation upwind model turbines are well below the pressure sound levels at which known health effects occur. Further, there is no scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects.

All of the proposed wind turbines are greater than 698 meters away from any residence, so there should clearly be no issue. The MOE noise standard also meets the range of the Health Canada guidelines of 40 dB(A) to residences. The Province of Ontario has some of the most stringent regulations in North America regarding wind turbine siting and sounds restrictions and Northland Power intends to meet or exceed these regulations. It is important to note that although wind energy is relatively new to Ontario, it’s a very well-established and proven form of electrical generation around the world. For more than thirty (30) years, tens of thousands of people have been living near wind turbines with no ill effects.

The Ontario’s Chief Medical Officer of Health, Dr. Arlene King, recently sent a memorandum to all Medical Officers of Health and Environmental Health Directors stating the following about wind energy and human health: “(...) there is no scientific evidence, to date, to demonstrate a causal association between wind turbine noise and adverse health effects.”

The Chief Medical Officer of Health (CMOH) Report “The Potential Health Impact of Wind Turbines” dated May 2010 concludes that “While some people living near wind turbines report symptoms such as dizziness, headaches, and sleep disturbance, the scientific evidence available to date does not demonstrate a direct causal link between wind turbine noise and adverse health effects” and that “The sound level from wind turbines at common residential setbacks is not sufficient to cause hearing impairment or other direct adverse health effects. However, some people might find it annoying. It has been suggested that annoyance may be a reaction to the characteristic “swishing” or fluctuating nature of wind turbine sound rather than to the intensity of sound.

I would like to bring your attention to a report released December 2009, authored by an international panel of medical doctors and sound experts titled “Wind Turbine Sound and Health Effects: An Expert Panel Review”. It concluded that sound from wind turbines has no direct harmful effect on human health.

To see the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects.pdf)

To see an executive summary of the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects-Executive\\_Summary.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects-Executive_Summary.pdf)

For more information on the effects of sound from wind turbines on human health please refer to the comment response tables provided in the Draft Renewable Energy Approval (REA) package.

### **Concerns and Responses Regarding Decreased Property Values**

**Comment:** “(...) many unanswered questions with regard to (...) land values (...)”

#### **NPI Response:**

Based on the consultations undertaken with the local residents, NPI is aware of the public concerns over the loss of property values due to the proposed development of the McLean’s Mountain Wind Farm. The vast majority of evidence on the impact of wind farms on land values comes from Europe, Australia and

United States of America (USA). The studies conducted in these countries indicate wind farms have no material effect on property values. Data from Ontario is beginning to emerge as more wind farms are constructed, and the experience from those projects also suggests that wind farms do not decrease property values.

A 2006 study conducted by Blake, Matlock and Marshal Ltd. for Windrush Energy suggests that wind farms have not negatively affected property values. "Property Value Study: the Relationship of Windmill Development and Market Prices" aimed to determine if the development of wind farms in the Melancthon area has had any impact on the growth of property values in the Township. Property values before and after wind farm development in the Township of Melancthon were compared to values in East Luther Grand Valley Township, a neighbouring and similar township except for its lack of wind farms. Property values in Melancthon were also compared to those in Dufferin County. The analysis showed that property values in the Township of Melancthon grew similarly to the rest of the County, and increased more than East Luther Grand Valley Township. Wind farm development was not found to have diminished property values.

The Canadian Hydro Developers Inc. also compared housing price ranges on Wolfe Island and Simcoe Island in Ontario, before and after the development of the wind farm ([http://www.shearwind.com/glen\\_dhu\\_community/fact\\_sheet.html](http://www.shearwind.com/glen_dhu_community/fact_sheet.html)). Findings indicate that Township of Melancthon experienced a stronger growth rate in sales price per property, than the adjoining East Luther Grand Valley Township. The findings of this particular research indicate that the presence of the Wind Farm in Melancthon Township has not had an adverse impact on values within that municipality.

A study conducted in the Chatham-Kent area, where there are a number of wind turbines, found no evidence that wind farms have any measurable affect on rural residential market values. The study was conducted during May and June of 2009 by John Simmons Realty Services Ltd. and Canning Consultants Inc. and was commissioned by the Canadian Wind Energy Association to review possible effects of wind energy developments on real estate values on near-by properties. This information was provided at the March 22<sup>nd</sup>, 2010 Public Information Centre (PIC) that was held in Little Current. To review the study, please visit:

<http://www.canwea.ca/pdf/talkwind/PropertyValuesConsultingReportFebruary42010.pdf>

The appeals review board through MPAC (Municipal Property Assessment Corporation) referred to a very specific case in which a particular transformer was not functioning properly, causing excess noise. MPAC uses market and sales analysis to determine property values and has provided an outline of how they assess properties. This information was displayed on a large panel at the March 22<sup>nd</sup>, 2010 PIC and states that "To date, MPAC's analysis of sales does not indicate that the presence of wind turbines that are either abutting or in proximity to a property has either a positive or negative impact on its value."

Our direct contact with real estate sales representatives have indicated that there has been no effect on property values as a result of the Prince Wind Farm near Sault Ste. Marie. This information was presented at the March 2010 PIC. It is also our understanding that since the McLean's Mountain Wind Farm has been in advanced development stages adjacent properties including Farms have been sold at quite appreciated values.

### **Concerns and Responses Regarding Tourism Impacts**

**Comment:** "(...) many unanswered questions with regard to (...) tourism (...)"

### **NPI Response:**

The proposed McLean's Mountain Wind Farm is expected to have no negative impacts on Manitoulin Island Tourism. NPI has considered the potential for effects of the project on tourism and recreation activities. The project is well removed from the Lake Huron shoreline areas around the Island. The closest wind turbine (the westernmost turbine, turbine #42) is about 1.5 km from the Lake Huron shoreline. The easternmost wind turbine (turbine #9) of the project area is greater than 3 kilometres from the Lake Huron shoreline. Appreciating that tourist interests vary by individual, it is NPI's opinion that the view of the wind farm, especially from Honora Bay, will be complementary and will not negatively affect the viewscape.

Wind farms can have positive effects on the local tourism economy. There are 6,000 wind turbines in Denmark, which are used for marketing tourism. Local tourism associations may use wind turbines to promote "green tourism". This is particularly targeted towards the German market, where the public is known to have a high level of interest in both environmental issues and in new technology. In a Scottish study<sup>1</sup> 43% of respondents said a wind farm would have a positive effect on their inclination to visit the Argyll area, an area of high landscape value. About the same proportion of respondents said it would make no difference, while less than 8% felt that it would have a negative effect. Nine out of ten tourists visiting some of Scotland's top beauty spots say the presence of wind farms makes no difference to the enjoyment of their holiday. Twice as many people would return to an area because of the presence of a wind farm than would stay away, according to a poll carried out by MORI Scotland Commercial tour companies provide guided tours of several wind farms in the Pincher Creek, Alberta region. Several wind farms in Australia attract so many visitors that commercial tour operators provide opportunities for the public to get a close up view of the wind farms.

Back in 2004 I was involved in conducting a survey about the wind farm, requested by the municipality. The survey results indicated over 95% support of a wind farm by locals and visitors to Little Current. Boaters especially noted that the Turbines provide a landmark coming into the port of Little Current. NPI does not expect that the presence of the turbines would factor into a person's decision on whether to visit the Island. This project may have the potential to attract visitors. At NPI's Miller Mountain project in Quebec, 3500 tourists visited the project in 2008. The Providence Bay Wind Farm located to the south east of the MMWF project, approximately 45 kilometres away, established an interpretation centre for the project, which attracts numerous visitors over the summer visitor months

### **Concerns and Responses Regarding Aesthetics**

**Comment:** *"(...) many unanswered questions with regard to (...) aesthetics (...).The Island's reputation as a pristine and unspoiled place to live has vanished (...)"*

### **NPI Response:**

NPI recognizes the importance of enjoyment of one's property and the surrounding environment. The wind farm will not interfere with the peace and quiet you currently enjoy, except during the construction period, and even then you may not experience disruption depending on the location of your property. Perceptions regarding the visibility of wind turbines are subjective. NPI, in the siting of the turbines, has attempted to balance the visibility of the turbines with maximizing the output of the turbines. Visual

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<sup>1</sup> *Tourist Attitudes Toward Wind Farms*, MORI Summary Report, September 2002 [www.bwea.com/pdf/MORI.pdf](http://www.bwea.com/pdf/MORI.pdf)

simulations have been prepared as part of the Environmental Screening process. The machines used for this project will blend in well with the surrounding area.

Impacts to the night sky should be minimal. The amount of lighting required should not unduly impact residents and cottagers in the area. Current lighting systems ensure pilot safety, minimal impact on birds and minimal impacts on the night sky viewing and are unobtrusive for communities. Light shrouds and shielding will be used where appropriate to minimize the impact of night time lighting. NPI believes that Manitoulin will continue to be viewed as a 'pristine and unspoiled place'.

### **Comment and Response Regarding Ethics**

**Comment:** *"Northland's policy has been to act just within the guidelines of the Green Energy Act with no regard for the greater ethical question of whether the wind turbines are in the interest of the Manitoulin community."*

### **NPI Response:**

The proposed project will require approval under Ontario Regulation 359/09 – Renewable Energy Approval (REA) under the *Green Energy Act* and NPI is complying with all of the REA requirements. Further, NPI will be required to meet the 40 dBA limit at all identified receptors and would be required to mitigate/resolve any exceedances as per the terms of the REA approval.

NPI has great regard for the Manitoulin community and is making every attempt to protect the environmental, economic and social fabric of the community. Consultation activities and natural environment studies conducted to date have met and exceeded the requirements of the applicable regulations.

Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is rickmartin@northlandpower.ca.

Thank you.



Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre

#### HUMAN HEALTH PUBLIC COMMENT

Request that the proposed project be elevated to an individual environmental assessment based on the following: The McLean's Wind Farm project Environmental Review Report does not properly address the effects on humans who will be living near the turbine complex. Evidence form around the world strongly suggests that industrial wind developments can have a very negative effect on human health and quality of life. A proper health study is required to prove that the project can be constructed and operated without harming the local residents. A recent (released July 23, 2009) community-based self-reporting health survey conducted in areas with operational industrial wind turbines has found that 70% of the respondent reported a significant increase in the frequency of at least one health problem (the average was five health problems), or the onset of new health issues since the turbines began functioning near them.

The health issues reported are serious and include: sleep deprivation - which leads to serious health problems (this is the number one problem); headaches; tinnitus (ringing in ears); cognitive dysfunction; and some serious cardiac effects such as irregular heart rhythm, palpitations and high blood pressure. Reports of adverse effects continue to come into light. Some victims have been forced to move from their homes. Dr. Robert McMurty, M.D., F.R.C.S (C), F.A.C.S stated that enough evidence of adverse health effects exists in wind turbine complexes to demand an epidemiological study before any more turbines are installed. Dr. McMurty has made a deputation to a standing committee on General Government. Dr. McMurty's deputation discusses the inadequacy of the dBA scale for measuring noise from wind turbines because it does not take into account low frequencies. Todd et. al. have published research that proves the human inner ear is extremely sensitive to low frequency noise. It also point points out a similarity between the health effects being reported in Ontario and those reported by Dr. Nina Pierpoint (New York) and Dr. Amanda Harry (U.K.). Dr. Michael Nissenbaum (Maine) has recently conducted medical interviews with residents of a wind complex in Maine. Dr. Nissenbaum presented his preliminary findings before the Maine Medical Association. He described the results as alarming. The residents are experiencing serious health problems related to shadow flicker and noise emissions from the turbines near their

homes. The onset of symptoms including sleep disturbance, headaches, dizziness, weight changes, possible increases in blood pressure as well as increased prescription medication use, all coincide with the time of turbine commissioning. Shadow flicker and noise pollution are not the only sources of problems for residences near turbine complexes. Improper electrical integration of the turbines into the grid and lack of proper filters can expose residents to high frequency electrical pollution that can cause electromagnetic sensitivity. The symptoms associated with electrical pollution include: ringing in ears, headaches, sleeplessness, dangerously elevated blood pressure, heart palpitations, itching in the ears, eye watering, earaches, bleeding noses and pressure on chest causing difficulty breathing. There are many unanswered questions about the long term impacts regarding the elderly, infants, children and the unborn that are exposed during mother's pregnancy, and workers such as farmers and technicians who work near wind turbines. Some wind complex residents are being approached to participate in long-term health studies. Rural residents should not be taking the place of laboratory specimen Ontario has approximately 585 operating wind turbines, currently 86 victims have reported problems. Such a high incidence of injury is criminal. The Ministry of the Environment has overseen the development of these existing turbine complexes and issued their certificates of complaints yet people through the province are suffering severe health effects. The current guidelines indicate are clearly inadequate. Ontario citizens must be properly protected. A proper epidemiological study must be performed before the McLean's Mountain Wind Farm is developed. Many are asking for a public inquiry.

(50)- This comment submitted as a template.

2. Concerned about harmful effects of noise.

3. Concerned with adverse human health effects of wind farms

4. Concerned with adverse human health effects of wind farms.

#### NATURAL ENVIRONMENT

5. Requests that the proposed project be elevated to an individual environmental assessment based on the following:

1. Moved from Toronto to Little Current in May to study organic and biodynamic farming and the development of bees in the area. Has learnt that there are at least ten windmills to be built within few kilometers of her residence.

2. Lack of notice and public consultation and new studies coming from Europe regarding the effects of wind turbines on the weather, health and natural habitat.

6. Expresses concerns regarding: impacts to vegetation, wildlife and bird impacts and soils.

7.1. The 43 wind turbines will be aesthetically unpleasant. Their position on top of height ground makes them very visible.

2. More of the Niagara Escarpment, which is not protected on Manitoulin will be quarried.

3. More studies on birds are required

8. Expresses concerns regarding immense land clearing required

9. Inadequate bat population study research

10. Indicated that: "Manitoulin Island is very pristine and holds thousands of acres of unspoiled beauty and wildlife (...) and countless species of birds and plant life. Concerned that "on the neighbouring lot where turbine #3 is proposed there is a large swamp and duck pond (...)

11. Requests that the proposed project be elevated to an individual environmental assessment

based on the following:

Impacts of the proposed wind farm on the bat populations have not been adequately studied. It

is impossible to study the impact of the wind turbines on bats without knowing the number and

location of the wind turbines. NPI should be required by the MNR to do a bat study in May

since the Ministry of Natural Resources (MNR) suggested that it is likely that it is a

migratory route for bats". MNR recommended that bat studies be conducted in August and the

NPI's subcontracted Natural Resources Solutions Inc (NRSI) reported on their studies in July.

NPI has acquired the University of Waterloo to monitor bat activity which they did on August

17, 2009, without the final locations of wind turbines approved. The public cannot comment on

the study as the deadline for the ESR would be past. Fifty percent of wind turbines are in

wooded areas known to support bats as well as other wildlife. This does not address tree

removal of the 10 kilometers for a 115,00 volt transmission line.

(39) -This comment submitted as a template.

#### PROPERTY VALUES

12. Those adjacent to proposed wind turbines and those in sight of turbines will have property

values reduced and homes will be very hard to sell.

13. Request that the proposed project be elevated to an individual environmental assessment based on the following:  
Setbacks, distances from a wind turbine to a house, that NPI proposes are not adequate to protect property value in the area. The large lots on McLean's Mountain are privately owned, many have no "Dwellings": homes, cottages or hunt cabins. A few lots have dwellings that are not identified in the ESR noise study. The company has arranged its setbacks as per MOE guidelines so that no current dwellings will receive more than 40 decibels of noise. This does not address the vacant land issue for future use as MOE does not have an interpretation for seasonal residences who determine such. There are many farms on Manitoulin with large acreage and one or no dwellings but have the potential to build. If a farmer wants to finance retirement by severing or selling a lot he will be out of luck once this project goes away through. If a farmer or resident wants to move because of the industrial farm, his land will be so reduced in value that he might not be able to afford to move. The land on McLeans' Mountain is privately owned and the needs and rights of the landowners must be respected. Many of the existing farms have been passed on for generations. This company from Toronto should not be allowed to ignore and devalue the years of hard work that have gone into owning, maintaining and paying taxes on these lands.  
(42)- Comment submitted as a template.

#### SETBACKS FROM RESIDENCES

14 - 20. Distance to their home  
Setback from private property , setbacks

#### CONSULTATION PROCESS

21. Wrong date on flyer for open house  
Delivery of notice to only a few homes

22. Lack of consultation - informal discussion occurred at the least Requests that full consultation be pursued with the Nation False allegation that offers were made to seek support - informal discussion at the least

23. Indicated that all landowners in the project area should have been contacted about the possible siting of wind turbines.

#### OTHER

24. Request that the proposed project be elevated to an individual environmental assessment



based on the following:

- Failure to inform or consult with local residents.
  - Changes in scale of the proposed project from a 54MW. (30 wind turbines) wind farm as presented by Northland Power Inc (NPI) in 2004 to a 100 MW (60 wind turbines) wind farm as proposed by NPI in 2005 to a 77MW (43 wind turbines) wind farm as proposed by NPI in 2009.
  - The increase of project land base since the initial start of the project with an additional land use of 1400 to 1600 acres in the past two years.
  - The wind turbine sites are proposed and sites have not been secured and the existing wellings in the project area have not been identified.
  - Future dwelling in the project area are planned as building permits are being acquired with the township.
  - The company has been negotiating leases with landowners for at least 6 years. June 25, 2009 was the first time the community heard about the 43 wind turbines and a submarine cable under the North Channel as well as transformer station, switching station and a transmission line which all have their impacts.
  - This is not a fair process and does not meet the public consultation requirements of a Class Environmental Assessment.
  - Urge to require NPI to properly consult with the local community.
- (42)- Comment submitted as a template.

25.1. One megawatt supplies about 350 homes. Over the last two months Manitoulin peak usage was 16 MW. Average was 12 MW. Northland Power McLean's Mountain project is proposed 77MW. Wind farms are on average 25% efficient due to Hydro having to keep the power produced from other sources available for supply when the wind stops in that area. Approximately 30 MW from Sudbury including line loss. If the provincial grid goes down Manitoulin will still not have power due to being non utility generator. Hydro One still maintains control authority for safety.

2. Concerned with the following construction impacts:

- Approximately 50% of turbines will be in wooded areas.
- Tree removal includes road allowances.
- Overhead lines form turbines require more road width including potential dangers trees adjacent to lines.
- The 115,000 volt transmission line construction will be looking into authority to expropriate private and NEMI property if required.

3. Expresses concerns regarding:

- Impact to First Nation communities (Sacred Giant Site)
- Social and economic impacts
- Natural and cultural impacts
- Visual impacts

26.1. The 43 wind turbines will be aesthetically unpleasant. Their position on top of height ground makes them very visible. Their height of 410 feet is excessive and not in keeping with the landform.

2. The red flashing lights pollute the dark sky. No information has been given as to which of the turbines will have the lights - this will be required for the elevated assessment. Many people have moved to Manitoulin for the rural landscape which could now be ruined.

3. The construction period will be very disruptive. Highway 6 and Highway 540 are two lane roads and too narrow and congested for construction traffic. McLean's Mountain Road and Burnett Side Road are 1.5 lane roads, up very steep hills and will have to be rebuilt at NEMI taxpayer's expense.

4. Gravel pits will have to be expanded or new ones opened to handle the aggregate requirements.

27.NPI is trying to get the project approved prior to the new regulations in accordance with the Green Energy Act without making the public aware of all that is involved with the turbines.

28.Concerned about harmful effects of shadow flickering, ice throw and lighting on humans and wildlife.

29.Concerned with impacts on archaeological significance of the proposed project area.

30.Indicated that: Part A.6.2.4 of the Guide to EA Requirements for Electricity Projects describes the process of mandatory notification. It states that, "The notice must be mailed or delivered to households in the immediate vicinity of the project and to affected government agencies." My home is clearly identified as residence #3 on a map titled "McLeans Mountain Windfarm Figure 6-4 Noise Receptor Locations and Noise Contours." Neither myself nor my father (owner of Lot 9 Con 1 and Lot 9 Con 2) received correspondence of any sort from Dillon Consulting or NPI. The property I live and farm on, which is owned by my father and which I am currently in the process of buying, is adjacent to turbines 24 and 28. My family should have been notified of all public meetings held by NPI.

31.Indicates that: "NEMI Council has passed previous Resolutions in support of the project and these resolutions remain on the public records. Council's position has been modified though the passage of Resolution No. 218-08-09 rescinding proposed setbacks under the

NEMI Zoning By-Law

agreed to by Resolution No. 36-02-07 (...). It should be noted that the setbacks identified in Resolution No. 36-02-07 were never implemented into the NEMI Zoning By-law under the provision of the Planning Act (...). Asks "(...) to revise page 11 of the (ESR/IES) document and delete any reference to any setbacks governing the project under the NEMI Zoning By-Law (...)"

32. Concerned with negative impacts on tourism.

COMMENTS RELATING TO THE SPECIFIC SECTIONS IN THE ENVIRONMENTAL IMPACT STATEMENT/ ENVIRONMENTAL SCREENING REPORT

33.

1. Section 1.1 in part states that, "No surface water will be required for the project," yet on page 8 of the ESR under section 1.9 it indicates that the following permit may be required: "Ontario MOE Permit to Take Water under the Environmental Protection Act, should water be extracted for use in the temporary cement plant/concrete batch plant (if necessary) or for other purposes from a surface and or groundwater source in excess of 50,000 liters per day;" Will surface water be required for this project or not?

2. Section 1.2 In part states that "Some de-watering of the turbine foundation area may be required. Affects on groundwater levels are not expected because of this." What will happen to the flow of groundwater as a result of the blasting required to pour foundations for the turbines? It is my understanding that there have not been any wind farms developed in Ontario on this type of bedrock. It is also my understanding that the spring water (groundwater) flowing down through the escarpment to my farm originates from proposed turbine sites. I am concerned that the construction of the turbines (particularly turbines 24, 28, 29, 30, and 34) may alter the flow of groundwater to my farm. I rely on this water to operate my farm. What is an appropriate compensation for the loss of access to clean water?

3. Section 2.1 In part states that "There are few residences in the vicinity of the turbines. The turbines are set back at least 550m from each residence and future building envelopes." Because many of the turbines are located on single 100 acre lots, many adjacent landowners will be prevented from building on their own land in the future. With the 550m setback requirements of the Green Energy Act, property owner rights will be restricted with

respect to building a dwelling. Dillon Consulting and NPI cannot possibly know about adjacent landowners future building plans because they did not adequately consult with us. What is equally problematic is the restriction future landowners will face if they choose to build. I have recently purchased a building permit for a dwelling on Lot 9 Con 2. My building permit is dated August 20, 2009, as is my receipt of payment. I expect NPI to change the proposed location for turbine 28 as it is less than 550m from my building site. I also expect that NPI should report on any negative environmental impacts for the new site chosen for turbine 28.

4. Section 4.1 In part states that, "Based on an extensive literature review, consultations with local experts, and a full year of fieldwork, rare, threatened or endangered species are unlikely to be affected by the project." I have partially commented on this statement in paragraph 3 of this elevation request, with particular attention to the Puma, which is endangered in eastern North America.

5. Which local experts were contacted for consultation? Judith Jones, Dr. Gerard Courtin, and Chris Bell were not consulted. Local residents who know the land and its communities better than any, were not consulted. I have seen a list of "local" authorities in the ESR who were consulted with, and most if not all of these people hold offices that are not on Manitoulin Island. Was John Diebolt used as a consultant in this project? He is our local, senior Conservation Officer who likely knows the project area extremely well. I suggest that in the individual Environmental Assessment being requested, some of these truly local experts are used for consultation.

6. Section 4.2 In part states that, "There are no known ESAs in the study area. The one ANSI (life science) in the area has been avoided." I contend that the effects to the ANSI (presumably Bass Lake Marsh/Swamp - AREA\_ID 4853) will be mitigated simply because the project area boundary conveniently excludes this ANSI. I have discussed my concerns related to this in paragraph 4 of this elevation request.

7. Section 4.3 In part states that, "Wetlands in the study area have been avoided as much as possible." Were qualified wetlands evaluators used to evaluate the wetlands that will not be

avoided? If not, this should be completed in the requested EA.

8. Section 4.4 In part states that, "The construction and installation of project components has the potential to result in effects to wildlife through the removal of some habitat." This proposed wind farm will result in more habitat loss in the project area than has ever before been experienced - it not only has the potential to result in effects to wildlife - it will have effects to wildlife.

9. Section 4.6 In part states that, "The scale and significance of these effects has been assessed in this Environmental Screening". Ducks Unlimited acknowledges that the indirect impacts of windfarms on migratory birds are not well understood and that quality information on this particular issue is generally lacking (Pers. Comm.). How can Dillon Consulting and NPI assess and mitigate the effects of something the scientific community knows very little about?

10. Section 4.7 In part states that: "From some turbine sites, natural vegetation will need to be cleared for the turbines, collector lines and access roads." Because every turbine will require the construction of at least some length of road, and a foundation, natural vegetation will be destroyed at every turbine site. Also, because many (nearly 50%) of the proposed turbine sites are located in wooded areas, much of the vegetation that is destroyed will be forest.

11. Section 5.5 In part states that: "The affected lands do not support harvestable forest resources." This statement is simply not true. I invite you to visit the project area and have one of the adjacent landowners show you some of the harvestable forest resources that will be cleared for collector lines and access roads.

12. Section 5.6 In part states that: "The project is located in an area that may be used for recreational hunting." And that "None of the affected lands can be considered inaccessible." The project area is unquestionably used by recreational and sustenance hunters. The people that hunt these lands include members of Sheguiandah First Nation, local land owners and their families, as well as off-Island residents who come to the area for hunting (bringing money into the local economy). A large percentage of the lands in the project area are used solely for hunting. Should the windfarm cause the emigration of game resources from the area it is possible that many of these landowners will sell, depreciating property

values.

13. Section 6.1 In part states that: "There are no built communities in the vicinity of the project, the area is rural in nature with a few scattered residences." This is a terribly

misleading statement. The project area boundary conveniently excludes: •

Aundeck Omni Kaning

First Nation which is approximately 1 km from the nearest proposed turbine (turbine 8)

- All of the homes north and west of HWY 540

- All of the homes on Bidwell Road south of proposed turbines 42 and 43 (these homes are

approximately 1 km from the proposed turbines)

- All of the homes on Townline Road south of the project area

- Sheguiandah and Sheguiandah First Nation

- All of the homes along HWY 6

- Little Current which is approximately 3 km from the nearest proposed turbines 1 and 4.

The project area boundary should be extended 1 km in each cardinal direction, with special

mention given to Little Current, to properly describe the level of human habitation in the

vicinity of the project. Please refer to the McLeans Mountain Windfarm Figure 6-4 Noise

Receptor Locations and Noise Contours map to help clarify my arguments on this topic. Note that

the 40 dBA Noise Contour of proposed turbine 37 exceeds the project area boundary to the west.

Also note the obvious exclusion of Aundeck Omni Kaning from the project area (the project area

boundary clearly cuts to the southwest as it approaches AOK).

14. Section 6.2 In part states that: "There are no businesses in the vicinity of the project

that could be negatively affected." How can Dillon Consulting make such a bold statement

based on the information in this ESR? Most Island businesses rely on tourist dollars, and

tourists do not come to Manitoulin Island to see wind turbines. Tourists come to the Island to

get away from large man made structures like turbines, and the light and noise pollution

associated with

such structures.

15. Section 6.3 In part states that: "Disruption during operations is not expected," and

that "No recreation cottages are within the project area. There are a couple of hunt camps in

the

project area." - One of the 40 dBA Noise Contours on the McLeans Mountain Windfarm Figure 6-4

Noise Receptor Locations and Noise Contours map includes a large portion (approximately 30%) of

the land my family and I hunt on (Lot 9 Con 2). This will undoubtedly disrupt the game that I

hunt and will disrupt the deep connection I feel with the land when I am hunting. I personally know of 12 dwellings in the project area, plus at least 2 building permits for dwellings that have been purchased within the last 6 months that are also within the project area. Of these 14 dwellings, at least 4 are within 550 metres of a proposed turbine. I am also unclear of the distinction Dillon Consulting makes between a recreation cottage and a hunt camp. Many consider hunting to be a recreational activity (though hunting for me is part of my Manitoulin lifestyle), therefore, making a hunt camp a recreational cottage. Also, many "hunt camps" are used year round for many forms of recreation including skiing, snowshoeing, wild crafting, maple syrup making, and hiking. Regardless of their uses, these camps are all considered dwellings and will require the Green Energy Act setback of 550 m.

16. Section 6.5 In part states that: "Negative effects on the area economy are not expected. The project will result in positive economic impacts through payments to land owners and taxes that will be paid to the municipality and job creation. Supplies and services will be obtained in the local area as much as possible." I have already addressed my concerns regarding negative effects on the area economy. Information in the ESR does not convince me that the tourism industry and land values of Manitoulin Island will not be negatively affected. NPI's commitment to support the local economy through job creation and the purchase locally of supplies and services is not convincing. Full-time, long term job creation has been estimated by NPI to be anywhere from 7-10 jobs, with no written commitment to hire locally. I have also not seen any written commitment in the form of a legally binding contract that holds NPI to using local businesses and labour during the construction phase of the project. It seems very likely that there will be no net economic benefit likely that there will be a long term net negative impact to the local economy.

17. Section 6.8 In part states that: "Potential effects to public health and safety during the operations period are minimal," and that "Project Health and Safety concerns have been responded to - local residents are generally supportive of the project. Potential health effects from wind turbines are still poorly understood. Dillon Consulting and NPI should not be able to make this claim, especially when organizations like the World

Health Organization

are approaching this issue with caution. I do not feel it is safe for us (residents within or near the project area) to be living in such close proximity to wind turbines until our provincial and national governments have a clearer understanding of the potential health effects from wind turbines. Local residents are not generally supportive of the project, at least not since being given the most recent information.

34.

1. Commented on the following statement as presented in the EIS/ESR document: "NPI intends to develop the project under the new Green Energy Act (GEA) Feed-In- Tariff (FIT) program". This misleading because Northland Power Inc. (NPI) has publicly stated that they are not obligated to do not intend to follow the restrictions of the GEA.

2. Commented on the following statement as presented in the EIS/ESR: "Significant effects to the natural and social environment have been avoided through careful site selection, good planning, the implementation of mitigation measures, and adherence to regulatory requirements". The (project) sites were selected according to availability of landowners willing to buy in; for example when one landowner recently reconsidered his decision to have Tower 3 on his land, it was moved from its previous location to its current one where it is close to a well known waterfowl pond and in the middle of a mature maple forest habitat.

3. Commented on the following statement as presented in the EIS/ESR: "The project is located in a rural area where the wind farm will not interfere with the existing land uses. No significant adverse environmental effects are anticipated. The overall conclusion of this ESR is that this project can be constructed, operated and decommissioned without any significant impacts to the environment, including the natural and social environment". This is the type of overstatement that is repeated frequently through the report as if its repetition alone will give the document some validity. There will be a significant interference with current land use; e.g. hunting is a major pastime in the green bush and will be significantly impacted by the construction and operation phase noise. Agricultural land (although limited) will be significantly reduced on the affected lots due to the combined land degradations of the development. Significant noise issues may



affect the enjoyment of adjacent lands. Building restrictions on land within setback radius of turbines will restrict use. See further more specific comments below.

4. Commented on the following statement as presented in the EIS/ESR: "In addition to the wind turbines, the project will require a 10.3 km 115 kV power transmission line to be constructed to the west of the study area". No routing has been suggested that runs to the west. I assume this is the first of several errors in direction in the document. Or perhaps there is another route being considered - the project has a history of metamorphosing so frequently that local stakeholders have difficulty keeping up. 5. Commented on the following statements as presented in the EIS/ESR:

5a)

"As part of the EA requirements, a consultation process has been undertaken to provide the opportunity for the public, government agencies and aboriginal communities to identify any issues that they may have with the project and obtain information to mitigate their concerns."

I will let the

First Nations speak for themselves as I understand they feel they have not been appropriately consulted. As for the local residents - the first we heard of this project was mid June 09 when

NPI

announced the "public information meeting" in the local paper. Residents who did not subscribe to a paper would not have heard about it. Previous meetings referred to in the ER involved a completely different proposal with different turbine locations, overall size and transmission line.

5b)

"Public and agency consultation has been a cornerstone of this project with multiple information sharing and stakeholder feedback opportunities provided throughout the course of this study. Potential stakeholders were identified and contacted early in project planning to identify areas of concern. On June 8th and 15th, 2009 the Notice of study restart and PIC #3 was published in the Manitoulin Expositor. The notice was also sent on June 15th, 2009 to all residents in the project area and the larger area through Canada Post Ad Mail." Our family lives on McLean's Mountain Road and we and our neighbours did not notice this mailing amongst the advertisement mail we received in June.

5c)

"The final PIC was held on June 25, 2009 at the NEMI Recreation Centre/Arena in Little Current,

Ontario from 7:30 pm to 9:30 pm. During the PIC, several information panels were displayed to provide the public with information about the project (see Appendix B). The purpose of

the PIC was to present:

- The results of environmental studies and evaluations of the siting of the wind turbine and transmission line route;
- The assessment of project impacts on the environment with potential mitigation measures and identification of residual effects;
- The specific information on the project; and,
- To provide a venue for questions and for providing feedback to NPI about the project.

The PIC was organized as a drop-in centre. In total, thirty-four (34) participants signed in.

Overall the PIC was well received." The date in the Expositor appeared incorrectly and many

people may have missed it. The season is particularly busy in June for local people to attend a

meeting with short notice. Many people had seen enough versions of this project over several

years that they were skeptical that the development would proceed. To my knowledge there was no

substantive changes made to the project in response to the public concerns.

Steadily escalating

public outcry as a result of educational efforts has also not resulted in any material change

to the project.

6. Commented on the following statement as presented in the EIS/ESR: "Follow-up discussions were

held with residents regarding the routing of the transmission line along Morphet's Side Road."

This refers to an effort to convince me to allow the 115KV line over my property (presumably

over the edge of the escarpment and directly toward Little Current) as opposed to

running down Morphet's Side Road. (MSR) This was the canopied in its upper section by 100 year

old maple trees and features a fabulous vista to the East over the East Channel.

Further east it is lined by trees and passes four lovely hillside farms. We didn't want a

transmission line with ROW along it, nor did we want it overhead through our farm. (an

underground routing was proposed but NPI's response was that it was too expensive.)

7. Commented on the following statement as presented in the EIS/ESR: "The wind turbine setback

distance requirements as specified in the NEMI zoning by-law is observed or even surpassed in

the siting the wind turbines for this project. These setbacks are:

1) Separation distance from dwellings, the great of

a) 250m, or

b) Ministry of the Environment, Certificate of

Approval requirement, (NPC232)

2) Participant property line setback - 10 m

3) Non-participant property line setback - rotor radius plus 10 m

4) Setback from road right-of-way line - rotor radius plus 10m

5) Separation distance from non-dwelling principal and accessory structures - rotor radius plus 10m."

My understanding is that council had passed this concept in principle but subject to further

consideration and research. Many municipalities are now realizing that the old setbacks are

simply not adequate to protect residents. In addition they are recognizing that the setbacks

may be better defined with reference to property lines rather than receptors to avoid

infringement on property rights. The GEA has not yet established appropriate setbacks. The

council intends to revisit this motion and propose a bylaw in the near future. This is well

known to NPI and it is disingenuous to imply that the local government is onboard with the

project as it stands.

Commented on the following statement as presented in the EIS/ESR: "A key aspect of all project

phases is to minimize environmental effects. The wind turbines have been sited to target areas

with the best wind energy potential, avoid sensitive natural areas/habitats, optimize use of

existing roads, minimize the visual impacts of the turbines, and respect all municipal set back

requirements". See above.

Commented on the following statement as presented in the EIS/ESR: "It is anticipated that the maximum width of the ROW would be approximately 8-10 meters depending on the distance of poles

and conductor swing. The transmission line route as shown in Figure 2-1 is largely contained

within municipal road rights-of-way". Given the description of MSR (above) we are skeptical

that an 8 to 10 meter ROW can be "largely contained within municipal road rights-of-way." If

NPI thought that was true they would not have applied for expropriation rights to route the

transmission line.

10.

Commented on the following statement as presented in the EIS/ESR: "Turbine staging areas are

located at each turbine site. The turbine staging area is comprised of three different zones.

The crane pad is the area needed to support the crane used for construction and will be

approximately 12 meters wide by 36.5 meters deep and will be accessible from the access road

with a slope of less than 1% or less in all directions. Each turbine position will also require

a staging and equipment storage area for the safe erection of the towers and the lift and securing of the nacelle and blades. Thus, a total leveled surface of approximately 40m by 40m will be required at each turbine. Furthermore, a 360 degree radius around the base required at each foundation is 225 feet (69 m) by 250 feet (76 m) (the "Construction Site"); the Construction Site includes a crane pad area of 80 feet (24 m) by 60 feet (18m), which may have a maximum slope of 1% in any direction. The Construction Site will be cleared of vegetation, rocks and other obstructions that may impede access by erection equipment.

- Soil compaction to provide ground-bearing capacity of nominal 4,500 pounds per square foot.

An open area of not less than 300 feet (92 m) by 600 feet (183 m) will be required as a staging area. The entrance and exit will be 40 feet (12 m) wide and have an inside turning radius of at least 150 feet (46 m)". NPI states that at least ½ of the turbines are located in forested areas. Most of this forest is mature sugar maple or cedar. The NPI statement "A key aspect of all project phases will be on the minimization of environmental and social effects" rings rather hollow in the face of this description as does their claim that the natural forest will "largely reestablish itself within a year" (Rick Martin July 2009).

11.

Commented on the following statement as presented in the EIS/ESR: "A decommissioning plan will be prepared in accordance with provincial legislation and guidelines that exist at the time of decommissioning. Decommissioning will involve the removal of the turbines and other associated infrastructure including the turbine foundations to below grade and the removal of electrical lines/facilities. Infrastructure that is left below grade will not affect future land use. Previously disturbed lands would be rehabilitated and returned to their previous state." This suggests to me that if Northland pulls out or sells out at some point there will be no one left with the very expensive obligation to decommission. This should all be specified as part of the initial process and bonded to ensure it gets paid for. The suggestion that "Previously disturbed lands would be rehabilitated and returned to their previous state" is of course ludicrous. How can you replace a mature maple sugar bush? - they don't seem to be making them anymore.

12.

Commented on the following statement as presented in the EIS/ESR: "The (transmission) line has been routed to minimize its distance and avoid sensitive environmental

features. The line will be above ground. Some minor variations to the alignment are possible dependant on public input and engineering considerations." This repetitive statement has been questioned above.

13.

Commented on the following statement as presented in the EIS/ESR: "Operations will directly employ up to 8 people whose tasks will be to monitor and operate the wind farm. These long term employment opportunities will generate total annual incomes of about \$600,000." Even if this figure was likely to represent local employment (which is hardly likely - these are highly specialized and technical machines) it is a tiny drop in the bucket compared to the employment from tourism (see below).

14.

Commented on the following statement as presented in the EIS/ESR: "The McLean's Mountain Wind Farm is located in the in NEMI. This will represent an annual tax payment to the Municipality of approximately \$95,000 per year". This figure (which might require justification) may be offset by reduced property values in the entire surrounding area as evidenced in other areas.

15.

Commented on the following statement as presented in the EIS/ESR: Will the project "have negative effects on residential, commercial or institutional land uses within 500 metres of the site"?

- There are no commercial or institutional land uses in the project area.
- There are a few residences in the vicinity of the turbines. The turbines are set back at least 550 m from each residence and future building envelopes." This is in fact not true and represents one of the major objections to the project as planned. Precisely because the setbacks are from current residences, the building and business opportunities for adjacent landowners are being restricted or the land within the setback rendered unsafe for use. It would not make sense for the municipality to insist on a certain setback from a residence and then allow a residence to be built within the setback jeopardizing the health of current and future owners.

16.

Commented on the following statement as presented in the EIS/ESR: Will the project "be inconsistent with the Provincial Policy Statement, provincial land use or resource management

plans?

- The project respects the pertinent Provincial Policy Statement". The project is located on one of the highest and most prominent portions of the Niagara Escarpment as it exists on Manitoulin. As such, provincial policy discourages development of the brow of the escarpment. One of the previous incarnations of this project was located well back from the brow of the escarpment for that very reason.

17.

Commented on the following statement as presented in the EIS/ESR: Will the project "cause negative effects from the emission of noise?

- The operation of the construction equipment will result in noise increases in a localized area.

- The operation of the turbines will result in noise, although the turbines have been sited to meet MOE noise criteria.

- Increased road traffic from the construction workforce could increase road traffic noise

levels in area. See Section 6.12 or effects assessment/mitigation".

The noise forecast data (which in itself has questionable accuracy) suggests levels of noise

that would cause significant disruption in the lives of local residents who have a right to the peaceful

enjoyment of their homes and properties. There is also increasing evidence for the validity of

Wind Turbine Syndrome in a small but significant percentage of predisposed individuals,

possibly related to the low frequency sound. This condition is prompting authorities in many

countries including our own to reevaluate the appropriate setbacks. The setbacks suggested in

the draft of the GEA call for greater setbacks than NPI is willing to entertain.

18.

Commented on the following statement as presented in the EIS/ESR: Will the project "have

negative effects on the availability of forest resources? The affected lands do not support

harvestable forest resources." This is a shockingly narrow perspective to take on the value of

our forest resources especially when completing a review of the environmental effects of a

large industrial development on a rural ecosystem.

19.

Commented on the following statement as presented in the EIS/ESR: Will the project "have

negative effects on neighbourhood or community character? There are no built communities in the

vicinity of the project, the area is rural in nature with a few scattered residences". How is

that for blowing off the concerns of the estimated 400 people who live within

1 km. of a proposed turbine site? And if any community has character I would suggest Manitoulin does. NPI is quickly finding that out as more and more people in the area learn about what is planned. Manitoulin prides itself in the pristine rolling green farmland and clear waters that are the basis of its tourist industry and a draw for many of its new residents. A quiet lifestyle, dark skies, an enjoyment of the arts and the outdoor experience characterizes the values of many Manitouliners.

20.

Commented on the following statement as presented in the EIS/ESR: "Will the project have negative effects on recreation, cottaging or tourism? The project could temporarily affect hunting activity in the area during construction. Disruption during operations is not expected. No recreation cottages are within the project area." This point has largely been addressed. The long term effects on the tourism industry have not been adequately studied. Initial inquisitive interest followed by a sharp decline in tourist approval has sparked a reassessment of industrial wind turbine development in some tourism dependant areas of the world. The NPI response neglects to consider the fact that the turbines are arranged along the brow of the escarpment and will be fully visible from the premium tourist area - the North Channel sailing and boating area, as well as the large cottage area of Bay of Islands and the whole corridor of access to Little Current from across La Cloche Island to the North.

21.

Commented on the following statement as presented in the EIS/ESR: Will the project "have negative effects on the economic base of a municipality or community? Negative effects on the area economy are not expected. The project will result in positive economic impacts through job creation. Supplies and services will be obtained in the local area as much as possible." Again the inadequacy of the response deserves no further comment.

22.

Commented on the following statement as presented in the EIS/ESR: "Soils in the immediate area are too shallow for cultivation and are suitable only for woods or rough pasture". I have one of the most fertile farms on Manitoulin, 200 acres of which are included in the "study area". Some of the fields above the escarpment well within the study area produce an excellent crop of hay or have good pasture when not too dry.

23.

Commented on the following statement as presented in the EIS/ESR: "There

exists the potential for some slight alterations to topography as a result of grading and blasting required for turbine foundations and access road construction." An understatement.

24.

Commented on the following statement as presented in the EIS/ESR: "Setbacks specific to birds that will be observed include the following:

- 90 m River/Stream Setback
- 120 m Wetland Setback - none of the wetlands in the project area are considered to be significant. Attempts have been made to meet this setback as much as possible."

I don't agree that these setbacks, as minimal as they are, are being met. Many of the proposed turbine placements seem to be quite close to wetland areas. The Perch lake drainage system drains down to the Bidwell Bog and significant alterations to that system of drainage would have effects on a rare domed bog formation.

25.

Commented on the following statement as presented in the EIS/ESR: "No rare plant species were found in vegetation survey plots." Is this a standard method of surveying for rare species?

26.

Commented on the following statement as presented in the EIS/ESR: "305 m (1000 ft.) Perch Lake Setback- The NEMI municipal set back requirement identifies Perch Lake as a sensitive lake and requires a 305 m (1000 ft) setback for all building activity." I don't think turbine sites 29 and 34 meet this requirement if taken from the wetland at the east end of the lake and perhaps the more sensitive part ecologically.

27.

Commented on the following statement as presented in the EIS/ESR: "No bald eagles were observed during winter monitoring but a single bird was observed during spring migration monitoring in April 2008 at the Townline Road - Greenbay Road Junction area." I regularly see a bald eagle pair (with a new juvenile this year) above a nest at Freer Point (2000 M from turbine 11) Also a bald eagle has been frequently seen above Whites Point east of McLean's Mtn.

28.

Commented on the following statement as presented in the EIS/ESR: "NEMI primarily consists of northern boreal forest that plays an important role in the local economy, for mining, forest harvesting and tourism. Misery Bay Nature Reserve (MBNR) is located along remote stretches of Lake Huron shoreline at Misery Bay. The local economy in NEMI includes mainly farming and lumbering where tourism is a main aspect of the local economy. The nature



reserve lies 35

kilometers west of the Town of Gore Bay." What has Misery Bay got to do with eastern

Manitoulin? Perhaps more evidence this report was cutting and pasting into a mold for a

previous unrelated study?

29.

Commented on the following statement as presented in the EIS/ESR: "There are few residences

within the proposed study area which are located along existing roadways

(Green Bush Road,

Morphet's Sideroad and McLean's Mountain Road). There are no businesses in

the vicinity of

the study site." That is because the boundaries of the study site were drawn to specifically

exclude the corridors of housing along the shore and along Green bay Road.

Farmers are business

men, so are tourist operators and marina operators and artists.

30.

Commented on the following statements as presented in the EIS/ESR: "The

Little Current Harbour

provides deepwater access for private yachts and cruise ships. Tourism is an important economic

factor. Four-season recreational opportunities and special events draw

visitors to the

NEMI. Tourist attractions in NEMI consist of many public beaches, fishing,

hiking, fossil

hunting, variety of tours, summer theatres, and wildlife watching. Hunting is

popular in the

fall. The project lands are not likely to be of interest to visitors to the

Island, with the

possible exception of hunters

although all of the project lands are private. Nevertheless, some residents

have expressed

concern that the visibility of the turbines could affect tourism activity and related

businesses. The project is well set back from shoreline areas which is the

focus of tourism

activity in the general area. (three turbines are about 1.5- 2 km from the

shoreline and the

rest are at least 3 km away).

As such, no specific mitigation measures are required." Perhaps this is an

attempt to deceive a

reviewer who might not be familiar with the area. The distance from shore is irrelevant

given that the turbines are 120M high and located on top the escarpment. As

the report

says "The site lies mainly above an escarpment, which trends along the

northern, eastern and

southeastern boundaries of the property. The escarpment is 300 m (I think

feet) high and

is a major physiographic feature of the area." Precisely why the Niagara

escarpment commission

restricts turbines from the bluff.

31.

Commented on the following statement as presented in the EIS/ESR: "Analysis of noise levels

shows that the noise impact from the operating phase of the wind farm would not exceed the most restrictive nighttime noise limits that apply for an area with a Class 3 (Rural) acoustic designation. As the turbines have been sited to comply with MOE noise restrictions (40 dB level) at receptors within 1500 m of each wind turbine there is no need to apply mitigation measures. No adverse significant effects are predicted." The noise forecast data suggest levels of noise that would cause significant disruption in the lives of local residents who have a right to the peaceful enjoyment of their homes and properties. There is also increasing evidence for the validity of Wind Turbine Syndrome in a small but significant percentage of predisposed individuals possibly related to the low frequency sound. This condition is prompting authorities in many countries including our own to reevaluate the appropriate setbacks.

32.

Commented on the following statement as presented in the EIS/ESR: "The presence of wind turbines will alter the current rural "bush" nature of the study area. Some residences in the project area may experience temporary disruption effects during project construction (e.g. noise, dust and additional traffic). Although these effects are common to any large-scale construction project, they do have the ability to temporarily affect the character of the area during the construction of the project. The visual impact of wind turbines is subjective, with people's reaction being either positive, to their influence on the landscape. The alteration of the viewscape is further discussed in Section 6.25." I suspect if you are not aware of any Manitoulin culture you would characterize the area as "rural bush". The living beings in the "bush" area are apparently incidental. The information on the three categories peoples responses fall into with respect to the visual impact is informative!

33.

Commented on the following statement as presented in the EIS/ESR: "Some residents along Morphets Side Rd have expressed concerns related to the proposed transmission line route. While this transmission line will not result in any nuisance effects to residents along the road way, its presence may be perceived as a visual intrusion to the area and impact the rural character of the area. As there are few residents in the vicinity of the project and all are well removed from the turbine sites, these types of effects are expected to be minimal. Changes to

the character of the area will result from the turbines being visible from some areas." See previous comment about the general level of distain for public concern.  
34.

Commented on the following statement as presented in the EIS/ESR: "As the wind farm is well removed from major recreation features such as La Cloche Provincial Park (>20 km away), effects to recreation/tourism are unlikely." To my knowledge there are few recreational opportunities developed as yet in this recently designated area. Given that, the meaning of the statement is Obscure.  
35.

Commented on the following statement as presented in the EIS/ESR: "McLean's Mountain is one of many scenic lookouts of Manitoulin Island. There is a viewing platform at the top of the bluff on the west side of Burnets Side Road. While the project will not affect views from this platform (the views are to the north over the North Channel), there may be an opportunity to improve this facility with the addition of a project information kiosk at this location." This lookout is not near or to the west of Burnett's Side Road. Of more relevance are other lookouts like the famous Cup and Saucer trail and lookout that currently looks over the entire beautiful Green Bush area and where people who visit in large numbers especially in the summer and for the fall colours will now see all 43 turbines. (I guess Dillon forgot about that lookout)  
36.

Commented on the following statement as presented in the EIS/ESR: "The proposed project lands are of limited value to tourism. Some recreational hunting for small game and waterfowl may occur in the project area early in October and early in December. The visibility of the turbines beyond the immediate project area will be very limited." This obvious inaccuracy has been refuted above.  
37.

Commented on the following statement as presented in the EIS/ESR: "No significant changes to recreation and tourism activity are expected as a result of the project. As such, no significant effects to tourism and recreation activity are expected." Excellent logic.  
38.

Commented on the following statement as presented in the EIS/ESR: "Some residents have expressed concerns with the turbine the number of turbines to be lit to reduce this effect. As per Transport Canada requirements some of the wind turbines will require navigation lighting." Yes, residents are concerned about light pollution. Manitoulin and NEMI have

both passed dark  
skies legislation that this project is clearly in contravention of.  
Manitouliners value their  
dark skies. To suggest that the majority of the towers will not have to be  
lit is misleading.

39.

I have based this review on the most glaring of the errors in the sections  
where I have certain  
knowledge. The authors of the report show little understanding of the  
geography of Manitoulin  
and even less of the values Manitoulin people hold. I am not sufficiently  
expert in biology to  
comment on the fish, bird and bat studies but one would have to wonder about  
the quality of  
the conclusions in those areas given the quality of the rest of the report.  
In conclusion I  
contend that the number of errors in facts and the omissions and bias of  
content combine to  
completely  
undermine the credibility of this report. It would only be proper for this  
project to be  
advanced to a full environmental assessment in order to ensure the protection  
of the  
environment and the people of NEMI.



## **NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

[REDACTED]  
[REDACTED]  
[REDACTED]

### **RE: McLean's Mountain Wind Project**

Thank you for your letter of April, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

Several of the northernmost turbines and southwestern perimeter turbines have been removed largely due to public input. This results in a reduction in the number of wind turbines. Northland Power Inc. (NPI) is also currently proposing the use of 100 metre wind turbine towers which will lower the number again to 24-26 units. The proposed project will require the construction of a transmission line to connect with the Hydro One transmission system that is located on Goat Island.

NPI has also entered into a 50/50 partnership with Mnidoo Mnising Power, a company formed by the United Chiefs and Councils of Mnidoo Mnising First Nations, to share equally in the McLean's Mountain Wind Farm.

NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

I trust that the following responses address the concerns and questions you have expressed in your letter.

### **Concerns and Responses Regarding Economic Impacts**

**Comment:** *"Manitoulin is a tourist based economy: With the Ontario Power Authority having just approved 60 MW of the McLean's Mountain project, with another 40 MW awaiting approval and another 100+ MW for future expansion as per the Ontario Power Authority web site, how can Northland and government officials assure residents and visitors that this island will not soon be covered with hundreds of Industrial Wind Turbines? (...)"*

### **NPI Response:**

The proposed McLean's Mountain Wind Farm is expected to have no negative impacts on Manitoulin Island Tourism. NPI has considered the potential for effects of the project on tourism and recreation

activities. The project is well removed from the Lake Huron shoreline areas around the Island. The closest wind turbine (the westernmost turbine, turbine #42) is about 1.5 km from the Lake Huron shoreline. The easternmost wind turbine (turbine #9) is greater than 3 kilometres from the Lake Huron shoreline. Appreciating that tourist interests vary by individual, it is NPI's opinion that the view of the wind farm, especially from Honora Bay, will be complementary and will not negatively affect the viewscape. Appreciating that tourist interests vary by individual, it is NPI's opinion that the view of the wind farm, especially from Honora Bay, will be complementary and will not negatively affect the viewscape.

Wind farms can have positive effects on the local tourism economy. There are 6,000 wind turbines in Denmark, which are used for marketing tourism. Local tourism associations may use wind turbines to promote "green tourism". This is particularly targeted towards the German market, where the public is known to have a high level of interest in both environmental issues and in new technology. In a Scottish study<sup>1</sup> 43% of respondents said a wind farm would have a positive effect on their inclination to visit the Argyll area, an area of high landscape value. About the same proportion of respondents said it would make no difference, while less than 8% felt that it would have a negative effect. Nine out of ten tourists visiting some of Scotland's top beauty spots say the presence of wind farms makes no difference to the enjoyment of their holiday. Twice as many people would return to an area because of the presence of a wind farm than would stay away, according to a poll carried out by MORI Scotland Commercial tour companies provide guided tours of several wind farms in the Pincher Creek, Alberta region. Several wind farms in Australia attract so many visitors that commercial tour operators provide opportunities for the public to get a close up view of the wind farms.

Back in 2004 I was involved in conducting a survey about the wind farm, requested by the municipality. The survey results indicated over 95% support of a wind farm by locals and visitors to Little Current. Boaters especially noted that the Turbines provide a landmark coming into the port of Little Current. NPI does not expect that the presence of the turbines would factor into a person's decision on whether to visit the Island. This project may have the potential to attract visitors. At NPI's Miller Mountain project in Quebec, 3500 tourists visited the project in 2008. The Providence Bay Wind Farm located to the south east of the MMWF project, approximately 45 kilometres away, established an interpretation centre for the project, which attracts numerous visitors over the summer visitor months

### **Concerns and Responses Regarding Natural Environment**

**Comment:** *"Soft rock and gas pockets all over the island: Manitoulin is known locally for the existence of extensive gas pockets and limestone rock. A fire burns yearly unless extinguished in Kagawong due to surface leakage (...)"*

#### **NPI Response:**

Gas pockets are unlikely to be found during construction as the foundations extend to a depth of only three (3) meters. The initial geotechnical tests show that the rock near the surface is fractured and permeable and therefore unlikely to contain gas. Care will be taken during the drilling of additional bore holes prior to construction and the excavation during construction to protect against the unlikely release of gas.

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<sup>1</sup> *Tourist Attitudes Toward Wind Farms*, MORI Summary Report, September 2002 [www.bwea.com/pdf/MORI.pdf](http://www.bwea.com/pdf/MORI.pdf)

Additional geotechnical investigations have been initiated and will confirm the characteristics of the rock and provide input to the design for the turbine foundations to support the turbines. Wind turbines can be erected in a variety of soil/rock conditions. The risk of turbine collapse is extremely low. The foundations that will be used for the turbines on this site are the same as the ones used in locations with sandy soil. The large spread foundation disperses the mass of the turbine equally over a significant footprint to enhance its stability.

A decommissioning plan has been prepared by NPI. The decommissioning plan identifies the specific Project components that will be removed, the costs associated with the removal of the components and the associated scrap value. The cost of decommissioning will be paid by the company that owns the contract with the government at the end of its useful life. We expect this to be Northland Power Inc. The responsibility of responsibly decommissioning the project is a requirement of any company who holds a contract under the FIT process. The decommissioning plan is an integral part of the REA requirement.

**Comment:** *“Surface ground water contamination due to extensive drilling for multiple anchor rods for each turbine to unknown depths, in soft, unstable limestone (...)”*

**NPI Response:**

Given the nature of a wind farm (and the specific mitigation measures proposed for this project), the project is highly unlikely to have any impact of surface or ground water resources. Given the shallow depth of the foundations, three (3) meters and the fractured and permeable nature of the geology, no measurable effects on ground water flow is expected. We are aware, previous to any construction; many people in the community are hauling water to their wells at various times of the year. Further, the project will not reduce the rate of rainwater ground infiltration in the larger area. Based on the bore holes information collected to date, the water table is expected to be well below the depth of turbine foundation excavation. There is no reason to expect that turbine excavation activities would have an effect on the underground water or surface water in the area given the shallow depth of the excavations.

**Comment:** *“Adverse consequences for soil, vegetation, trees, birds, bats and other wildlife both during construction and operational phases. With Manitoulin being home to so many rare species and plants, how can Northland possibly address and mitigate such extensive losses as a result of their project?”*

**NPI Response:**

Extensive studies on the natural environment have been conducted for the proposed project. These studies include the input of the Ministry of Natural Environment (MNR) and Environment Canada (EC) to ensure that the natural environment on Manitoulin Island is protected. A Natural Environment Assessment, in consultation with the MNR and EC was also conducted for this project. The assessment concluded that the risk to rare, threatened and endangered species in the area is low and minimal significant adverse effects are anticipated. NPI will implement mitigation measure where required.

**Comment:** *“At Northland’s public consultation meeting on March 22, 2010 The United Chiefs and Councils of Manitoulin (UCCM) declared their continued opposition to the project until appropriate consultation with Island First Nations has been made (...)”*

*The AOK First Nation has also expressed opposition to this project, sighting concerns regarding improper consultation, and improper setbacks to protect the health of their community and First Nation Land. AOK is also calling for a minimum 2-2.5 km setback distance between turbines and the boundaries of their Nation (...).”*

**NPI Response:**

Communication with First Nation communities that may have interests in the proposed project has been ongoing for several years and is in compliance with government requirements. In February 2011, Mnidoo Mnising Power, a company formed by the United Chiefs and Councils of Mnidoo Mnising First Nations (UCCMM), has entered into a 50/50 partnership with Northland Power Inc. to share equally in the McLean's Mountain 60 MW Wind Farm Project and on-going renewable power developments.

Membership of UCCM include M'Chigeeng First Nation; Sheguiandah First Nation; Sheshegwaning First Nation; Aundeck-Omni-Kaning First Nation; Whitefish River First Nation; and Zhiibaahaasing First Nation. UCCMM formed Mnidoo Mnising Power to lead renewable energy projects on Manitoulin Island in order to protect First Nations' rights, heritage and ensure the future for First Nations' youth.

Band Council resolutions are in place with each band council supporting their position in this agreement.

**Concerns and Responses Regarding Decreased Property Values**

**Comment:** *“There is increasing evidence that Industrial Wind Turbines (IWT) cause significant loss of property values to nearby lands. Recently in Ontario an appeals review board through MPAC (Municipal Property Assessment Corporation) ruled in favour of a 50% assessed reduction in property value on a property due to excessive noise from a transformer station in a wind farm project (...)”*

**NPI Response:**

Based on the consultations undertaken with the local residents, NPI is aware of the public concerns over the loss of property values due to the proposed development of the McLean's' Mountain Wind Farm. The vast majority of evidence on the impact of wind farms on land values comes from Europe, Australia and United States of America (USA). The studies conducted in these countries indicate wind farms have no material effect on property values. Data from Ontario is beginning to emerge as more wind farms are constructed, and the experience from those projects also suggests that wind farms do not decrease property values.

A 2006 study conducted by Blake, Matlock and Marshal Ltd. for Windrush Energy suggests that wind farms have not negatively affected property values. “Property Value Study: the Relationship of Windmill Development and Market Prices” aimed to determine if the development of wind farms in the Melancthon area has had any impact on the growth of property values in the Township. Property values before and after wind farm development in the Township of Melancthon where compared to values in East Luther Grand Valley Township, a neighbouring and similar township except for its lack of wind farms. Property values in Melancthon were also compared to those in Dufferin County. The analysis showed that property values in the Township of Melancthon grew similarly to the rest of the County, and increased more than East Luther Grand Valley Township. Wind farm development was not found to have diminished property values.

The Canadian Hydro Developers Inc. also compared housing price ranges on Wolfe Island and Simcoe Island in Ontario, before and after the development of the wind farm ([http://www.shearwind.com/glen\\_dhu\\_community/fact\\_sheet.html](http://www.shearwind.com/glen_dhu_community/fact_sheet.html)). Findings indicate that Township of Melancthon experienced a stronger growth rate in sales price per property, than the adjoining East Luther Grand Valley Township. The findings of this particular research indicate that the presence of the Wind Farm in Melancthon Township has not had an adverse impact on values within that municipality.



A study conducted in the Chatham-Kent area, where there are a number of wind turbines, found no evidence that wind farms have any measurable affect on rural residential market values. The study was conducted during May and June of 2009 by John Simmons Realty Services Ltd. and Canning Consultants Inc. and was commissioned by the Canadian Wind Energy Association to review possible effects of wind energy developments on real estate values on near-by properties. This information was provided at the March 22<sup>nd</sup>, 2010 Public Information Centre (PIC) that was held in Little Current. To review the study, please visit: <http://www.canwea.ca/pdf/talkwind/PropertyValuesConsultingReportFebruary42010.pdf>

The appeals review board through MPAC (Municipal Property Assessment Corporation) referred to a very specific case in which a particular transformer was not functioning properly, causing excess noise. MPAC uses market and sales analysis to determine property values and has provided an outline of how they assess properties. This information was displayed on a large panel at the March 22<sup>nd</sup>, 2010 PIC and states that "To date, MPAC's analysis of sales does not indicate that the presence of wind turbines that are either abutting or in proximity to a property has either a positive or negative impact on its value."

Our direct contact with real estate sales representatives have indicated that there has been no effect on property values as a result of the Prince Wind Farm near Sault Ste. Marie. This information was presented at the March 2010 PIC. It is also our understanding that since the McLean's Mountain Wind Farm has been in advanced development stages adjacent properties including Farms have been sold at quite appreciated values.

### **Concerns and Responses Regarding Infrasound and Human Health Impacts**

**Comment:** "(...) For full information, please visit [www.WindVigilance.com](http://www.WindVigilance.com)"

#### **NPI Response:**

Infrasound or low frequency noise emissions were characteristics of some of the earlier models of wind turbines. This was attributed to early designs in which the turbine blades are downwind of the main tower. This phenomenon does not occur with modern upwind turbine technology (MOE, 2005). Infrasound has been studied extensively for current wind turbine technologies (JCAA, June 2006; HGC, 2006; Defra, 2003). At present, there are a significant number of wind turbines in operation in Ontario, including in several in proximity to residences; with no adverse impact from infrasound.

A study performed by HCG (2006) conclude, "All in all, based on Canadian and international studies, infrasound generated by wind turbines should not be considered a concern to the health of nearby residences. At the closest distances at which residences are typically located near large wind turbines, approximately 300 meters, the infrasonic levels are low enough to not be of concern. In any event, the discussion of whether or not infrasound poses a health risk at low levels is somewhat academic since, in the absence of wind turbines, comparable infrasonic levels are present in the natural environment." The evidence is that the current turbine technologies do not present any adverse impact related to the generation of infrasound.

The May 2010 report on *The Potential Health Impacts of Wind Turbines*, Chief Medical Officer of Health (CMOH) indicates that:

"There is no scientific evidence, however, to indicate that low frequency sound generated from wind turbines causes adverse health effects. Low frequency sound and infrasound are everywhere in the environment. They are emitted from natural sources (e.g., wind, rivers) and from artificial sources including road traffic, aircraft, and ventilation systems. The most common source of

infrasound is vehicles. Under many conditions, low frequency sound below 40Hz from wind turbines cannot be distinguished from environmental background noise from the wind itself (Leventhall 2006, Colby et al 2009).

Low frequency sound from environmental sources can produce annoyance in sensitive people, and infrasound at high sound pressure levels, above the threshold for human hearing, can cause severe ear pain. There is no evidence of adverse health effects from infrasound below the sound pressure level of 90dB (Leventhall 2003 and 2006).

Studies conducted to assess wind turbine noise indicate that infrasound and low frequency sounds from modern wind turbines are well below the level where known health effects occur, typically at 50 to 70dB. A small increase in sound level at low frequency can result in a large increase in perceived loudness. This may be difficult to ignore, even at relatively low sound pressures, increasing the potential for annoyance (Jakobsen 2005, Leventhall 2006) (...).”

The report concludes that “low frequency sound and infrasound from current generation upwind model turbines are well below the pressure sound levels at which known health effects occur. Further, there is no scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects.

All of the proposed wind turbines are greater than 698 meters away from any residence, so there should clearly be no issue. The MOE noise standard also meets the range of the Health Canada guidelines of 40 dB(A) to residences.

### **Concerns and Responses Regarding Set-back Distances between Industrial Wind Turbines and Nearby Homes and Dwellings**

**Comment:** *“The 550 metre setback outlined in Ontario’s Green Energy Act is clearly not enough compared to other norms and standards around the world (see statements from the World Health Organization in the section below on Noise and Health Effects); I strongly urge Northland Power Inc. to exercise the Precautionary Principle and structure their project so that 2-2.5 km is the minimum distance between a turbine and any other dwelling such as a home, cottage or hunt camp.”*

#### **NPI Response:**

The Province of Ontario has some of the most stringent regulations in North America regarding wind turbine siting and sounds restrictions and Northland Power intends to meet or exceed these regulations. It is important to note that although wind energy is relatively new to Ontario, it’s a very well-established and proven form of electrical generation around the world. For more than thirty (30) years, tens of thousands of people have been living near wind turbines with no ill effects.

The Ontario’s Chief Medical Officer of Health, Dr. Arlene King, recently sent a memorandum to all Medical Officers of Health and Environmental Health Directors stating the following about wind energy and human health: “(...) there is no scientific evidence, to date, to demonstrate a causal association between wind turbine noise and adverse health effects.”

I would like to bring your attention to a report released December 2009, authored by an international panel of medical doctors and sound experts titled “Wind Turbine Sound and Health Effects: An Expert Panel Review”. It concluded that sound from wind turbines has no direct harmful effect on human health.

To see the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects.pdf)

To see an executive summary of the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects-Executive\\_Summary.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects-Executive_Summary.pdf)

For more information on the effects of sound from wind turbines on human health please refer to the comment response tables provided in the Draft Renewable Energy Approval (REA) package.

### **Concerns and Responses Regarding Adverse Health Effects and Industrial Wind Turbines**

**Comment:** “(...) *The December 2009 American Wind Energy Association and Canadian Wind Energy Association sponsored report entitled “Wind Turbine Sound and Health Effects” (A/CanWEA Panel Review) acknowledges that wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological symptoms (...)*”

#### **NPI Response:**

The Chief Medical Officer of Health (CMOH) Report “The Potential Health Impact of Wind Turbines” dated May 2010 concludes that “While some people living near wind turbines report symptoms such as dizziness, headaches, and sleep disturbance, the scientific evidence available to date does not demonstrate a direct causal link between wind turbine noise and adverse health effects” and that “The sound level from wind turbines at common residential setbacks is not sufficient to cause hearing impairment or other direct adverse health effects. However, some people might find it annoying. It has been suggested that annoyance may be a reaction to the characteristic “swishing” or fluctuating nature of wind turbine sound rather than to the intensity of sound.

The proposed project will require approval under Ontario Regulation 359/09 – Renewable Energy Approval (REA) under the *Green Energy Act* and NPI is complying with all of the REA requirements. Further, NPI will be required to meet the 40 dBA limit at all identified receptors and would be required to mitigate/resolve any exceedances as per the terms of the REA approval.

The issues and concerns expressed in a document you have provided entitled “*Human Health Public Comment*” have been addressed in the Draft REA Submission Package was released on January 18<sup>th</sup>, 2010 for a 60-day public review period. The responses to these concerns can be found in Section 2 Of the Draft REA package in “*Table A – Proponent Response to Comments Received During The 30-day Calendar Review Period (July 24<sup>th</sup>, 2009 – August 24<sup>th</sup>, 2009) on the Environmental Impact Statement/Environmental Screening Report (EIS/ESR) For the McLean’s’ Mountain Wind Farm*”.

The comments you have provided in a document entitled “*List of Municipal issues needing to be addressed by NPI*” have been addressed in the Draft REA Submission Package.

Should you have any additional comments or concerns regarding the proposed project please feel free to contact me directly. My phone number is 705-271-5358 and my email is rickmartin@northlandpower.ca.

Thank you.

A handwritten signature in black ink, appearing to read "Rick Martin". The signature is fluid and cursive, with the first name "Rick" and last name "Martin" clearly distinguishable.

Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre

Mar 12, 2010

Northland Power,

Attn: Rick Martin

We wrote to you on Aug 18, 2009 and again on Sept 3, 2009 with regard to our concerns regarding the too-close location of turbine 1 to our Manitoulin home. We informed you that our home is located at GPS N45,57.505 W081,56.971. Our home fills the requirements of a receptor as defined in the GEA. Your McLeans Mountain Wind farm plan appears to show the location of turbine 1 is well within the proscribed 550 meter distance required by the GEA. We are growing increasingly concerned as the deadline nears and you have not responded to either of our letters that you may be planning to proceed without addressing our concern. Can you confirm that you will be moving turbine 1 back to allow for the full 550M setback?

Yours Truly

A large black rectangular redaction box covering the signature and name of the sender.



3 SEPT 2009

Ms. Agatha Garcia-Wright, Director,  
Environmental Assessment & Approvals Branch,  
Ministry of the Environment,  
2 St. Clair Ave. West, Floor 12A  
Toronto, ON M4V 1L5

Dear Ms Garcia-Wright,

Re: Location of dwelling at 55 McLeans Mountain Road,  
Township of North East Manitoulin and the Islands,  
and Northland Power Inc's siting of wind turbines  
in their environmental assessment report.

We wrote to you on 18 Aug 2009 about the omission of our dwelling from Northland Power's maps of the siting of V90 turbines in their Environmental assessment report. We have now measured the distance between Northland Power's meteorological tower ( $\Delta$  on the enclosed map p2) and our dwelling. It is 340 meters.

Our property extends from the top of the escarpment, to the west of the scenic lookout on McLeans Mountain, to Highway 540 (19.4 acres, Pt of Lot 6, Conc 7, NE Manitoulin and the Islands) shown on the enlarged map - p3. The south west corner of our property is 70 meters from the meteorological tower.

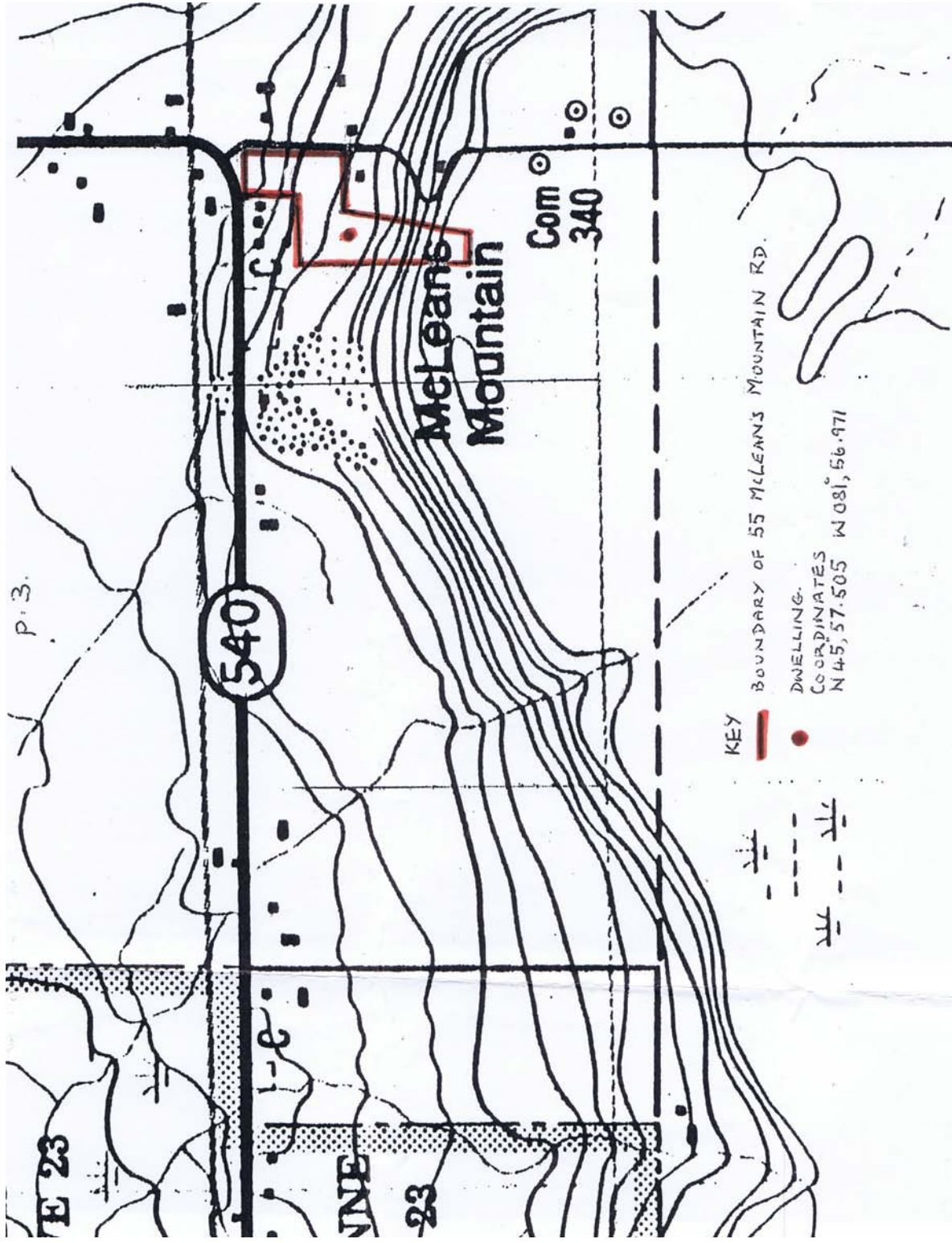
- Revised co ordinates of our dwelling = N 45°, 57.505 W 081, 56.971
- South west corner of our property i.e nearest to meteorological tower = N 45°, 57.349 W 081, 57.050
- Meteorological tower ( $\Delta$  on Northland Power's map on p2) = N 45° 57.346 W 081, 57.101

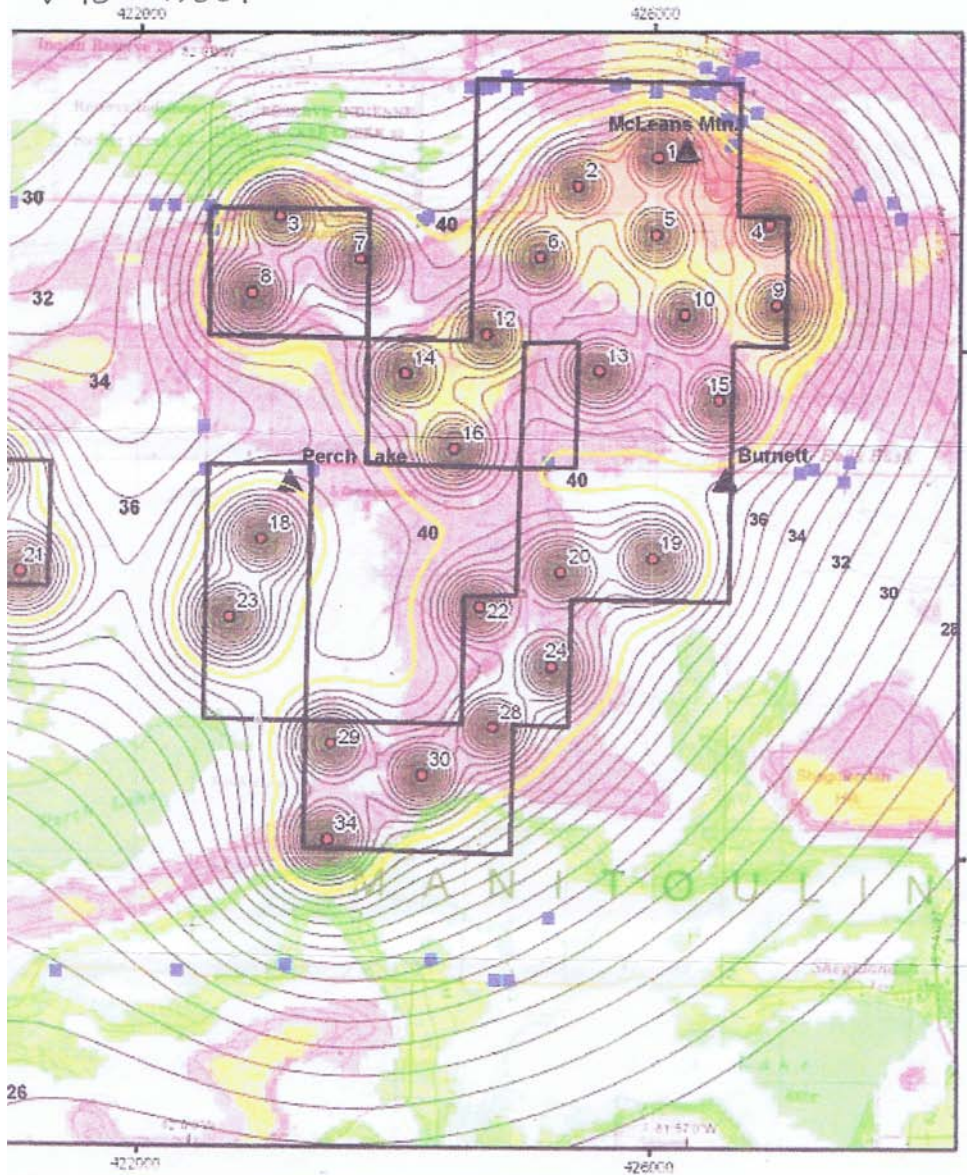
We give permission for Northland Power's representative to go onto our property at 55 McLeans Mountain Road. To check the precise location of our dwelling for themselves to ensure that the turbines are sited the correct distance away from our dwelling. We use this dwelling frequently, in all seasons of the year. Combination of this can be checked with [redacted], neighbours on McLeans Mountain Road.

Yours sincerely



c.c. Don McKinnon, Dillon Consulting Ltd  
Rick Martin, Project Manager, Northland Power Inc.  
Stephen B. Marshall, B.A., LL.B., 34 Water St, Little Current, POPIKO.





← SEE ALSO  
ENLARGED  
MAP. P.3

<p>Legend</p> <ul style="list-style-type: none"> <li>● V90 Layout</li> <li>▲ Met Tower</li> <li>■ Dwellings</li> <li>□ Project Boundary</li> </ul>	<p>Product</p> <p>Optimized Layout</p>	<p>Reference</p>	
	<p>Operator</p> <p>AWS Truewind</p>	<p>Disclaimer</p> <p>The information contained herein is for informational purposes only and does not constitute an offer or recommendation of any financial product or service. The information is subject to change without notice and is not intended to be relied upon in making any investment decision.</p>	<p>North Arrow</p> <p>N</p>
	<p>AWS Truewind</p>	<p>Product</p> <p>Optimized Layout</p>	<p>Reference</p>





## **NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

[REDACTED]

### **RE: McLean's Mountain Wind Project and Community Concerns**

Thank you for your email of March, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

Several of the northernmost turbines and southwestern perimeter turbines have been removed largely due to public input. This results in a reduction in the number of wind turbines. Northland Power Inc. (NPI) is also currently proposing the use of 100 metre wind turbine towers which will lower the number again to 24-26 units. The proposed project will require the construction of a transmission line to connect with the Hydro One transmission system that is located on Goat Island.

NPI has also entered into a 50/50 partnership with Mnidoo Mnising Power, a company formed by the United Chiefs and Councils of Mnidoo Mnising First Nations, to share equally in the McLean's Mountain Wind Farm.

NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

I trust that the following responses address the concerns and questions you have expressed in your email and previous letters (August 18 and September 3, 2009).

NPI understands and acknowledges your concern with regard to the location of Turbine 1 in relation to your residence and can confirm that in the final layout this turbine has been removed. The final wind farm layout meets all required REA setbacks. The proposed project will require approval under Ontario

Regulation 359/09 – Renewable Energy Approval (REA) under the *Green Energy Act* and NPI is complying with all of the REA requirements. Further, NPI will be required to meet the 40 dBA limit at all identified receptors and would be required to mitigate/resolve any exceedances as per the terms of the REA approval.

Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is rickmartin@northlandpower.ca.

Thank you.

A handwritten signature in black ink, appearing to read "Rick Martin". The signature is fluid and cursive, with the first name "Rick" and last name "Martin" clearly distinguishable.

Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre

**From:** McKinnon, Don  
**Sent:** Tuesday, March 30, 2010 11:40 AM  
**To:** Myrans, Katharine  
**Subject:** MMWF COMMENTS

**Categories:** 2 Boss

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**From:** [REDACTED]  
**Sent:** Thursday, March 18, 2010 3:32 PM  
**To:** rickmartin@northlandpower.ca; McKinnon, Don  
**Subject:** Windfarms on Manitoulin Island

To Whom It May Concern:

This letter is a request that the McClean's windmill project not move forward until sufficient health studies have been conducted, an economic impact study has been prepared, and a thorough environmental impact study has been completed – preferably by someone other than Dillon Consulting.

The only people to my mind that would benefit from this project will be Northland Power Inc., and the 13 landowners who have leased their property to Northland Power. Northeastern Manitoulin and the Islands (NEMI) will receive some tax revenues from the project but this benefit will likely be offset by a downturn in tourism and lost tax revenues resulting from property devaluation. Allowing large industry to exploit us here on the is not the approach we should be taking. We can find other green solutions.

There are many developed lands in Ontario that offer suitable locations for wind farms. While global warming is arguably the greatest environmental problem humanity is facing today, there are many other environmental problems that exist. Habitat loss and degradation is still a major environmental problem, and should not be ignored in finding ways to reduce our carbon emissions. It does not make sense to develop 22 000 acres of pristine habitat to build windmills when there are alternative sites that have been previously developed and in many cases have existing infrastructure.

My concerns with this project include but are not limited to: economic impacts, negative effects on human health, impacts on soil, plant, and wildlife communities during the construction phase, permanent displacement of wildlife, property devaluation, loss of adjacent property owner rights, and alteration of groundwater quality and flow.

Please conduct more investigations before moving forward with this project. It does not really benefit islanders...just off - islanders that see it as a way to reduce their taxes on their recreational properties, and they don't have to live near these things.

Sincerely,

[REDACTED]

This e-mail is intended solely for the person or entity to which it is addressed and may contain confidential and/or privileged information. Any review, dissemination, copying, printing or other use of this e-mail by persons or entities other than the addressee is prohibited. If you have received this e-mail in error, please contact the sender immediately and delete the material from any computer. Please also notify the Rainbow District School Board's Information and Privacy Co-ordinator by calling 705-674-3171, ext. 7217 / 1-888-421-2661 or by email at [info@rainbowschools.ca](mailto:info@rainbowschools.ca)



## **NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

[REDACTED]  
[REDACTED]  
[REDACTED]

### **RE: McLean's Mountain Wind Project and Community Concerns**

Thank you for your email of March, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

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NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

I trust that the following responses address the concerns and questions you have expressed in your letter.

### **Concerns and Responses Regarding Human Health Impacts**

**Comment:** "(...) request that the McLean's windmill project not move forward until sufficient health studies have been conducted (...)"

#### **NPI Response:**

The May 2010 report on *The Potential Health Impacts of Wind Turbines*, Chief Medical Officer of Health (CMOH) indicates that:

*"There is no scientific evidence, however, to indicate that low frequency sound generated from wind turbines causes adverse health effects. Low frequency sound and infrasound are everywhere*

*in the environment. They are emitted from natural sources (e.g., wind, rivers) and from artificial sources including road traffic, aircraft, and ventilation systems. The most common source of infrasound is vehicles. Under many conditions, low frequency sound below 40Hz from wind turbines cannot be distinguished from environmental background noise from the wind itself (Leventhall 2006, Colby et al 2009).*

*Low frequency sound from environmental sources can produce annoyance in sensitive people, and infrasound at high sound pressure levels, above the threshold for human hearing, can cause severe ear pain. There is no evidence of adverse health effects from infrasound below the sound pressure level of 90dB (Leventhall 2003 and 2006).*

*Studies conducted to assess wind turbine noise indicate that infrasound and low frequency sounds from modern wind turbines are well below the level where known health effects occur, typically at 50 to 70dB. A small increase in sound level at low frequency can result in a large increase in perceived loudness. This may be difficult to ignore, even at relatively low sound pressures, increasing the potential for annoyance (Jakobsen 2005, Leventhall 2006) (...)."*

The report concludes that "low frequency sound and infrasound from current generation upwind model turbines are well below the pressure sound levels at which known health effects occur. Further, there is no scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects.

All of the proposed wind turbines are greater than 630 meters away from any residence, so there should clearly be no issue. The MOE noise standard also meets the range of the Health Canada guidelines of 40 dB(A) to residences. The Province of Ontario has some of the most stringent regulations in North America regarding wind turbine siting and sounds restrictions and Northland Power intends to meet or exceed these regulations. It is important to note that although wind energy is relatively new to Ontario, it's a very well-established and proven form of electrical generation around the world. For more than thirty (30) years, tens of thousands of people have been living near wind turbines with no ill effects.

The Ontario's Chief Medical Officer of Health, Dr. Arlene King, recently sent a memorandum to all Medical Officers of Health and Environmental Health Directors stating the following about wind energy and human health: "(...) there is no scientific evidence, to date, to demonstrate a causal association between wind turbine noise and adverse health effects."

The Chief Medical Officer of Health (CMOH) Report "The Potential Health Impact of Wind Turbines" dated May 2010 concludes that "While some people living near wind turbines report symptoms such as dizziness, headaches, and sleep disturbance, the scientific evidence available to date does not demonstrate a direct causal link between wind turbine noise and adverse health effects" and that "The sound level from wind turbines at common residential setbacks is not sufficient to cause hearing impairment or other direct adverse health effects. However, some people might find it annoying. It has been suggested that annoyance may be a reaction to the characteristic "swishing" or fluctuating nature of wind turbine sound rather than to the intensity of sound.

I would like to bring your attention to a report released December 2009, authored by an international panel of medical doctors and sound experts titled "Wind Turbine Sound and Health Effects: An Expert Panel Review". It concluded that sound from wind turbines has no direct harmful effect on human health.

To see the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects.pdf)

To see an executive summary of the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects-Executive\\_Summary.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects-Executive_Summary.pdf)

For more information on the effects of sound from wind turbines on human health please refer to the comment response tables provided in the Draft Renewable Energy Approval (REA) package.

### **Concerns and Responses Regarding Economic Impacts**

**Comment:** “(...) request that the McLean’s mountain windmill project not move forward until ...an economic impact study has been prepared (...)”

#### **NPI Response:**

The proposed McLean’s Mountain Wind Farm is expected to have no negative impacts on Manitoulin Island Tourism. NPI has considered the potential for effects of the project on tourism and recreation activities. The project is well removed from the Lake Huron shoreline areas around the Island. The closest wind turbine (the westernmost turbine, turbine #42) is about 1.5 km from the Lake Huron shoreline. The easternmost wind turbine (turbine #9) of the project area is greater than 3 kilometres from the Lake Huron shoreline. Appreciating that tourist interests vary by individual, it is NPI’s opinion that the view of the wind farm, especially from Honora Bay, will be complementary and will not negatively affect the viewscape.

Wind farms can have positive effects on the local tourism economy. There are 6,000 wind turbines in Denmark, for example, which are used for marketing tourism. Hotels, guesthouses, and campsites may use wind turbines to promote “green tourism”. This is particularly targeted towards the German market, where the public is known to have a high level of interest in both environmental issues and in new technology. In a Scottish study<sup>1</sup> 43% of respondents said a wind farm would have a positive effect on their inclination to visit the Argyll area, an area of high landscape value. About the same proportion of respondents said it would make no difference, while less than 8% felt that it would have a negative effect. Nine out of ten tourists visiting some of Scotland’s top beauty spots say the presence of wind farms makes no difference to the enjoyment of their holiday. Twice as many people would return to an area because of the presence of a wind farm than would stay away, according to a poll carried out by MORI Scotland Commercial tour companies provide guided tours of several wind farms in the Pincher Creek, Alberta region. Several wind farms in Australia attract so many visitors that commercial tour operators provide opportunities for the public to get a close up view of the wind farms.

A survey conducted by NPI staff in 2004 indicated over 95% support of a wind farm by visitors to Little Current. Boaters especially noted that the Turbines provide a landmark coming into the port of Little Current. NPI does not expect that the presence of the turbines would factor into a person’s decision on whether to visit the Island. This project may have the potential to attract visitors. At NPI’s Miller Mountain project in Quebec, 3500 tourists visited the project in 2008. The Providence Bay Wind Farm located to the south east of the MMWF project, approximately 45 kilometres away, established an

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<sup>1</sup> *Tourist Attitudes Toward Wind Farms*, MORI Summary Report, September 2002 [www.bwea.com/pdf/MORI.pdf](http://www.bwea.com/pdf/MORI.pdf)

interpretation centre for the project, which attracts numerous visitors over the summer visitor months.

### **Concerns and Responses Regarding Decreased Property Values**

**Comment:** “(...) *lost tax revenues resulting from property devaluation (...)*”

#### **NPI Response:**

Based on the consultations undertaken with the local residents, NPI is aware of the public concerns over the loss of property values due to the proposed development of the McLean's Mountain Wind Farm. The vast majority of evidence on the impact of wind farms on land values comes from Europe, Australia and United States of America (USA). The studies conducted in these countries indicate wind farms have no material effect on property values. Data from Ontario is beginning to emerge as more wind farms are constructed, and the experience from those projects also suggests that wind farms do not decrease property values.

A 2006 study conducted by Blake, Matlock and Marshal Ltd. for Windrush Energy suggests that wind farms have not negatively affected property values. “Property Value Study: the Relationship of Windmill Development and Market Prices” aimed to determine if the development of wind farms in the Melancthon area has had any impact on the growth of property values in the Township. Property values before and after wind farm development in the Township of Melancthon were compared to values in East Luther Grand Valley Township, a neighbouring and similar township except for its lack of wind farms. Property values in Melancthon were also compared to those in Dufferin County. The analysis showed that property values in the Township of Melancthon grew similarly to the rest of the County, and increased more than East Luther Grand Valley Township. Wind farm development was not found to have diminished property values.

The Canadian Hydro Developers Inc. also compared housing price ranges on Wolfe Island and Simcoe Island in Ontario, before and after the development of the wind farm ([http://www.shearwind.com/glen\\_dhu\\_community/fact\\_sheet.html](http://www.shearwind.com/glen_dhu_community/fact_sheet.html)). Findings indicate that Township of Melancthon experienced a stronger growth rate in sales price per property, than the adjoining East Luther Grand Valley Township. The findings of this particular research indicate that the presence of the Wind Farm in Melancthon Township has not had an adverse impact on values within that municipality.

A study conducted in the Chatham-Kent area, where there are a number of wind turbines, found no evidence that wind farms have any measurable affect on rural residential market values. The study was conducted during May and June of 2009 by John Simmons Realty Services Ltd. and Canning Consultants Inc. and was commissioned by the Canadian Wind Energy Association to review possible effects of wind energy developments on real estate values on near-by properties. This information was provided at the March 22<sup>nd</sup>, 2010 Public Information Centre (PIC) that was held in Little Current. To review the study, please visit: <http://www.canwea.ca/pdf/talkwind/PropertyValuesConsultingReportFebruary42010.pdf>

The appeals review board through MPAC (Municipal Property Assessment Corporation) referred to a very specific case in which a particular transformer was not functioning properly, causing excess noise. MPAC uses market and sales analysis to determine property values and has provided an outline of how they assess properties. This information was displayed on a large panel at the March 22<sup>nd</sup>, 2010 PIC and states that “To date, MPAC’s analysis of sales does not indicate that the presence of wind turbines that are either abutting or in proximity to a property has either a positive or negative impact on its value.”

Our direct contact with real estate sales representatives have indicated that there has been no effect on property values as a result of the Prince Wind Farm near Sault Ste. Marie. This information was presented at the March 2010 PIC. It is also our understanding that since the McLean's Mountain Wind Farm has been in advanced development stages adjacent properties including Farms have been sold at quite appreciated values.

### **Concerns and Responses Regarding Natural Environment**

**Comment:** *“My concerns with this project include but are not limited to: ...impacts on soil, plant, and wildlife communities during the construction phase, permanent displacement of wildlife ... and alteration of groundwater quality and flow.”*

#### **NPI Response:**

Extensive studies on the natural environment have been conducted for the proposed project. These studies include the input of the Ministry of Natural Environment (MNR) and Environment Canada (EC) to ensure that the natural environment on Manitoulin Island is protected. A Natural Environment Assessment, in consultation with the MNR and EC was also conducted for this project. The assessment concluded that the risk to rare, threatened and endangered species in the area is low and minimal significant adverse effects are anticipated. Additional field work was conducted in 2010 as per the MNR direction. Some turbines have been removed and some changes were made to the turbine and road locations to avoid wetland areas that now have to be avoided under the REA process. The results of this work will contribute to the final Environmental Management and Protection Plan (EMPP). NPI will implement mitigation measure where required. A new natural heritage assessment document has been prepared and submitted to the Ministry of Natural Resources for review and comment. NPI will implement mitigation measure where required.

An assessment of avifauna and wildlife in the project area was conducted in accordance with Ministry of Natural Resources and Environment Canada guidelines. The assessment concludes that the potential effects of the proposed project in the avian and other wildlife populations are minimal. There is a large amount of information available regarding the effects of wind farms of birds and this base of information continues to grow. From the experience of existing wind farms, the effects to birds are generally minimal during operation. While some construction activities could result in deer and other species moving out of the immediate area during the construction period, once the turbines are operational there is no evidence to suggest that the turbines would reduce deer population in the area, or that deer would no longer frequent the area.

There is no reason to expect that turbine excavation activities would have an effect on the groundwater or surface water in the area given the shallow depth of the foundations (three (3) meters), the specific mitigation measures proposed for this project and the fractured and permeable nature of the geology. Further, the project will not reduce the rate of rainwater ground infiltration in the larger area. Based on the borehole information collected to date, the water table is expected to be well below the depth of turbine foundation excavation. Additional geotechnical investigations will confirm the characteristics of the rock and provide input to the design for the turbine foundations to support the turbines.

### **Concerns and Responses Regarding Property Owner Rights**

**Comment:** *“My concerns with this project include but are not limited to: ...loss of adjacent property owner rights (...)”*



**NPI Response:**

The wind turbines, once constructed, will not prevent landowners from constructing buildings in their vicinity. There are currently no by-laws preventing a landowner from doing this. NPI is siting its turbines a minimum of 550 metres from sensitive noise receptors as required by provincial policy. With the current layout all turbines are at least 698 metres from the closest receptor.

**Comments and Responses Regarding Project Location**

**Comment:** *“There are many developed lands in Ontario that offer suitable locations for wind farms (...) It does not make sense to develop 22,000 acres of pristine habitat to build windmills when there are alternative sites that have been previously developed (...)”*

**NPI Response:**

Choosing a location for a wind farm is largely based on available wind resources and access to the transmission grid. For the wind turbine to achieve maximum efficiency, the wind must be strong and consistent. These winds are found on McLean’s Mountain with its high elevation. A large portion of the project is on agricultural (pasture) land, which can be considered “altered” or “developed” and is not in pristine habitat. It is our opinion that the project can be developed with minimal impact on the ecosystem as described in the ESR and the REA reports.

Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is rickmartin@northlandpower.ca.

Thank you.



Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre

**From:** McKinnon, Don  
**Sent:** Thursday, April 29, 2010 12:16 PM  
**To:** Myrans, Katharine  
**Subject:** FW: For future generations, Reconsider McLean Mountain Wind Project

**Follow Up Flag:** Follow up  
**Flag Status:** Blue

**Categories:** 2 Boss

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**From:** [REDACTED]  
**Sent:** Thursday, April 29, 2010 12:07 PM  
**To:** jtem@northlandpower.ca; commissioner@eco.on.ca; agatha.garciawright@ontario.ca; rickmartin@northlandpower.ca; arlene.king@ontario.ca; info@ombudsman.on.ca; info@oahpp.ca; bdoguid.mpp@liberal.ola.org; dmcguinty.mpp.co@liberal.ola.org; info@townofnemi.on.ca; minister.moe@ontario.ca; McKinnon, Don; dca@northlandpower.ca  
**Subject:** For future generations, Reconsider McLean Mountain Wind Project

April, 2010

To All Government and Company Officials:

Wind power appropriately planned clearly can be a helpful part of green energy going forward. Huge wind turbines also clearly lower the value of surrounding property, and without proper set-backs cause human health problems. The damage to the tourist-based economy of Manitoulin Island will be irreparable if the McLean Mountain Wind Project commercial-scale turbines are installed as planned. The suggested set-backs are not sufficient to prevent human health problems. I am aghast to learn that the community will not have input in determining the appropriate scale of the project, in order for it to fit into our community, and into our fragile and unique ecology. There are few unspoiled places left in the world. Those affected when this one is damaged include full time Manitoulin residents, both First Nations people and other residents, summer residents of the surrounding area who also contribute much to the tax base, and wildlife and wildlife habitat. The natural beauty of the Canadian shield, of "Rainbow country," is a heritage for everyone. Please think of all of our grandchildren, and allow the needed research and community input to happen, so that this project can be carried out in a manner appropriate to the surrounding ecology and the surrounding community! Hear the plea made in 1862 by Itawashkesh, speaking for the First Nations of Manitoulin at a conference held at Manitowaning to determine the fate of Manitoulin Island. "My brother," Itawashkesh then said to Commissioner McDougall, "we have again considered your offer and we have not changed our mind. You have not provided any land for our children, boys and girls under 21 years, and all those who are to come. We shall keep our land for our children..." These words were not heeded in 1862, as you know. I beg you to show greater wisdom than our forbears, and listen to them now. If, instead, you follow the example of Commissioner McDougall, natural and human damage will continue in that tragic tradition. "My Indian brothers," said the commissioner, "I have heard your answer to my proposition; you are losing your time in useless protests. The Great Chief must have your land, and we will have it..." (Quotes are from *Modern Jesuit Indian Missions in Ontario*, as quoted in my article "The Birch Island Story," published in *The McGregor Bay Shoal* of August 8, 1978.) Today our world simply does not have the leeway to continue the environmental destruction and lack of concern for human rights that characterized our forefathers. Please read and deeply consider the reasonable suggestions made below. Please allow the appropriate planning and consultation to take place, so that wind energy on a scale appropriate to this area can be a blessing, and not a curse.

## **Re: McLean's Mountain Wind Project and Community Concerns**

The purpose of this letter is to advise you of the many concerns that people living on and off of Manitoulin Island have regarding the Industrial Wind Turbine Project that is being proposed by **Northland Power Inc.** As one of many concerned citizens, I would like to see the following issues addressed in full prior to any construction on this project beginning:

### **Economic Impacts**

- Manitoulin is a tourist based economy: With the Ontario Power Authority having just approved 60 MW of the McLean's Mountain project, with another 40 MW awaiting approval and another 100+ MW for future expansion as per the Ontario Power Authority web site, how can Northland and government officials assure residents and visitors that this island will not soon be covered with hundreds of Industrial Wind Turbines? Once the infra-structure is approved for this first project, the road is already paved for many more companies to follow. Firms such as Greenhead Energy and others will also be offered government subsidies and will easily be able to plug into the main grid (which has to first be upgraded for Northland's expansion). Vacationers and long time island residents who used to enjoy the peace and quiet of the natural world will leave and take their economic resources elsewhere.

### **Environmental Concerns**

- Soft rock and gas pockets all over the island: Manitoulin is known locally for the existence of extensive gas pockets and limestone rock. A fire burns yearly unless extinguished in Kagawong due to surface leakage. A camp in Bidwell road area is supplied by gas from the ground. A well driller in NEMI had his rig and a recently constructed large new home burn up when he was drilling for water well and struck a gas pocket. When Northland does test drilling and then digs large holes to form the bases for 43 separate turbines, such explosions could easily occur threatening project employees, equipment and nearby habitats. How will the company prevent and/or deal with such unplanned explosions? Will a soft limestone rock foundation support turbines the height of a 40 storey high building over the lifespan of the turbine? If they do stand for 20 years, who will pay for the turbines to be taken down when they have outlived their usefulness?
- Surface ground water contamination due to extensive drilling for multiple anchor rods for each turbine to unknown depths, in soft, unstable limestone: How can Northland assure other land owners that their ground water supplies will not be changed, disappear or become contaminated with all this drilling going on over such a large area? Drilling and construction activity would definitely adversely affect underground water flow which would contaminate many spring-fed lakes, ponds and drinking water sources.
- Adverse consequences for soil, vegetation, trees, birds, bats and other wildlife both during construction and operational phases. With Manitoulin being home to so many rare species and plants, how can Northland possibly address and mitigate such extensive losses as a result of their project?

### **First Nations Concerns**

- At Northland's public consultation meeting on March 22, 2010 The United Chiefs and Councils of Manitoulin (UCCM) declared their continued opposition to the project until appropriate consultation with Island First Nations has been made. A legal requirement of the Ontario government, as proclaimed by the Supreme Court of Canada, consultation, "has been ignored and continues to be ignored," said Chief Shining Turtle of Whitefish River First Nation and UCCM tribal chair.

- The AOK First Nation has also expressed opposition to this project, sighting concerns regarding improper consultation, and improper setbacks to protect the health of their community and First Nation Land. AOK is also calling for a minimum 2-2.5 km setback distance between turbines and the boundaries of their Nation. Recently the Sheguiandah First Nation supported this resolution made by AOK. The UCCM and the Wikwemikong Unceded First Nation all stated their opposition to the Northland power project.

### **Decreased property values**

- There is increasing evidence that Industrial Wind Turbines(IWT) cause significant loss of property values to nearby lands. Recently in Ontario an appeals review board through MPAC (Municipal Property Assessment Corporation) ruled in favour of a 50% assessed reduction in property value on a property due to excessive noise from a transformer station in a wind farm project. Many people who have tried to move away from IWT's have found themselves unable to sell their properties. Others who have invested their life savings in their home or farm find they cannot afford to sell. This is a particularly bad predicament for those who are experiencing adverse health effects due to their close proximity to Industrial Wind Turbines.

### **Infrasound and Human Health Impacts**

- See below for details, including references. For full information, please visit [www.WindVigilance.com](http://www.WindVigilance.com)

### **Set-back distances between Industrial Wind Turbines and nearby homes and dwellings**

- The 550 metre setback outlined in Ontario's Green Energy Act is clearly not enough compared to other norms and standards around the world (see statements from the World Health Organization in the section below on Noise and Health Effects); I strongly urge Northland Power Inc. to exercise the Precautionary Principle and structure their project so that 2-2.5 km is the minimum distance between a turbine and any other dwelling such as a home, cottage or hunt camp.

### **Re: Response to the Project Proposal and the new Renewable Energy Approval application regarding Adverse Health Effects and Industrial Wind Turbines**

Further to these concerns, I would like to advise Northland Power Inc. and any other corporation, individual, consulting group, government ministry or agency involved in the obtainment and or granting of licence that you will be held responsible if I or any of my family members or group suffer adverse health effects or other negative consequences as a result of exposure to the industrial wind turbines in the **McLean's Mountain Wind Farm**.

The December 2009 American Wind Energy Association and Canadian Wind Energy Association sponsored report entitled "Wind Turbine Sound and Health Effects" (A/CanWEA Panel Review) acknowledges that wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological

[1]

symptoms.

In a radio interview an author of the A/CanWEA Panel Review W. David Colby, M.D. stated:

"We're not denying that there are people annoyed and that maybe some of them are getting stressed out  
[2]  
enough about being annoyed that they're getting sick."

The A/CanWEA Panel Review acknowledges wind turbine noise induced symptoms may include palpitations, insomnia, nose bleeds, dizziness, nausea, eye strain, feeling vibration and headache. [3]

In 2010 Geoff Leventhall an author of the A/CanWEA Panel Review is quoted as stating “... there was no doubt people living near the turbines suffered a range of symptoms, including abnormal heart beats, sleep disturbance, headaches, tinnitus, nausea, visual blurring, panic attacks and general irritability... it’s ruining their lives – and it’s genuine...”. [4]

The A/CanWEA Panel Review does not provide any science based guidelines that would mitigate these health risks. [5]

The Ontario Ministry of Health and Long Term Care also acknowledge wind turbines may cause annoyance, stress and sleep disturbance. [6]

Globally there are people reporting adverse health effects from exposure to industrial wind turbines. [7], [8] [9] [10], Families including children have abandoned their homes to protect their health. This cannot be denied.

In Ontario there are now over 100 family members reporting adverse health effects from exposure to industrial wind turbines. [11] [12]

Peer reviewed studies of European industrial wind turbine facilities have documented high annoyance and sleep disturbance in respondents. [13] [14] [15], and that wind turbine induced “Annoyance was further associated with lowered sleep quality and negative emotions. This, together with reduced restoration possibilities may adversely affect health.” [16]

Annoyance may adversely affect physiological health. Research indicates that for “...chronically strong annoyance a causal chain exists between the three steps health – strong annoyance – increased morbidity.” [17]

The subjective experience of noise annoyance and stress can, through central nervous processes, lead to an inadequate neuro-endocrine reaction and finally to regulation diseases. [18]

The World Health Organization recognizes annoyance and sleep disturbance as adverse health effects. [19]

“Health Canada advises...that there are peer-reviewed scientific articles indicating that wind turbines may have an adverse impact on human health.” [20]

The Renewable Energy Application (REA) and proposal for the **McLean's Mountain Wind Farm** is inadequate and does not specifically address the risk of adverse human health effects associated with the operations of industrial wind turbines.

Therefore, this project cannot be approved.

Specific concerns about the REA include but are not limited to:

The REA does not specifically discuss the risk of human adverse health effects from exposure to industrial wind turbine operations. The REA does not expressly require **Northland Power Inc.** to address the risk of human adverse health effects from exposure to industrial wind turbine operations. This is a flaw in the REA process.

The ability of those individuals to rely on the shielding effect of an environmental assessment (REA) is greatly diminished by the elimination of the awareness of any flaws in the assessment procedure or grant of licence. It has been stated that such an awareness should trigger an intensive exercise of due diligence to ascertain and deal with the potential risks to others of the project. The REA does not address how the project proponent **Northland Power Inc.** intends to prevent the widely acknowledged wind turbine induced adverse health effects such as annoyance, stress and sleep disturbance and adverse physiological and psychological symptoms.

The REA indicates the **Northland Power Inc.** intends to adhere to Ontario wind turbine noise guidelines and regulations. **Northland Power Inc.** is advised that adherence to government regulations does not guarantee that individuals will not experience adverse health effects and therefore does not remove responsibility.

There is no scientific evidence that the current Ministry of Environment wind turbine noise guidelines and regulations are adequate to protect Ontario individuals from suffering wind turbine induced adverse health effects.

In addition the current Ministry of Environment wind turbine noise guidelines and regulations fail to incorporate key Noise Management strategies and protocols endorsed by the World Health Organization.

For example the World Health Organization considers enforcement of health based noise guidelines

[21]

imperative to health protection. According to the Ontario Ministry of Environment "There is currently no scientifically accepted field methodology to measure wind turbine noise to determine

[22]

compliance or non compliance with a Certificate of Approval limits."

In a January 2010 request for proposal issued by The Ministry of Environment it states "Unlike typical industrial noise sources, measurement of audible noise from wind turbines in general raises technical

[23]

challenges"

The request for proposal further states:

"...the MOE Noise Guidelines for Wind Farms, October 2008 do not contain a measurement method for assessing the actual noise impact." and that "The Ministry requires a consultant to assist in the development of a measurement procedure to assess noise compliance of existing wind farms with the

applicable sound level limits" [\[24\]](#)

The A/CanWEA Panel Review also acknowledges that wind turbine low frequency noise may cause annoyance. [\[25\]](#)

The physiological and psychological symptoms caused by low frequency noise annoyance can be serious and "The claim that their "lives have been ruined" by the noise is not an exaggeration..." [\[26\]](#)

The current Ministry of Environment wind turbine noise guidelines and regulations do not have any science based guidelines or regulations to protect individuals from the adverse health effects of wind turbine low frequency noise. [\[27\]](#) [\[28\]](#)

This deficiency is further illustrated by the Ministry of Environment's January, 2010 request for proposal to solicit assistance in "determining how or whether to regulate low frequency noise emissions from wind turbines". [\[29\]](#)

It is acknowledged that wind turbine shadow flicker may cause annoyance in humans. [\[30\]](#) Annoyance is an adverse health effect. [\[31\]](#) In the past Ontario wind energy projects have included Shadow Flicker Reports as part of their Environmental Screening Reports / Environmental Review Reports. The REA does not require the wind energy proponent to address the risk of shadow flicker. A shadow flicker report based on authoritative guidelines designed to protect human health must be conducted before the **Northland Power Inc.** can be approved.

The current Ontario wind turbine noise guidelines or regulations are based on conservative computer modelling. They are not based on independent third party human health studies designed to protect human health. The MOE has not provided peer-reviewed scientific evidence detailing how the guidelines or regulations were derived. The MOE has not provided peer-reviewed scientific evidence to demonstrate that a minimum 550 m setback will protect humans from the acknowledged adverse physiological and psychological effects associated with industrial wind turbines. According to the MOE 2008 Guidelines, the noise limits allow up to 51 dBA at 10 m/s which is over a 10 fold increase in acoustic energy from that of 40 dBA.

Dr. R. Copes, member of the Ontario Agency for Public Health and Promotion, along with others have identified a number of research gaps related to industrial wind turbines and related adverse health effects. [\[32\]](#)

The research gaps include among others, investigation of 'health effects from long-term exposure to low levels of low frequency sound...practical measurement methods for attributing sound specifically to wind turbines...impact of wind turbine sound on sleep physiology...epidemiological data to assess health status before and after wind farm development.'

The World Health Organization states "In all cases noise should be reduced to the lowest level achievable in a particular situation. When there is a reasonable possibility that the public health will be endangered, even though scientific proof may be lacking, action should be take to protect the public

[33]

health, without awaiting the full scientific proof.”

In summary the American Wind Energy Association and Canadian Wind Energy Association sponsored report entitled “Wind Turbine Sound and Health Effects” and authoritative bodies including those in Ontario acknowledge that industrial wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological symptoms.

The government of Ontario has been advised about these adverse health effects and cannot claim ignorance. The REA ignores the risks to health and is an unconscionable approval process knowingly supported by the Ontario government.

**Northland Power Inc.** cannot proceed until the independent 3rd party human health studies have been conducted to determine authoritative setbacks and noise levels including that of low frequency noise. Please visit [www.WindVigilance.com](http://www.WindVigilance.com) for full details. I look forward to receiving a response, and/or at very least acknowledgement of receipt of my comments.

Yours truly,

Please be advised that this letter has also been sent to:

**James C. Temerty**, Chairman of the Board, Northland Power Inc. (**please distribute copies to all board members**),

Gord Miller, Environmental Commissioner of Ontario, Ministry of the Environment  
 Agatha Garcia-Wright, Director, Environmental Assessment and Approvals Branch, Rick Martin, McClean’s Mountain Wind Farm, Arlene King, Chief Medical Officer of Health, Ministry of Health and Long Term Care Public Health Division, Andre Marin, Ombudsman of Ontario, (please apply to file # 222-520) The Ontario Agency for Health Protection and Promotion, Brad Duguid Ministry of Energy and Infrastructure, Dalton McGuinty, Premier, The Town of North Eastern Manitoulin Island, John Gerretsen, Ministry of Environment, Don McKinnon Consulting, and David Cheung-Atkinson, Project Manager, Northland Power Inc.

Thank you so much for your time and attention.

Judy Young, 3rd generation McGregor Bay resident  
[jsmithyoung@gmail.com](mailto:jsmithyoung@gmail.com)

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[1]

W. David Colby, M.D et al., Wind Turbine Sound and Health Effects, An Expert Panel Review 2009, Prepared for American Wind Energy Association and Canadian Wind Energy Association

[2]

W. David Colby, M.D., Sounding Board, 97.9 FM The Beach December 17, 2009



- [3] W. David Colby, M.D et al., Wind Turbine Sound and Health Effects, An Expert Panel Review 2009, Prepared for American Wind Energy Association and Canadian Wind Energy Association
- [4] Countryside News, Wind turbines set to get bigger, January 28 2010  
<http://www.walesonline.co.uk/countryside-farming-news/countryside-news/2010/01/28/wind-turbines-setto-get-bigger-91466-25701853/>
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- [6] Arlene King M.D., Ontario Ministry of Health and Long Term Care Memorandum, October 21, 2009,  
[http://windvigilance.com/primer\\_ahe.aspx](http://windvigilance.com/primer_ahe.aspx)
- [7] Amanda Harry M.D., Wind Turbines Noise and Health, 2007 UK
- [8] Michael A. Nissenbaum M.D., [http://windvigilance.com/mars\\_hill.aspx](http://windvigilance.com/mars_hill.aspx)
- [9] WindVOiCe© <http://windvigilance.com/>
- [10] Nina Pierpont M.D., Wind Turbine Syndrome, 2009
- [11] WindVOiCe© <http://windvigilance.com/>
- [12] Hansard Reports, proceedings from April 15th, and April 16th , 2009 The Green Energy Act, Bill 150, Standing Committee on General Government, Ontario [http://www.ontla.on.ca/web/committee-proceedings/committee\\_transcripts\\_details.do?locale=en&Date=2009-04-15&ParlCommID=8856&BillID=2145&Business=&DocumentID=23801](http://www.ontla.on.ca/web/committee-proceedings/committee_transcripts_details.do?locale=en&Date=2009-04-15&ParlCommID=8856&BillID=2145&Business=&DocumentID=23801)
- [13] Pedersen, E. and K. Persson Waye. 2004. Perception and annoyance due to wind turbine noise: A dose–response relationship, Journal of the Acoustical Society of America 116: 3460–3470.
- [14] Pedersen, E. and K. Persson Waye. 2007. Wind turbine noise, annoyance and self-reported health and well being in different living environments
- [15] Pedersen et al., 2008, Project WINDFARM perception Visual and acoustic impact of wind turbine farms on residents
- [16] Eja Pedersen and Kerstin Persson Waye , Wind turbine noise, annoyance and self-reported health and well-being in different living environments, February, 2007
- [17] Niemann, H, et al., WHO LARES Final report Noise effects and morbidity, 2004
- [18] Maschke, C., et al Health Effects of Annoyance Induced by Neighbour Noise, Noise Control Engineering Journal, 2007, 55(3): 348-356.
- [19] World Health Organization, Guidelines for Community Noise, 1999  
[http://www.euro.who.int/mediacentre/PR/2009/20091008\\_1](http://www.euro.who.int/mediacentre/PR/2009/20091008_1)
- [20] Safe Environs Program, Health Canada Environmental Assessment Nova Scotia, August 6, 2009,  
[http://windvigilance.com/primer\\_ahe.aspx](http://windvigilance.com/primer_ahe.aspx)
- [21] World Health Organization, Guidelines for Community Noise, 1999  
[http://www.euro.who.int/mediacentre/PR/2009/20091008\\_1](http://www.euro.who.int/mediacentre/PR/2009/20091008_1)
- [22] Correspondence from Ministry of Environment Sept 30, 2009 ENV1283MC2009-4305
- [23] MERX 189608: MGS - RFP Provision of Expert Advice on Measuring Audible Noise from Wind Turbines - OSS-078695 [www.merx.ca](http://www.merx.ca)

[24]

ibid

[25]

W. David Colby, M.D et al., Wind Turbine Sound and Health Effects, An Expert Panel Review 2009, Prepared for American Wind Energy Association and Canadian Wind Energy Association

[26]

Leventhall HG. Low frequency noise and annoyance. Noise Health [serial online] 2004 [cited 2009 Dec 31];6:59-72. Available from: <http://www.noiseandhealth.org/text.asp?2004/6/23/59/31663>

[27]

Ontario Regulation 359/09 Made Under The Environmental Protection Act Renewable Energy Approvals Under Part V.0.1 of the Act, September 24, 2009

[28]

“October 2008 Noise Guidelines for Wind Farms” Ontario Ministry of Environment

[29]

MERX 189612: MGS - RFP Provision of Expert Advice on Low Frequency Noise from Wind Turbines - OSS-078696  
[www.merx.ca](http://www.merx.ca)

[30]

National Research Council (NRC). Environmental Impacts of Wind-Energy Projects, 2007, NRC, Washington, DC

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World Health Organization, Guidelines for Community Noise,1999

[http://www.euro.who.int/mediacentre/PR/2009/20091008\\_1](http://www.euro.who.int/mediacentre/PR/2009/20091008_1)

[32]

National Collaborating Center for Environmental Health, Wind Turbines and Health by Karen Rideout, Ray Copes, Constance Bos, January 2010

[33]

World Health Organization, Guidelines for Community Noise,1999

[http://www.euro.who.int/mediacentre/PR/2009/20091008\\_1](http://www.euro.who.int/mediacentre/PR/2009/20091008_1)



## **NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

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████████████████████  
██████████

### **RE: McLean's Mountain Wind Project and Community Concerns**

Thank you for your letter of April, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

Several of the northernmost turbines and southwestern perimeter turbines have been removed largely due to public input. This results in a reduction in the number of wind turbines. Northland Power Inc. (NPI) is also currently proposing the use of 100 metre wind turbine towers which will lower the number again to 24-26 units. The proposed project will require the construction of a transmission line to connect with the Hydro One transmission system that is located on Goat Island.

NPI has also entered into a 50/50 partnership with Mnidoo Mnising Power, a company formed by the United Chiefs and Councils of Mnidoo Mnising First Nations, to share equally in the McLean's Mountain Wind Farm.

NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

I trust that the following responses address the concerns and questions you have expressed in your letter.

### **Concerns and Responses Regarding Economic Impacts**

**Comment:** *"Manitoulin is a tourist based economy: With the Ontario Power Authority having just approved 60 MW of the McLean's Mountain project, with another 40 MW awaiting approval and another 100+ MW for future expansion as per the Ontario Power Authority web site, how can Northland and government officials assure residents and visitors that this island will not soon be covered with hundreds of Industrial Wind Turbines? (...)"*

### **NPI Response:**

The proposed McLean's Mountain Wind Farm is expected to have no negative impacts on Manitoulin Island Tourism. NPI has considered the potential for effects of the project on tourism and recreation

activities. The project is well removed from the Lake Huron shoreline areas around the Island. The closest wind turbine (the westernmost turbine, turbine #42) is about 1.5 km from the Lake Huron shoreline. The easternmost wind turbine (turbine #9) of the project area is greater than 3 kilometres from the Lake Huron shoreline. Appreciating that tourist interests vary by individual, it is NPI's opinion that the view of the wind farm, especially from Honora Bay, will be complementary and will not negatively affect the viewscape.

Wind farms can have positive effects on the local tourism economy. There are 6,000 wind turbines in Denmark, which are used for marketing tourism. Local tourism associations may use wind turbines to promote "green tourism". This is particularly targeted towards the German market, where the public is known to have a high level of interest in both environmental issues and in new technology. In a Scottish study<sup>1</sup> 43% of respondents said a wind farm would have a positive effect on their inclination to visit the Argyll area, an area of high landscape value. About the same proportion of respondents said it would make no difference, while less than 8% felt that it would have a negative effect. Nine out of ten tourists visiting some of Scotland's top beauty spots say the presence of wind farms makes no difference to the enjoyment of their holiday. Twice as many people would return to an area because of the presence of a wind farm than would stay away, according to a poll carried out by MORI Scotland Commercial tour companies provide guided tours of several wind farms in the Pincher Creek, Alberta region. Several wind farms in Australia attract so many visitors that commercial tour operators provide opportunities for the public to get a close up view of the wind farms.

Back in 2004 I was involved in conducting a survey about the wind farm, requested by the municipality. The survey results indicated over 95% support of a wind farm by locals and visitors to Little Current. Boaters especially noted that the Turbines provide a landmark coming into the port of Little Current. NPI does not expect that the presence of the turbines would factor into a person's decision on whether to visit the Island. This project may have the potential to attract visitors. At NPI's Miller Mountain project in Quebec, 3500 tourists visited the project in 2008. The Providence Bay Wind Farm located to the south east of the MMWF project, approximately 45 kilometres away, established an interpretation centre for the project, which attracts numerous visitors over the summer visitor months

### **Concerns and Responses Regarding Natural Environment**

**Comment:** *"Soft rock and gas pockets all over the island: Manitoulin is known locally for the existence of extensive gas pockets and limestone rock. A fire burns yearly unless extinguished in Kagawong due to surface leakage (...)"*

#### **NPI Response:**

Gas pockets are unlikely to be found during construction as the foundations extend to a depth of only three (3) meters. The initial geotechnical tests show that the rock near the surface is fractured and permeable and therefore unlikely to contain gas. Care will be taken during the drilling of additional bore holes prior to construction and the excavation during construction to protect against the unlikely release of gas.

Additional geotechnical investigations have been initiated and will confirm the characteristics of the rock and provide input to the design for the turbine foundations to support the turbines. Wind turbines can be

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<sup>1</sup> *Tourist Attitudes Toward Wind Farms*, MORI Summary Report, September 2002 [www.bwea.com/pdf/MORI.pdf](http://www.bwea.com/pdf/MORI.pdf)

erected in a variety of soil/rock conditions. The risk of turbine collapse is extremely low. The foundations that will be used for the turbines on this site are the same as the ones used in locations with sandy soil. The large spread foundation disperses the mass of the turbine equally over a significant footprint to enhance its stability.

**Comment:** *“Surface ground water contamination due to extensive drilling for multiple anchor rods for each turbine to unknown depths, in soft, unstable limestone (...)”*

**NPI Response:**

Given the nature of a wind farm (and the specific mitigation measures proposed for this project), the project is highly unlikely to have any impact of surface or ground water resources. Given the shallow depth of the foundations, three (3) meters and the fractured and permeable nature of the geology, no measurable effects on ground water flow is expected. We are aware, previous to any construction; many people in the community are hauling water to their wells at various times of the year. Further, the project will not reduce the rate of rainwater ground infiltration in the larger area. Based on the bore holes information collected to date, the water table is expected to be well below the depth of turbine foundation excavation. There is no reason to expect that turbine excavation activities would have an effect on the underground water or surface water in the area given the shallow depth of the excavations.

**Comment:** *“Adverse consequences for soil, vegetation, trees, birds, bats and other wildlife both during construction and operational phases. With Manitoulin being home to so many rare species and plants, how can Northland possibly address and mitigate such extensive losses as a result of their project?”*

**NPI Response:**

Extensive studies on the natural environment have been conducted for the proposed project. These studies include the input of the Ministry of Natural Environment (MNR) and Environment Canada (EC) to ensure that the natural environment on Manitoulin Island is protected. A Natural Environment Assessment, in consultation with the MNR and EC was also conducted for this project. The assessment concluded that the risk to rare, threatened and endangered species in the area is low and minimal significant adverse effects are anticipated. Additional field work was conducted in 2010 as per the MNR direction. Some turbines have been removed and some changes were made to the turbine and road locations to avoid wetland areas that now have to be avoided under the REA process. The results of this work will contribute to the final Environmental Management and Protection Plan (EMPP). NPI will implement mitigation measure where required. A new natural heritage assessment document has been prepared and submitted to the Ministry of Natural Resources for review and comment. NPI will implement mitigation measure where required.

**Concerns and Responses Regarding First Nations**

**Comment:** *“At Northland’s public consultation meeting on March 22, 2010 The United Chiefs and Councils of Manitoulin (UCCM) declared their continued opposition to the project until appropriate consultation with Island First Nations has been made (...)”*

*The AOK First Nation has also expressed opposition to this project, sighting concerns regarding improper consultation, and improper setbacks to protect the health of their community and First Nation Land. AOK is also calling for a minimum 2-2.5 km setback distance between turbines and the boundaries of their Nation (...).”*

**NPI Response:**

Communication with First Nation communities that may have interests in the proposed project has been ongoing for several years and in compliance with government requirements. In February 2011, Mnidoo Mnising Power, a company formed by the United Chiefs and Councils of Mnidoo Mnising First Nations (UCCMM), has entered into a 50/50 partnership with Northland Power Inc. to share equity in the McLean's Mountain 60 MW Wind Farm Project and on-going renewable power developments.

Membership of UCCM include M'Chigeeng First Nation; Sheguiandah First Nation; Sheshegwaning First Nation; Aundeck-Omni-Kaning First Nation; Whitefish River First Nation; and Zhiibaahaasing First Nation. UCCMM formed Mnidoo Mnising Power to lead renewable energy projects on Manitoulin Island in order to protect First Nations' rights, heritage and ensure the future for First Nations' youth.

Band Council resolutions are in place with each band council supporting their position in this agreement.

**Concerns and Responses Regarding Decreased Property Values**

**Comment:** *“There is increasing evidence that Industrial Wind Turbines (IWT) cause significant loss of property values to nearby lands. Recently in Ontario an appeals review board through MPAC (Municipal Property Assessment Corporation) ruled in favour of a 50% assessed reduction in property value on a property due to excessive noise from a transformer station in a wind farm project (...)”*

**NPI Response:**

Based on the consultations undertaken with the local residents, NPI is aware of the public concerns over the loss of property values due to the proposed development of the McLean's' Mountain Wind Farm. The vast majority of evidence on the impact of wind farms on land values comes from Europe, Australia and United States of America (USA). The studies conducted in these countries indicate wind farms have no material effect on property values. Data from Ontario is beginning to emerge as more wind farms are constructed, and the experience from those projects also suggests that wind farms do not decrease property values.

A 2006 study conducted by Blake, Matlock and Marshal Ltd. for Windrush Energy suggests that wind farms have not negatively affected property values. “Property Value Study: the Relationship of Windmill Development and Market Prices” aimed to determine if the development of wind farms in the Melancthon area has had any impact on the growth of property values in the Township. Property values before and after wind farm development in the Township of Melancthon were compared to values in East Luther Grand Valley Township, a neighbouring and similar township except for its lack of wind farms. Property values in Melancthon were also compared to those in Dufferin County. The analysis showed that property values in the Township of Melancthon grew similarly to the rest of the County, and increased more than East Luther Grand Valley Township. Wind farm development was not found to have diminished property values.

The Canadian Hydro Developers Inc. also compared housing price ranges on Wolfe Island and Simcoe Island in Ontario, before and after the development of the wind farm ([http://www.shearwind.com/glen\\_dhu\\_community/fact\\_sheet.html](http://www.shearwind.com/glen_dhu_community/fact_sheet.html)). Findings indicate that Township of Melancthon experienced a stronger growth rate in sales price per property, than the adjoining East Luther

Grand Valley Township. The findings of this particular research indicate that the presence of the Wind Farm in Melancthon Township has not had an adverse impact on values within that municipality.

A study conducted in the Chatham-Kent area, where there are a number of wind turbines, found no evidence that wind farms have any measurable affect on rural residential market values. The study was conducted during May and June of 2009 by John Simmons Realty Services Ltd. and Canning Consultants Inc. and was commissioned by the Canadian Wind Energy Association to review possible effects of wind energy developments on real estate values on near-by properties. This information was provided at the March 22<sup>nd</sup>, 2010 Public Information Centre (PIC) that was held in Little Current. To review the study, please visit: <http://www.canwea.ca/pdf/talkwind/PropertyValuesConsultingReportFebruary42010.pdf>

The appeals review board through MPAC (Municipal Property Assessment Corporation) referred to a very specific case in which a particular transformer was not functioning properly, causing excess noise. MPAC uses market and sales analysis to determine property values and has provided an outline of how they assess properties. This information was displayed on a large panel at the March 22<sup>nd</sup>, 2010 PIC and states that "To date, MPAC's analysis of sales does not indicate that the presence of wind turbines that are either abutting or in proximity to a property has either a positive or negative impact on its value."

Our direct contact with real estate sales representatives have indicated that there has been no effect on property values as a result of the Prince Wind Farm near Sault Ste. Marie. This information was presented at the March 2010 PIC. It is also our understanding that since the McLean's Mountain Wind Farm has been in advanced development stages adjacent properties including Farms have been sold at quite appreciated values.

### **Concerns and Responses Regarding Infrasound and Human Health Impacts**

**Comment:** "(...) For full information, please visit [www.WindVigilance.com](http://www.WindVigilance.com)"

#### **NPI Response:**

Infrasound or low frequency noise emissions were characteristics of some of the earlier models of wind turbines. This was attributed to early designs in which the turbine blades are downwind of the main tower. This phenomenon does not occur with modern upwind turbine technology (MOE, 2005). Infrasound has been studied extensively for current wind turbine technologies (JCAA, June 2006; HGC, 2006; Defra, 2003). At present, there are a significant number of wind turbines in operation in Ontario, including in several in proximity to residences; with no adverse impact from infrasound.

A study performed by HCG (2006) conclude, "All in all, based on Canadian and international studies, infrasound generated by wind turbines should not be considered a concern to the health of nearby residences. At the closest distances at which residences are typically located near large wind turbines, approximately 300 meters, the infrasonic levels are low enough to not be of concern. In any event, the discussion of whether or not infrasound poses a health risk at low levels is somewhat academic since, in the absence of wind turbines, comparable infrasonic levels are present in the natural environment." The evidence is that the current turbine technologies do not present any adverse impact related to the generation of infrasound.

The recent (May 2010) report on *The Potential Health Impacts of Wind Turbines*, Chief Medical Officer of Health (CMOH) indicates that:

*“There is no scientific evidence, however, to indicate that low frequency sound generated from wind turbines causes adverse health effects. Low frequency sound and infrasound are everywhere in the environment. They are emitted from natural sources (e.g., wind, rivers) and from artificial sources including road traffic, aircraft, and ventilation systems. The most common source of infrasound is vehicles. Under many conditions, low frequency sound below 40Hz from wind turbines cannot be distinguished from environmental background noise from the wind itself (Leventhall 2006, Colby et al 2009).*

*Low frequency sound from environmental sources can produce annoyance in sensitive people, and infrasound at high sound pressure levels, above the threshold for human hearing, can cause severe ear pain. There is no evidence of adverse health effects from infrasound below the sound pressure level of 90dB (Leventhall 2003 and 2006).*

*Studies conducted to assess wind turbine noise indicate that infrasound and low frequency sounds from modern wind turbines are well below the level where known health effects occur, typically at 50 to 70dB. A small increase in sound level at low frequency can result in a large increase in perceived loudness. This may be difficult to ignore, even at relatively low sound pressures, increasing the potential for annoyance (Jakobsen 2005, Leventhall 2006) (...).”*

The report concludes that “low frequency sound and infrasound from current generation upwind model turbines are well below the pressure sound levels at which known health effects occur. Further, there is no scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects.

All of the proposed wind turbines are greater than 698 meters away from any residence, so there should clearly be no issue. The MOE noise standard also meets the range of the Health Canada guidelines of 40 dB(A) to residences.

### **Concerns and Responses Regarding Set-back Distances between Industrial Wind Turbines and Nearby Homes and Dwellings**

**Comment:** *“The 550 metre setback outlined in Ontario’s Green Energy Act is clearly not enough compared to other norms and standards around the world (see statements from the World Health Organization in the section below on Noise and Health Effects); I strongly urge Northland Power Inc. to exercise the Precautionary Principle and structure their project so that 2-2.5 km is the minimum distance between a turbine and any other dwelling such as a home, cottage or hunt camp.”*

#### **NPI Response:**

The Province of Ontario has some of the most stringent regulations in North America regarding wind turbine siting and sounds restrictions and Northland Power intends to meet or exceed these regulations. It is important to note that although wind energy is relatively new to Ontario, it’s a very well-established and proven form of electrical generation around the world. For more than thirty (30) years, tens of thousands of people have been living near wind turbines with no ill effects.

The Ontario’s Chief Medical Officer of Health, Dr. Arlene King, recently sent a memorandum to all Medical Officers of Health and Environmental Health Directors stating the following about wind energy



and human health: “(...) there is no scientific evidence, to date, to demonstrate a causal association between wind turbine noise and adverse health effects.”

I would like to bring your attention to a report released December 2009, authored by an international panel of medical doctors and sound experts titled “Wind Turbine Sound and Health Effects: An Expert Panel Review”. It concluded that sound from wind turbines has no direct harmful effect on human health. To see the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects.pdf)

To see an executive summary of the report, please visit:

[http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects-Executive\\_Summary.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects-Executive_Summary.pdf)

For more information on the effects of sound from wind turbines on human health please refer to the comment response tables provided in the Draft Renewable Energy Approval (REA) package.

### **Concerns and Responses Regarding Adverse Health Effects and Industrial Wind Turbines**

**Comment:** “(...) *The December 2009 American Wind Energy Association and Canadian Wind Energy Association sponsored report entitled “Wind Turbine Sound and Health Effects” (A/CanWEA Panel Review) acknowledges that wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological symptoms (...)*”

#### **NPI Response:**

The Chief Medical Officer of Health (CMOH) Report “The Potential Health Impact of Wind Turbines” dated May 2010 concludes that “While some people living near wind turbines report symptoms such as dizziness, headaches, and sleep disturbance, the scientific evidence available to date does not demonstrate a direct causal link between wind turbine noise and adverse health effects” and that “The sound level from wind turbines at common residential setbacks is not sufficient to cause hearing impairment or other direct adverse health effects. However, some people might find it annoying. It has been suggested that annoyance may be a reaction to the characteristic “swishing” or fluctuating nature of wind turbine sound rather than to the intensity of sound.

The proposed project will require approval under Ontario Regulation 359/09 – Renewable Energy Approval (REA) under the *Green Energy Act* and NPI is complying with all of the REA requirements. Further, NPI will be required to meet the 40 dBA limit at all identified receptors and would be required to mitigate/resolve any exceedances as per the terms of the REA approval.


Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is rickmartin@northlandpower.ca.

Thank you.

A handwritten signature in black ink, appearing to read "Rick Martin". The signature is fluid and cursive, with the first name "Rick" and last name "Martin" clearly distinguishable.

Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre



March 15, 2010

Rick Martin  
McLean's Mountain Windfarm Project  
Box 73  
Little Current, ON, P0P 1K0

Dear Mr. Martin,

On August 19, 2009 I wrote to Northland Power (NPI) with my concerns and questions about the proposed McLean's Mountain Wind Farm Project on Manitoulin Island. In 9 months I have received no acknowledgement of my letter, let alone responses to my questions.

In my August 19, 2010 letter I asked to be notified of future public consultation on this project. Your company ignored this request as well. Clearly you don't take public consultation seriously. A responsible corporation does not behave this way.

Here are my concerns and questions regarding NPI's REA. Again, I request the courtesy of a response. Your REA does not address any of the questions I, and many other members of the public, raised nine months ago.

The work done by NPI's consultants on Public Consultation is an insult to the intelligence of the public. You have done no additional studies of the impact on the bat population and migration, even though your own consultants and the MNR said you should. The statements about the impact on Perch Lake are woefully inadequate. The company's statements about the impact of its industrial development on property values are misleading and untrue. There has been no investigation of the impact of blasting and drilling into the Niagara Escarpment to install footing for the wind turbines.

My family has owned properties on Manitoulin Island for 30 years. Our properties are not within sight or sound of the McLean's Mountain Wind Farm. This is not a NIMBY request.

#### Public Consultation

For many years I worked as a public consultation consultant on major EA's, sub-contracted by Gartner Lee Ltd and Dillon Consulting Engineers. I was an expert witness on Public Consultation before the then Environmental Appeal Board. I was a member of the Environmental Review Tribunal for the past three years, and have since resigned.

Based on my professional experience, I am shocked and appalled at what NPI is trying to pass off as public consultation. Putting three turbines on McLean's Mountain has been talked about for years, and most people liked the idea. Although company President John Brace says that it was never three turbines, that certainly is what people here believed. Clearly, he failed to communicate with the residents. The comment sheets submitted in the Public Consultation Appendix make this abundantly clear.

On June 25, 2009, Islanders who read the local paper and/or attended the Open House, learned for the first time that the project has grown from three to forty-three turbines. On June 25, 2009, property owners on McLean's Mountain saw the locations of the turbines for the first time. The Notice for the Open House, published in the Manitou in Expositor, included a map of the study area and turbine locations. The map was so small that the turbine locations were illegible.

Affected landowners and concerned citizens were given 30 days, in the middle of summer, to read a huge report, that was at least two years in the making, and make their concerns known to you. Given that the scientific studies were completed **at least six months ago**, why did the company wait until the middle of the summer to tell the public? Because that is the minimum notice period required. A good corporate citizen would have gone to the public much earlier.

When I contacted Gordon Potts at NPI and requested that he mail me a copy of the ESR, he declined. I offered to cover the cost of a courier if he would send me a copy: he declined. I offered to come to his office and read it: he said he could not find a place for me to sit. It is impossible to do any meaningful analysis of such a voluminous document without a hard copy. NPI failed to facilitate my involvement. I don't think concerned citizens should be required to print thousands of pages of this ESR at their own expense.

In its ESR, NPI characterizes its public consultation as dating back to 2004. At the 2004 public information centre, NPI said the project would be 30 – 36 turbines. Five years later, with no public communication about the undertaking, the company announced that the project would be 43 turbines.

At the municipal consultation on your REA, you produced the same map of turbine locations that you handed out last June. You and I both know that a number of those locations are no longer viable because property owners hold building permits. This is a fundamental omission.

The "responses" to public concerns in the REA do not address the concerns being raised. You continue to either say, 'the impacts will be minimal', or 'we followed the guidelines'. You **have failed to meet the minimum public consultation requirements**.

### Bats

I have a B.Sc. in biology from the University of Guelph.

NPI sub-contracted Natural Resources Solutions Inc. (NRSI) in 2008 to study the wind farm's impact on the bat population. NRSI submitted their plan of study for comment to MNR, Sudbury, in advance. MNR's reply is at the end of the bat appendix, just before the references.

MNR stated that 'it is difficult to comment without knowing the layout and number of wind turbines'. NRSI acknowledged this difficulty in their report, but did their fieldwork regardless. It is impossible to study the impact of the wind turbines on bats without knowing **where the wind turbines are located**. That is what NRSI did. This is not valid science.

Forty-three wind turbines are proposed. NRSI did their fieldwork in seven locations for five nights. Monitoring seven arbitrarily selected locations for five nights is not a predictive sample size.

MNR recommended that the bat study be done in August: NRSI did their study in July. NRSI were on McLean's Mountain conducting further field studies this week. The company may attempt to submit supplementary research. Should this occur, I request that you require the company to mail a copy of these additional findings to every person who attended the June 25, 2009 open house and allow a 30-day comment period.

MNR also said: 'It is **very likely** (my emphasis) that is a migratory route for bats and more study should be done in late May to monitor spring migrations of bats'. NRSI did not do this and they did not recommend it to NPI. I urge you to require NPI to do a May bat migration study before you decide whether to approve this project. This is a very serious omission.

MNR said the face of McLean's mountain should be investigated for bat nesting and roosting. This was not done.

NRSI recommended to Northland that 15 more nights of bat monitoring and five more nights of radar monitoring in August be done. Northland did not do this before submitting the REA.

In my view, the entire bat study is invalid. Bats play an important role in the ecosystem and several bat species are endangered.

### Blasting Turbine Foundations

The impact of the blasting 43 holes, which would have to be at least 1,000 cubic feet, to build the footings for the 400' high wind turbines has not been considered. The impact of disturbing the fractured limestone and the resulting impact on the Perch Lake fishery and drinking water has not been studied.

McLeans Mountain is the northerly outcrop of the Niagara Escarpment, which is protected by the Niagara Escarpment Plan in southern Ontario. It is fractured limestone. There are three communications towers up there: the tallest is 200'. Otherwise, that rock has not been disturbed for centuries.

McLean's Mountain drains into Perch Lake, which is a spring fed lake supporting important fisheries. Once the company begins to blast out the huge holes for the foundations of 43 turbines, the hydrogeology will be disturbed and the contaminated water will impact Perch Lake. Limestone aquifers generally contain high concentrations of carbon, sulphur, nickel, vanadium and kerogen. All vanadium compounds should be considered toxic. We have no information on the water quality of the McLean's Mountain aquifer. It is difficult, if not impossible, to predict how water travels through fractured limestone. Northland has not studied the Perch Lake fishery and has not done hydro-geological work on McLean's Mountain.

At Perch Lake there is a First Nations traditional ceremonial site which is used by the people of Sheguiandah to this day. According to your out-of-date map of turbine locations. 13 turbines will surround this ceremonial site. Under the Class EA "Proposed transfer of Crown Land to UCCM First Nations" ownership of this site is scheduled to be transferred to Sheguiandah F.N. Your REA makes no mention of this proposed land transfer. This is a most serious omission.

Residents on McLean's Mountain, including farmers, rely on well water. Their wells could become contaminated by water released during blasting. It is also likely that during blasting the company will penetrate an aquifer and need to pump out the contaminated water. Where will

you pump it and how will it be treated? If you simply release it to the surface, it could impact agricultural activities and drinking water. I urge you to do hydrogeological studies to predict the impact of the blasting on near-by wells.

There are also pockets of natural gas seeping out of the limestone in many locations on Manitoulin Island. It would be impossible to control a blast if it hits a pocket of natural gas. I urge NPI to survey McLean's Mountain for natural gas pockets and outlets, for the safety of your own employees.

### Other

The concerns of landowners about health effects, noise and property values have not been answered. The concerns of the two First Nations who oppose this undertaking have not been answered. The duty to consult with First Nations has not been met.

Your archeological consultant did a Stage 1 assessment and recommended a Stage 2 assessment. You did not follow through with a Stage 2 assessment of the archeological finds. The site is known as 'The Giant' First Nations archeological site.

NPI has not done due diligence on its duty to consult First Nations. The boundaries of First Nations lands are not shown on NPI's maps. In fact, the map titled V90 Layout refers to the First Nation of Aundeck Omni Kaning (AOK) as "Reserve Indienne Sucker Creek". It has not been called that for at least five years.

Much of the land on McLean's Mountain is privately owned and *not* developed. There are a few dwellings. Many people who own undeveloped properties within the 40 db noise range of a turbine will be unable to build dwellings or sell their land. You failed to notify many of these land owners about its undertaking.

NPI's failure to properly inform stakeholders on Manitoulin Island, to conduct meaningful and timely public consultation, to adequately investigate the unique geology, flora and fauna, or to consider the impact on property owners, necessitates that this project cannot proceed.

### Other Regulatory Requirements

NPI proposes to deliver the power the wind farm generates to the transformer station on Goat Island via a submarine cable under the North Channel. Hydro One has said that NPI cannot use the transmission towers that cross the North Channel. The North Channel is navigable water and that undertaking will be subject to a federal EA under the CEAA. Northland has not begun this process. Does it make any sense to proceed with an industrial wind energy development when you have not secured means to deliver power into the grid?

### Conclusion

I strenuously oppose this project on the following grounds:

1. NPI did not comply with the minimum GEA requirements for Notice and Public Consultation.
2. There has been a significant change in the scale and scope of the undertaking.

3. NPI's bat study is invalid. The company did not study spring bat migration as recommended by MNR Sudbury.
4. NPI made NO study of the impacts from blasting 43 huge holes in McLean's Mountain. There are likely impacts on: the Perch Lake fishery, Sheguiandah F.N., drinking water, agriculture, surface water and air quality.
5. NPI did not do a Stage 2 archeological study as recommended by its consultant.
6. NPI has not satisfied its duty to consult the three First Nations impacted by this undertaking. Two of those First Nations officially and strenuously oppose this development.
7. NPI failed to notify many landowners about its undertaking.
8. NPI falsely claims that land values will appreciate.
9. NPI has not conducted a federal EA on its submarine hydro cable crossing the navigable water of the North Channel.

I respectfully request that you reply to my concerns. Please confirm receipt of this letter.

Sincerely,

A solid black rectangular box used to redact the signature of the sender.



## **NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May, 2011

[REDACTED]

[REDACTED]

### **RE: McLean's Mountain Wind Project and Community Concerns**

Thank you for your letter of March, 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

Several of the northernmost turbines and southwestern perimeter turbines have been removed largely due to public input. This results in a reduction in the number of wind turbines. Northland Power Inc. (NPI) is also currently proposing the use of 100 metre wind turbine towers which will lower the number again to 24-26 units. The proposed project will require the construction of a transmission line to connect with the Hydro One transmission system that is located on Goat Island.

NPI has also entered into a 50/50 partnership with Mnidoo Mnising Power, a company formed by the United Chiefs and Councils of Mnidoo Mnising First Nations, to share equally in the McLean's Mountain Wind Farm.

NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

I trust that the following responses address the concerns and questions you have expressed in your letter.

### **Concerns and Responses Public Consultation**

**Comment:** *"Based on my professional experience, I am shocked and appalled at what NPI is trying to pass off as public consultation."*

*"NPI failed to notify many landowners about this undertaking."*

*"On June 25, 2009, islanders who read the local paper and/or attended the Open House, learned for the first time that the project has grown from three to forty-three turbines (...)"*

*"Affected landowners and concerned citizens were given 30 days .... to read a huge report (...)"*



*“When I contacted Gordon Potts at NPI and requested that he mail me a copy of the ESR, he declined (...) I offered to come to his office and read it: he said he could not find a place for me to sit (...)”*

**NPI Response:**

It is NPI’s opinion that the consultation program exceeds what is required by applicable legislation. There have been multiple notifications of the project in the community for several years as documented in the ESR and the REA Consultation Report. Obtaining a complete and accurate list of all landowners is difficult. Some government databases have restrictions on their use. NPI, as a private proponent, did their best to obtain an accurate list of landowners in the study area. We are aware that some landowners did not receive an initial notification; NPI added these individuals to their mailing list once they became aware of them.

I regret the misunderstanding with Gordon Potts and how the situation turned out. The contact person for this project is myself, the senior project manager. All public documents, such as the ESR are always available for viewing on our project website. Once we have finalized the REA documentation we will post this on our website for public viewing as well.

If you have any further questions or comments please contact me directly at the contact information at the end of this letter. It is our intent that we keep an open and transparent process and we are more than happy to answer any questions you may have.

I currently run a weekly column in the Manitoulin Expositor with updates regarding the wind farm. From my understanding the column is not available online but if you would like I can send you these weekly columns so you can stay up to date on what is happening with the project.

The proposed project has been in the formal planning stages since the spring of 2004. Since that time, various forms of consultation have taken place including sending notices to residents throughout the area. NPI held a Public Information Meeting on June 28, 2005 where NPI indicated that initially the proposed wind farm would consist of 60 wind turbines for a total capacity of 99 MW. The number of proposed wind turbines and total capacity of the proposed wind farm has therefore decreased over the past five years during the planning stages of the proposed project.

The Environmental Screening Report (under the former Environmental Assessment process) was provided for public review in July 2009 for a 30-day review period. The ESR was provided on the NPI project website at: <http://www.northlandpower.ca> click tab *Development Projects* as well as in hard copy at the Clerk’s office in the town of Little Current at the municipality of the Northeastern Manitoulin and the Islands. The draft REA reports for the new approval process were provided to the public in January 2010 for a 60-day public review period. These documents were also provided on the NPI’s project website as well as in hard copies at the above mentioned locations. Updated maps depicting the wind turbine layout for the proposed McLean’s Mountain unwind farm were provided in the draft REA package. NPI continues an open public consultation process regarding the proposed project.

**Concerns and Responses Regarding Bats**

**Comment:** *“NPI’s bat study is invalid. The company did not study spring bat migration as recommended by the MNR Sudbury.”*

**NPI Response:**

The bat monitoring for the proposed project was conducted in accordance to guidelines provided by the Ministry of Natural Resources. As requested by the MNR additional bat monitoring was undertaken as a post ESR submission activity (August-Sept 2009). The findings of this additional survey work have been made available for the MNR to review. The MNR is reviewing the REA Natural Heritage Assessment reports and we expect they will advise on the need for any additional bat studies, if necessary. Post-construction monitoring studies will also be conducted to confirm the impact of the project on bats.

**Concerns and Responses Regarding Blasting Turbine Foundations**

**Comment:** *“The impact of blasting 43 holes ...has not been considered. The impact of disturbing the fractured limestone and the resulting impact on the Perch Lake fishery and drinking water has not been studied (...)”*

**NPI Response:**

Extensive studies on the natural environment have been conducted for the proposed project. These studies include the input of the Ministry of Natural Environment (MNR) and Environment Canada (EC) to ensure that the natural environment on Manitoulin Island is protected. A Natural Environment Assessment, in consultation with the MNR and EC was also conducted for this project. The assessment concluded that the risk to rare, threatened and endangered species in the area is low and minimal significant adverse effects are anticipated. Additional field work was conducted in 2010 as per the MNR direction. Some turbines have been removed and some changes were made to the turbine and road locations to avoid wetland areas that now have to be avoided under the REA process. The results of this work will contribute to the final Environmental Management and Protection Plan (EMPP). NPI will implement mitigation measure where required. A new natural heritage assessment document has been prepared and submitted to the Ministry of Natural Resources for review and comment. NPI will implement mitigation measure where required.

Given the nature of a wind farm (and the specific mitigation measures proposed for this project), the project is highly unlikely to have any impact of surface or ground water resources. Given the shallow depth of the foundations, (three (3) meters) and the fractured and permeable nature of the geology, no measurable effects on ground water flow is expected. Further, the project will not reduce the rate of rainwater ground infiltration in the larger area. Based on the bore holes information collected to date, the water table is expected to be well below the depth of turbine foundation excavation. There is no reason to expect that turbine excavation activities would have an effect on the underground water or surface water in the area given the shallow depth of the excavations. Additional geotechnical investigations will confirm the characteristics of the rock and provide input to the design for the turbine foundations to support the turbines.

Gas pockets are unlikely to be found during construction as the foundations extend to a depth of only three (3) meters. The initial geotechnical tests show that the rock near the surface is fractured and permeable and therefore unlikely to contain gas. Care will be taken during the drilling of additional bore holes prior to construction and the excavation during construction to protect against the unlikely release of gas.

The project is well removed from Perch Lake. Mitigation measures as outlined in the Environmental Management and Protection Plan (EMPP) would make the likelihood for any effects on Perch Lake to be

highly unlikely. EMPP measures would prevent any contamination of waterways during construction. No long term operational effects on Perch Lake are likely.

Additional geotechnical investigations have been initiated and will confirm the characteristics of the rock and provide input to the design for the turbine foundations to support the turbines. Wind turbines can be erected in a variety of soil/rock conditions. The foundations that will be used for the turbines on this site are the same as the ones used in locations with sandy soil. The large spread foundation disperses the mass of the turbine equally over a significant footprint to enhance its stability.

### **Comment and Response Regarding Archaeological Assessment**

**Comment:** *“Your archaeological consultant did a Stage 1 assessment and recommended a Stage 2 assessment. You did not follow through (...)”*

#### **NPI Response:**

A Stage 2 archaeological assessment for the project has been completed. Ontario Ministry of Tourism and Culture sign-off has been received.

### **Comments and Responses Regarding First Nations**

**Comment:** *“NPI has not done due diligence on its duty to consult with First Nations (...)”*

#### **NPI Response:**

Communication with First Nation communities that may have interests in the proposed project has been ongoing for several years and in compliance with government requirements. In February 2011, Mnidoo Mnising Power, a company formed by the United Chiefs and Councils of Mnidoo Mnising First Nations (UCCMM), has entered into a 50/50 partnership with Northland Power Inc. to share equity in the McLean’s Mountain 60 MW Wind Farm Project and on-going renewable power developments.

Membership of UCCM include M’Chigeeng First Nation; Sheguiandah First Nation; Sheshegwaning First Nation; Aundeck-Omni-Kaning First Nation; Whitefish River First Nation; and Zhiibaahaasing First Nation. UCCMM formed Mnidoo Mnising Power to lead renewable energy projects on Manitoulin Island in order to protect First Nations’ rights, heritage and ensure the future for First Nations’ youth.

Band Council resolutions are in place with each band council supporting their position in this agreement.

### **Comment and Response Regarding Property Rights and Property Values**

**Comment:** *“(...) Many people who own undeveloped properties within the 40 db noise range of a turbine will be unable to build or sell their land.”*

#### **NPI Response:**

The wind turbines, once constructed, will not prevent landowners from constructing buildings in their vicinity. There are currently no by-laws preventing a landowner from doing this. NPI is siting its turbines a minimum of 550 m from sensitive noise receptors as required by provincial policy. The closest turbine to a receptor is 698 m.

Based on the consultations undertaken with the local residents, NPI is aware of the public concerns over the loss of property values due to the proposed development of the McLean's Mountain Wind Farm. The vast majority of evidence on the impact of wind farms on land values comes from Europe, Australia and United States of America (USA). The studies conducted in these countries indicate wind farms have no material effect on property values. Data from Ontario is beginning to emerge as more wind farms are constructed, and the experience from those projects also suggests that wind farms do not decrease property values.

A 2006 study conducted by Blake, Matlock and Marshal Ltd. for Windrush Energy suggests that wind farms have not negatively affected property values. "Property Value Study: the Relationship of Windmill Development and Market Prices" aimed to determine if the development of wind farms in the Melancthon area has had any impact on the growth of property values in the Township. Property values before and after wind farm development in the Township of Melancthon were compared to values in East Luther Grand Valley Township, a neighbouring and similar township except for its lack of wind farms. Property values in Melancthon were also compared to those in Dufferin County. The analysis showed that property values in the Township of Melancthon grew similarly to the rest of the County, and increased more than East Luther Grand Valley Township. Wind farm development was not found to have diminished property values.

The Canadian Hydro Developers Inc. also compared housing price ranges on Wolfe Island and Simcoe Island in Ontario, before and after the development of the wind farm ([http://www.shearwind.com/glen\\_dhu\\_community/fact\\_sheet.html](http://www.shearwind.com/glen_dhu_community/fact_sheet.html)). Findings indicate that Township of Melancthon experienced a stronger growth rate in sales price per property, than the adjoining East Luther Grand Valley Township. The findings of this particular research indicate that the presence of the Wind Farm in Melancthon Township has not had an adverse impact on values within that municipality.

A study conducted in the Chatham-Kent area, where there are a number of wind turbines, found no evidence that wind farms have any measurable affect on rural residential market values. The study was conducted during May and June of 2009 by John Simmons Realty Services Ltd. and Canning Consultants Inc. and was commissioned by the Canadian Wind Energy Association to review possible effects of wind energy developments on real estate values on near-by properties. This information was provided at the March 22<sup>nd</sup>, 2010 Public Information Centre (PIC) that was held in Little Current. To review the study, please visit: <http://www.canwea.ca/pdf/talkwind/PropertyValuesConsultingReportFebruary42010.pdf>

The appeals review board through MPAC (Municipal Property Assessment Corporation) referred to a very specific case in which a particular transformer was not functioning properly, causing excess noise. MPAC uses market and sales analysis to determine property values and has provided an outline of how they assess properties. This information was displayed on a large panel at the March 22<sup>nd</sup>, 2010 PIC and states that "To date, MPAC's analysis of sales does not indicate that the presence of wind turbines that are either abutting or in proximity to a property has either a positive or negative impact on its value."

Our direct contact with real estate sales representatives have indicated that there has been no effect on property values as a result of the Prince Wind Farm near Sault Ste. Marie. This information was presented at the March 2010 PIC. It is also our understanding that since the McLean's Mountain Wind Farm has been in advanced development stages adjacent properties including Farms have been sold at quite appreciated values.

**Comment and Response Regarding the North Channel**

**Comment:** *“NPI proposes to deliver the power the wind farm generates to the transformer station on Goat Island via a submarine cable under the North Channel (...)”*

**NPI Response:**

The cable crossing design is being developed. Applicable permits are being sought from the MNR and Transport Canada. NEMI will be provided with the details once available.

Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is rickmartin@northlandpower.ca.

Thank you.



Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office  
Encl. Notice of Public Information Centre

April 26, 2010

To All Government and Company Officials,

I am writing to request that the McLean's Mountain Wind Farm Project, proposed by Northland Power Inc. (NPI), not be granted approval to begin construction until the following concerns are adequately addressed. My concerns with this project include but are not limited to: lack of information sharing with adjacent landowners, lack of public consultation (including a lack of consultation with local First Nations communities), economic impacts, negative effects on human health, impacts on soil, plant, and wildlife communities during the construction phase of the project, permanent displacement of wildlife, property devaluation, loss of adjacent property owner rights, and alteration of groundwater quality and flow.

I feel there are some major inadequacies with the REA draft submission package prepared by Dillon Consulting Limited for NPI. My greatest concern with this package is that it relies on the ESR prepared by Dillon Consulting to fulfill much of the REA requirements. I have expressed my concerns with the ESR during the last round of public comment and I have included a copy of my elevation request (Appendix I), which outlines my concerns with the ESR. NPI's responses to my elevation request are included in the REA draft submission package. I am not satisfied with the proponents responses to the concerns raised in my elevation request. I will outline some of the problems with the responses made by NPI and Dillon Consulting. I will use the same numbers NPI attached to my comments in the following responses.

1. NPI did not acknowledge the fact that they failed to mail or deliver correspondence of the project to my family as was required under the previous approval process (Guide to EA Requirements for Electricity Projects).
2. NPI states that it is "highly unlikely that the project would have any material effect on the ground water resources in the area," yet they include no supporting evidence or arguments. This is an important issue for people living in the project area and NPI needs to be accountable should groundwater be negatively affected.
3. NPI claims to be "siting its turbines a minimum of 550m from sensitive noise receptors as required by provincial policy," **yet they ignore the fact that turbine #28 is within 550m of a secured building permit for Lot 9 Con 2 – this turbine must be relocated.**
4. NPI does not provide sufficient evidence in their ESR or REA to ensure that rare, threatened or endangered species will not be affected by this project.
5. NPI claims that "discussions were held with several agencies as well input was received from local people with knowledge on conservation issues" but they do not provide any names – what evidence is there of any such discussions?

6. NPI does not provide any convincing arguments that their project will not have negative affects on the Bass Lake Marsh/Swamp – AREA\_ID 4853 that is located in the vicinity of the project.

12. NPI fails to address my concerns regarding the devaluation of recreational properties upon the construction of the turbines. Using anecdotal evidence from their own developments is a totally inadequate argument to support the statement that “once operational, the wind farm is highly unlikely to affect games species in the area”. Assuming game species are not affected by the operational turbines (as absurd an assumption as it is), it is still very likely that hunters will not choose to hunt in the vicinity of a turbine. It is very likely that this project will have a negative impact on property values in the project area.

13. NPI claims to have chosen its project area boundaries so they will have to adhere to the most stringent of noise criteria. They do not discuss the likelihood of gaining approval for their project if they had chosen the more logical project area boundaries I suggest in my elevation request.

14. NPI fails to acknowledge that there are businesses and a great deal of future business potential (ecotourism, outfitting, and culinary tourism) in the vicinity of the project. They simply change the context within which they claim that their project will not affect local businesses. There are businesses within the vicinity of the project (meaning the turbines will be heard from and seen from these business locations) that will likely experience negative affects.

15. NPI fails to acknowledge that they have understated the number of hunt camps within the project area. Hunt camps are noise sensitive receptors (dwellings) whether the MOE chooses to acknowledge them as such or not. **Placing turbines next to hunt camps is interfering with our way of life on Manitoulin Island – it is hindering our ability to express our culture.**

16. NPI makes several weak arguments defending the ability of their project to generate tourism for Manitoulin Island. While their arguments may be based on true occurrences they fail to acknowledge two very important facts. Firstly, Manitoulin Island already has a strong tourist base due to our undeveloped/non-industrial landscape. Secondly, wind turbines are no longer a novelty item worth making a special trip to see (they are scattered across much of the world now – most people in the Western world have seen them) and public opinion of them is changing. There is a growing segment of the population who now see them as a health hazard and a blight on the landscape.

17. NPI maintains that using the standard 550m setback will protect the health of residents in the vicinity of their project. They also maintain that the community is generally supportive of this project. There is a growing body of evidence to suggest that a setback of at least 2000m from any dwelling needs to be used to ensure the protection of public health. National and World health organizations are asking government and industry to use a cautious approach in establishing wind farms. There is a growing body

of evidence to suggest that there are serious negative health effects resulting from living in close proximity (within 2000m) to wind farms. Also, there is no evidence to suggest that our community is generally supportive of the McLean's Mountain Wind Farm. Surveying the local newspaper and online discussions suggests the community is firmly against the project as it is proposed in the REA draft submission package.

An additional point of concern I encountered after submitting my elevation request deals with two of the breeding bird sampling locations on Fig. 4 (Map of the 2007/2008) breeding bird sampling locations) of the Bird Study Report in the Appendix of the ESR prepared by Dillon Consulting. Two of the breeding bird sampling locations are shown to have been on my family's farm (Lot 9 Con 2). Dillon Consulting did not receive permission from my family to access our lands. This means either the sites were not visited (raising concerns about the reliability of the work conducted by this company) or Dillon Consulting is guilty of trespassing. The only other explanation is that the sites have been improperly positioned on the map, which also raises concerns about the quality of work carried out by Dillon Consulting.

I strongly recommend that Northland Power Inc. be required to take the following measures to ensure this project does not have serious negative impacts on our community.

1. A thorough economic impact study should be conducted to ensure this project will not have a negative impact on our local tourist driven economy. This economic impact study should survey tourists' acceptance of the project, a survey to determine the level of support from seasonal residents, and a survey of future tourist driven business envelopes for the area.
2. Public support for this project should be evaluated by circulating a survey to all NEMI taxpayers.
3. A more thorough environmental assessment should be completed by someone other than Dillon Consulting.
4. An updated map needs to be produced and must include future building envelopes (receptors). This map would show that many of the turbines are located within the 550m setback from a receptor as mandated by the Green Energy Act. These turbines will need to be moved to new locations and this is not illustrated in the map that is included in the REA draft submission package. The map provided in this package also shows turbine #3 on a lot for which NPI has not secured a lease agreement with the landowner.
5. Local First Nations must be in support of this project before it is allowed to move forward.
6. Northland Power Inc. should be required to sign legal agreements with landowners and residents of the project area holding them liable to any negative health affects, property devaluation, and alteration of groundwater quality and flow experienced by these people.



7. All turbines should be sited at least 2000m from any dwelling or dwelling for which a building permit has been obtained.

***I will take legal action against Northland Power Inc., Dillon Consulting, and all government agencies associated with the approvals process if the project is approved as it is currently proposed and I experience any of the aforementioned problems.***

Sincerely,



### **Appendix I**

Ms. Agatha Garcia-Wright, Director  
Environmental Assessment and Approvals Branch  
Ministry of the Environment  
2 St. Clair Avenue West, Floor 12A  
Toronto, ON, M4V 1L5

August 24, 2009

Dear Ms. Garcia-Wright:

I am writing to request that the McLean's Mountain Wind Farm Project, proposed by Northland Power Inc, be elevated from a screening to an individual environmental assessment. The environmental screening report prepared by Dillon Consulting Limited for Northland Power Inc. does not adequately address the negative environmental effects that this project will have in the area. The lack of public consultation is also of great concern in regards to this project. I have included only some of my concerns with this project, as a full discussion of my concerns is not practical for this type of public process.

Part A.6.2.4 of the Guide to EA Requirements for Electricity Projects describes the process of mandatory notification. It states that, "The notice must be mailed or delivered to households in the immediate vicinity of the project and to affected government agencies." My home is clearly identified as residence #3 on a map titled "McLeans Mountain Windfarm Figure 6-4 Noise Receptor Locations and Noise Contours." Neither myself nor my father (owner of Lot 9 Con 1 and Lot 9 Con 2) received correspondence of any sort from Dillon Consulting or NPI. The property I live and farm on, which is owned by my father and which I am currently in the process of buying, is adjacent to turbines 24 and 28. My family should have been notified of all public meetings held by NPI.

I sincerely feel that Dillon Consulting did not study the project area thoroughly enough to reach the conclusions made in the ESR. I take particular exception to the exclusion of the

North American Puma (*Puma concolor cougar*) in Table 2 of the “Natural Environment Report” which comprises Appendix C of the ESR. Manitoulin Island is identified as Puma habitat, with confirmed tracks in Misery Bay and many sightings in the project area. I do not feel that the column “Observed During Fieldwork” in Tables 2 and 3 of Appendix C of the ESR in any way allows Dillon Consulting to make conclusions about the presence of these animals in the project area. I have personally seen nearly all of the animals listed in Tables 2 and 3, several of which are listed as various levels of concern under SAR, SARA, and COSEWIC.

Having worked a farm located within the project area for 18 years, I feel that Dillon Consulting and NPI have grossly underestimated the abundance and diversity of bird species in the project area and the importance of the bird habitat used by these birds. My home is directly below the well-traveled flight path between Bass Lake and Perch Lake. I have seen Sandhill Cranes nesting within 200 m of the proposed sight for turbine 28. My kitchen window faces the Bass Lake Marsh/Swamp – AREA\_ID 4853, I regularly see birds follow a flight path from this area over the escarpment towards Perch Lake.

I have many questions and concerns regarding Table 5-1: Provincial Screening Checklist of the ESR. Here they are listed in point form for increased clarity:

1.1 In part states that, “No surface water will be required for the project,” yet on page 8 of the ESR under section 1.9 it indicates that the following permit may be required: *“Ontario MOE Permit to Take Water under the Environmental Protection Act, should water be extracted for use in the temporary cement plant/concrete batch plant (if necessary) or for other purposes from a surface and or groundwater source in excess of 50,000 liters per day;”*

**- Will surface water be required for this project or not?**

1.2 In part states that “Some de-watering of the turbine foundation area may be required. Affects on groundwater levels are not expected because of this.”

**- What will happen to the flow of groundwater as a result of the blasting required to pour foundations for the turbines? It is my understanding that there have not been any windfarms developed in Ontario on this type of bedrock. It is also my understanding that the spring water (groundwater) flowing down through the escarpment to my farm originates from proposed turbine sites. I am concerned that the construction of the turbines (particularly turbines 24, 28, 29, 30, and 34) may alter the flow of groundwater to my farm. I rely on this water to operate my farm. What is an appropriate compensation for the loss of access to clean water?**

2.1 In part states that “There are few residences in the vicinity of the turbines. The turbines are set back at least 550m from each residence and future building envelopes.”

**- Because many of the turbines are located on single 100 acre lots, many adjacent landowners will be prevented from building on their own land in the**

**future. With the 550m setback requirements of the Green Energy Act, property owner rights will be restricted with respect to building a dwelling. Dillon Consulting and NPI cannot possibly know about adjacent landowners future building plans because they did not adequately consult with us. What is equally problematic is the restriction future landowners will face if they choose to build. I have recently purchased a building permit for a dwelling on Lot 9 Con 2. My building permit is dated August 20, 2009, as is my receipt of payment. I expect NPI to change the proposed location for turbine 28 as it is less than 550m from my building site. I also expect that NPI should report on any negative environmental impacts for the new site chosen for turbine 28.**

4.1 In part states that, “Based on an extensive literature review, consultations with local experts, and a full year of fieldwork, rare, threatened or endangered species are unlikely to be affected by the project.”

**- I have partially commented on this statement in paragraph 3 of this elevation request, with particular attention to the Puma, which is endangered in eastern North America.**

**- The work done by Dillon Consulting and NPI to access the natural environment of the project area would not stand up to the requirements of any peer reviewed scientific publication I have encountered. I realize this is not a requirement of the normal screening process, but this is not a “normal” windfarm proposal. The McLeans Mountain Windfarm Project proposes to develop one of the most pristine natural habitats on Manitoulin Island.**

**- Which local experts were contacted for consultation? Judith Jones, Dr. Gerard Courtin, and Chris Bell were not consulted. Local residents who know the land and its communities better than any, were not consulted. I have seen a list of “local” authorities in the ESR who were consulted with, and most if not all of these people hold offices that are not on Manitoulin Island. Was John Diebolt used as a consultant in this project? He is our local, senior Conservation Officer who likely knows the project area extremely well.**

**- I suggest that in the individual Environmental Assessment being requested, some of these truly local experts are used for consultation.**

4.2 In part states that, “There are no known ESAs in the study area. The one ANSI (life science) in the area has been avoided.”

**- I contend that the effects to the ANSI (presumably Bass Lake Marsh/Swamp – AREA\_ID 4853) will be mitigated simply because the project area boundary conveniently excludes this ANSI. I have discussed my concerns related to this in paragraph 4 of this elevation request.**

4.3 In part states that, “Wetlands in the study area have been avoided as much as possible.”

**- Were qualified wetlands evaluators used to evaluate the wetlands that will not be avoided? If not, this should be completed in the requested EA.**

4.4 In part states that, “The construction and installation of project components has the potential to result in effects to wildlife through the removal of some habitat.”

**- This proposed windfarm will result in more habitat loss in the project area than has ever before been experienced – it not only has the potential to result in effects to wildlife – it will have effects to wildlife.**

4.6 In part states that, “The scale and significance of these effects has been assessed in this Environmental Screening”

**- Ducks Unlimited acknowledges that the indirect impacts of windfarms on migratory birds are not well understood and that quality information on this particular issue is generally lacking (Pers. Comm.). How can Dillon Consulting and NPI assess and mitigate the effects of something the scientific community knows very little about?**

4.7 In part states that: “From some turbine sites, natural vegetation will need to be cleared for the turbines, collector lines and access roads.”

**- Because every turbine will require the construction of at least some length of road, and a foundation, natural vegetation will be destroyed at every turbine site. Also, because many (nearly 50%) of the proposed turbine sites are located in wooded areas, much of the vegetation that is destroyed will be forest.**

5.5 In part states that: “The affected lands do not support harvestable forest resources.”

**- This statement is simply not true. I invite you to visit the project area and have one of the adjacent landowners show you some of the harvestable forest resources that will be cleared for collector lines and access roads.**

5.6 In part states that: “The project is located in an area that may be used for recreational hunting.” And that “None of the affected lands can be considered inaccessible.”

**- The project area is unquestionably used by recreational and sustenance hunters. The people that hunt these lands include members of Sheguiandah First Nation, local land owners and their families, as well as off-Island residents who come to the area for hunting (bringing money into the local economy). A large percentage of the lands in the project area are used solely for hunting. Should the windfarm cause the emigration of game resources from the area it is possible that many of these landowners will sell, depreciating property values.**

6.1 In part states that: “There are no built communities in the vicinity of the project, the area is rural in nature with a few scattered residences.”

**- This is a terribly misleading statement. The project area boundary conveniently excludes:**

- 1. Aundeck Omni Kaning First Nation which is approximately 1 km from the nearest proposed turbine (turbine 8)**
- 2. All of the homes north and west of HWY 540**
- 3. All of the homes on Bidwell Road south of proposed turbines 42 and 43 (these homes are approximately 1 km from the proposed turbines)**
- 4. All of the homes on Townline Road south of the project area**
- 5. Sheguiandah and Sheguiandah First Nation**
- 6. All of the homes along HWY 6**
- 7. Little Current which is approximately 3 km from the nearest proposed turbines (turbines 1 and 4)**

**- The project area boundary should be extended 1 km in each cardinal direction, with special mention given to Little Current, to properly describe the level of human habitation in the vicinity of the project.**

**- Please refer to the McLeans Mountain Windfarm Figure 6-4 Noise Receptor Locations and Noise Contours map to help clarify my arguments on this topic. Note that the 40 dBA Noise Contour of proposed turbine 37 exceeds the project area boundary to the west. Also note the obvious exclusion of Aundeck Omni Kaning from the project area (the project area boundary clearly cuts to the southwest as it approaches AOK).**

6.2 In part states that: “There are no businesses in the vicinity of the project that could be negatively affected.”

**- How can Dillon Consulting make such a bold statement based on the information in this ESR? Most Island businesses rely on tourist dollars, and tourists do not come to Manitoulin Island to see wind turbines. Tourists come to the Island to get away from large man made structures like turbines, and the light and noise pollution associated with such structures.**

6.3 In part states that: “Disruption during operations is not expected,” and that “No recreation cottages are within the project area. There are a couple of hunt camps in the project area.”

**- One of the 40 dBA Noise Contours on the McLeans Mountain Windfarm Figure 6-4 Noise Receptor Locations and Noise Contours map includes a large portion (approximately 30%) of the land my family and I hunt on (Lot 9 Con 2). This will undoubtedly disrupt the game that I hunt and will disrupt the deep connection I feel with the land when I am hunting.**

**- I personally know of 12 dwellings in the project area, plus at least 2 building permits for dwellings that have been purchased within the last 6 months**

**that are also within the project area. Of these 14 dwellings, at least 4 are within 550 metres of a proposed turbine. I am also unclear of the distinction Dillon Consulting makes between a recreation cottage and a hunt camp. Many consider hunting to be a recreational activity (though hunting for me is part of my Manitoulin lifestyle), therefore, making a hunt camp a recreational cottage. Also, many “hunt camps” are used year round for many forms of recreation including skiing, snowshoeing, wild crafting, maple syrup making, and hiking. Regardless of their uses, these camps are all considered dwellings and will require the Green Energy Act setback of 550 m.**

6.5 In part states that: “Negative effects on the area economy are not expected. The project will result in positive economic impacts through payments to land owners and taxes that will be paid to the municipality and job creation. Supplies and services will be obtained in the local area as much as possible.”

**- I have already addressed my concerns regarding negative effects on the area economy. Information in the ESR does not convince me that the tourism industry and land values of Manitoulin Island will not be negatively affected.**

**- NPI’s commitment to support the local economy through job creation and the purchase locally of supplies and services is not convincing. Full-time, long term job creation has been estimated by NPI to be anywhere from 7-10 jobs, with no written commitment to hire locally. I have also not seen any written commitment in the form of a legally binding contract that holds NPI to using local businesses and labour during the construction phase of the project. It seems very likely that there will be no net economic benefit to the Island, it seems more likely that there will be a long term net negative impact to the local economy.**

6.8 In part states that: “Potential effects to public health and safety during the operations period are minimal,” and that “Project Health and Safety concerns have been responded to – local residents are generally supportive of the project”

**- Potential health effects from wind turbines are still poorly understood. Dillon Consulting and NPI should not be able to make this claim, especially when organizations like the World Health Organization are approaching this issue with caution. I do not feel it is safe for us (residents within or near the project area) to be living in such close proximity to wind turbines until our provincial and national governments have a clearer understanding of the potential health effects from wind turbines.**

**- Local residents are not generally supportive of the project, at least not since being given the most recent information.**

I have presented several issues that warrant the McLean’s Mountain Windfarm Project proposed by NPI be elevated to an individual EA. I feel that the failure of NPI to notify my family of the public information meetings and to share information with us, has left me with an inadequate amount of time to fully examine the ESR. I am submitting this

elevation request within the comment period, however, request that I be permitted to submit further comments should the need arise.

Please copy me on the company's response to my elevation request.

Thank you for your time.

Sincerely,





**NORTHLAND POWER**  
McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

May 2011



Dear 

**RE: McLean's Mountain Wind Project – Elevation Request**

Thank you for your letter of April 2010 (copy enclosed) expressing community concerns regarding the proposed McLean's Mountain Wind Farm. Responses to your comments have been deferred until now to reflect the many changes that have been made to the project to be compliant with the Renewable Energy Approval (REA) regulations.

Several of the northernmost turbines and southwestern perimeter turbines have been removed largely due to public input. This results in a reduction in the number of wind turbines. Northland Power Inc. (NPI) is also currently proposing the use of 100 metre wind turbine towers which will lower the number again to 24-26 units. The proposed project will require the construction of a transmission line to connect with the Hydro One transmission system that is located on Goat Island.

NPI has also entered into a 50/50 partnership with Mnidoo Mnising Power, a company formed by the United Chiefs and Councils of Mnidoo Mnising First Nations to share equally in the McLean's Mountain Wind Farm.

NPI is committed to providing up-to-date information about wind energy and the McLean's Mountain Wind Farm to help people stay informed about our project. As the Project Manager for this important project, I am committed to ensuring the project is a success from everyone's perspective and I welcome your input.

NPI will be holding a Public Information Centre (PIC) on Wednesday, May 18, 2011 to inform stakeholders of the recent changes made to the project that are described above. The project layout will be presented at the PIC. The Notice of Public Information Centre is attached.

I trust that the following responses address the concerns and questions you have expressed in your letter.

**Comment: 1.** *“NPI did not acknowledge the fact that they failed to mail or deliver correspondence of the project to my family as was required under the previous approval process (Guide to EA Requirements for Electricity Projects).”*

**NPI Response:**

Obtaining a complete and accurate list of all landowners is difficult. Some government databases have restrictions on their use. NPI, as a private proponent, did their best to obtain an



accurate list of landowners in the study area. Yes, we are aware that some landowners did not receive an initial notification; NPI has added these individuals to their mailing list once they became aware of them. It is NPI's opinion that the consultation program exceeds what is required by applicable legislation. We apologize for any errors and omissions.

**Comment: 2.** *“NPI states that it is “highly unlikely that the project would have any material effect on the ground water resources in the area,” yet they include no supporting evidence or arguments. This is an important issue for people living in the project area and NPI needs to be accountable should groundwater be negatively affected.”*

**NPI Response:**

Given the nature of a wind farm (and the specific mitigation measures proposed for this project), the project is highly unlikely to have any impact of surface or ground water resources. Given the shallow depth of the foundations three (3) meters and the fractured and permeable nature of the geology, no measurable effects on ground water flow is expected. We are aware, previous to any construction; many people in the community are hauling water to their wells at various times of the year. Based on the bore holes information collected to date, the water table is expected to be well below the depth of turbine foundation excavation. There is no reason to expect that turbine excavation activities would have an effect on the underground water or surface water in the area given the shallow depth of the excavations.

**Comment: 3.** *“NPI claims to be ‘siting its turbines a minimum of 550m from sensitive noise receptors as required by provincial policy,’ yet they ignore the fact that turbine #28 is within 550m of a secured building permit for Lot 9 Con 2 – this turbine must be relocated”*

**NPI Response:**

NPI made efforts to identify all potential receptors in the study area. In the event that any receptors were missed, required changes to the layout will be made to maintain a minimum 550 m setback and meet applicable MOE noise guidelines. Specific setbacks are required and a criterion is in place to maintain these typical setbacks based on common building practices when relating to vacant lots. This has been followed on this project.

The MOE has made a decision that crystallization dates are acknowledged for all projects. A crystallization date is the date at which the project layout is publically announced and the public should have an understanding of where the turbines are to be located. If building permits are purchased after the crystallization date, they are being taken out with full knowledge of the expected placement of the turbines.

The MOE, in its letter dated, August 3, 2010 (copy enclosed) has confirmed that the crystallization date is when NPI issued its Notice of Completion, under the previous Electricity Act Regulation. It is expected that all noise receptors, at that time, were considered in the noise assessment for the project. The only exception would be is if a turbine was relocated after a building permit was taken out. That building permit has to describe a building that meets the criteria as a sensitive receptor by the Ministry of the Environment.

NPI published its Notice of Completion on July, 2009 in the Manitoulin Expositor. The Notice of Completion was also distributed to residents within and around the project area at that time through Canada Post Admail.

**Comment: 4.** *“NPI does not provide sufficient evidence in their ESR or REA to ensure that rare, threatened or endangered species will not be affected by this project.”*

**NPI Response:**

Extensive studies on the natural environment have been conducted with the input of the MNR and Environment Canada to ensure that the Manitoulin environment is protected.

**Comment: 5.** *“NPI claims that “discussions were held with several agencies as well input was received from local people with knowledge on conservation issues” but they do not provide any names – what evidence is there of any such discussions?”*

**NPI Response:**

The reference to the agencies that NPI consulted with regarding the proposed project is provided in the ESR (July 2009) and further in the supplementary information required under the REA process. Discussions were held with several agencies, including the MNR and Environment Canada, and input was received from local people with knowledge on conservation issues (e.g. Christopher Bell has provided input). If there are other individuals in the area with relevant knowledge then NPI would be quite willing to speak with them. Names of individual local residents, unless otherwise indicated, are protected by the Privacy Act and as such remain undisclosed to the public.

**Comment: 6.** *“NPI does not provide any convincing arguments that their project will not have negative affects on the Bass Lake Marsh/Swamp – AREA\_ID 4853 that is located in the vicinity of the project.”*

**NPI Response:**

The project is well removed from Bass Lake. Mitigation measures as outlined in the Environmental Management and Protection Plan (EMPP), supplementary document required under REA, would make the likelihood for any effects on Bass Lake to be highly unlikely. The EMPP measures would prevent any contamination of waterways during construction. No long term operational effects on Perch Lake are likely.

**Comment: 7.** *“NPI fails to address my concerns regarding the devaluation of recreational properties upon the construction of the turbines. Using anecdotal evidence from their own developments is a totally inadequate argument to support the statement that “once operational, the wind farm is highly unlikely to affect game species in the area”. Assuming game species are not affected by the operational turbines (as absurd an assumption as it is), it is still very likely that hunters will not choose to hunt in the vicinity of a turbine. It is very likely that this project will have a negative impact on property values in the project area.”*

**NPI Response:**

The recreational properties i.e., cottages in the area, largely focused along the Manitoulin Island shoreline, are well removed from the proposed project. The cottages along the shore would likely face over the water to the north and east (away from the wind farm). As such these properties would not likely experience visual effects. Although we do acknowledge that there is a potential for views of the turbines from the water.

Based on the consultations undertaken with the local residents, NPI is aware of the public concerns over the loss of property values due to the proposed development of the McLean's' Mountain Wind Farm. Our direct contact with real estate sales representatives have indicated that there has been no effect on property values as a result of the Prince Wind Farm near Sault Ste. Marie. This information was presented at the March 2010 Public Information Centre in Little Current. It is our understanding that since the McLean's Mountain Wind Farm has been in advanced development stages adjacent properties including farms have been sold at quite appreciated values.

The vast majority of evidence on the impact of wind farms on land values comes from Europe, Australia and United States of America (USA). The studies conducted in these countries indicate wind farms have no material effect on property values. Data from Ontario is beginning to emerge as more wind farms are constructed, and the experience from those projects also suggests that wind farms do not decrease property values.

A 2006 study conducted by Blake, Matlock and Marshal Ltd. for Windrush Energy suggests that wind farms have not negatively affected property values. "Property Value Study: the Relationship of Windmill Development and Market Prices" aimed to determine if the development of wind farms in the Melancthon area has had any impact on the growth of property values in the Township. Property values before and after wind farm development in the Township of Melancthon where compared to values in East Luther Grand Valley Township, a neighbouring and similar township except for its lack of wind farms. Property values in Melancthon were also compared to those in Dufferin County. The analysis showed that property values in the Township of Melancthon grew similarly to the rest of the County, and increased more than East Luther Grand Valley Township. Wind farm development was not found to have diminished property values.

The Canadian Hydro Developers Inc. also compared housing price ranges on Wolfe Island and Simcoe Island in Ontario, before and after the development of the wind farm ([http://www.shearwind.com/glen\\_dhu\\_community/fact\\_sheet.html](http://www.shearwind.com/glen_dhu_community/fact_sheet.html)). Findings indicate that Township of Melancthon experienced a stronger growth rate in sales price per property, than the adjoining East Luther Grand Valley Township. The findings of this particular research indicate that the presence of the Wind Farm in Melancthon Township has not had an adverse impact on values within that municipality.

A study conducted in the Chatham-Kent area, where there are a number of wind turbines, found no evidence that wind farms have any measurable affect on rural residential market values. The study was conducted during May and June of 2009 by John Simmons Realty Services Ltd. and Canning Consultants Inc. and was commissioned by the Canadian Wind Energy Association to review possible effects of wind energy developments on real estate values on near-by properties. This information was provided at the March 22<sup>nd</sup>, 2010 Public Information Centre (PIC) that was held in Little Current. To review the study, please visit:

<http://www.canwea.ca/pdf/talkwind/PropertyValuesConsultingReportFebruary42010.pdf>

NPI has also considered the potential for effects of the project on recreation activities. While construction activity could result in some game species (e.g. deer) moving out of the immediate area during the construction period, once the turbines are operational there is no evidence to suggest that the turbines would reduce deer population in the area. Further, all the turbines are located on private land and these lands would not be open to hunting by the public unless landowner permission is provided. As such, over the long term, there is little reason to expect that the project would affect hunting activity in the area.

**Comment: 8.** *“NPI claims to have chosen its project area boundaries so they will have to adhere to the most stringent of noise criteria. They do not discuss the likelihood of gaining approval for their project if they had chosen the more logical project area boundaries I suggest in my elevation request.”*

**NPI Response:**

Choosing a location for a wind farm is largely based on available wind resources and access to the transmission grid. For the wind turbine to achieve maximum efficiency, the wind must be strong and consistent. These winds are found on McLean’s Mountain. Many people have suggested that the turbines be put in uninhabited places. However, the further the electricity must travel before it is used, the greater the losses. For turbines to be most efficient they need to be placed near the receiving sources.

A Noise and Acoustic Assessment was conducted in accordance with the Ontario Ministry of Environment (MOE) Guidelines. The purpose of this environmental noise impact assessment, prepared for the Northland Power Inc (“NPI”) M1 Wind Project (the “Project”), is to fulfill NPI’s requirements under Ontario Regulation 116/01 of the *Environmental Assessment Act* and to provide the basis for the Certificate of Approval – Air [“C of A (Air)”] under Section 9 of the *Environmental Protection Act* (“EPA”). The analysis shows that the noise impact from the proposed project does not exceed the most restrictive noise limits that apply for areas with acoustic designation of Class 3 (Rural) as defined by the MOE. NPI has full confidence in receiving an approval.

**Comment: 9.** *“NPI fails to acknowledge that there are businesses and a great deal of future business potential (ecotourism, outfitting, and culinary tourism) in the vicinity of the project. They simply change the context within which they claim that their project will not affect local businesses. There are businesses within the vicinity of the project (meaning the turbines will be heard from and seen from these business locations) that will likely experience negative affects.”*

**NPI Response:**

The McLean’s Mountain Wind Farm is expected to have no negative impacts on Manitoulin Island Tourism. NPI has considered the potential for effects of the project on tourism and recreation activities. The project is well removed from the Lake Huron shoreline areas around the Island. The closest wind turbine (the westernmost turbine, turbine #42) is about 1.5 km from the Lake Huron shoreline. The easternmost wind turbine (turbine #9) of the project area is greater than 3 kilometres from the Lake Huron shoreline. Appreciating that tourist interests vary by individual, it is NPI’s opinion that the view of the wind farm, especially from Honora Bay, will be complementary and will not negatively affect the viewscape.

Wind farms can have positive effects on the local tourism economy. There are 6,000 wind turbines in Denmark, for example, which are used for marketing tourism. Local tourism associations may use wind turbines to promote “green tourism”. This is particularly targeted towards the German market, where the public is known to have a high level of interest in both environmental issues and in new technology. In a Scottish study<sup>1</sup> 43% of respondents said a wind farm would have a positive effect on their inclination to visit the Argyll area, an area of high landscape value. About the same proportion of respondents said it would make no difference, while less than 8% felt that it would have a negative effect. Nine out of ten tourists visiting some of Scotland’s top beauty spots say the presence of wind farms makes no difference

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<sup>1</sup> *Tourist Attitudes Toward Wind Farms*, MORI Summary Report, September 2002 [www.bwea.com/pdf/MORI.pdf](http://www.bwea.com/pdf/MORI.pdf)

to the enjoyment of their holiday. Twice as many people would return to an area because of the presence of a wind farm than would stay away, according to a poll carried out by MORI Scotland Commercial tour companies provide guided tours of several wind farms in the Pincher Creek, Alberta region. Several wind farms in Australia attract so many visitors that commercial tour operators provide opportunities for the public to get a close up view of the wind farms.

Back in 2004 I was involved in conducting a survey about the wind farm, requested by the municipality. The survey results indicated over 95% support of a wind farm by locals and visitors to Little Current. Boaters especially noted that the Turbines provide a landmark coming into the port of Little Current. NPI does not expect that the presence of the turbines would factor into a person's decision on whether to visit the Island. This project may have the potential to attract visitors. At NPI's Miller Mountain project in Quebec, 3500 tourists visited the project in 2008. The Providence Bay Wind Farm located to the south east of the MMWF project, approximately 45 kilometres away, established an interpretation centre for the project, which attracts numerous visitors over the summer visitor months.

As indicated above a Noise and Acoustic Assessment was conducted in accordance with the Ontario Ministry of Environment (MOE) Guidelines. Wind turbines generate some sound. The noise from a wind turbine is caused by the passing of the blade through the air, and is similar to white noise from wind, or waves. But even when the turbine is turning you can carry on a conversation at its base. The sound is a "swish" like the waves on a beach. Wind turbines produce noise only when the wind is blowing, although background ambient noise from the blowing wind also increases. Other sources of background noise for the area include traffic on the nearby Highway 6 and/or Highway 540. All wind turbines have been sited a minimum of 550 meters from receptors.

**Comment: 10.** *"NPI fails to acknowledge that they have understated the number of hunt camps within the project area. Hunt camps are noise sensitive receptors (dwellings) whether the MOE chooses to acknowledge them as such or not. Placing turbines next to hunt camps is interfering with our way of life on Manitoulin Island – it is hindering our ability to express our culture."*

**NPI Response:**

NPI made efforts to identify all potential receptors in the study area. In the event that any receptors were missed, required changes to the layout will be made to maintain a minimum 550 m setback and meet applicable MOE noise guidelines. NPI is aware of the hunt camp locations in the study area. As per the direction provided by the MOE in letters dated March 19 and 22, 2010, seasonal hunt camps used for limited duration during the year do not need to be considered as noise sensitive receptors.

**Comment: 11.** *"NPI makes several weak arguments defending the ability of their project to generate tourism for Manitoulin Island. While their arguments may be based on true occurrences they fail to acknowledge two very important facts. Firstly, Manitoulin Island already has a strong tourist base due to our undeveloped/non-industrial landscape. Secondly, wind turbines are no longer a novelty item worth making a special trip to see (they are scattered across much of the world now – most people in the Western world have seen them) and public opinion of them is changing. There is a growing segment of the population who now see them as a health hazard and a blight on the landscape."*

**NPI Response:**

NPI is aware of the strong tourism base of the Island. And per our other responses, and as described in the REA documentation, based on the location of the project (well removed from the shoreline) and the experience of other jurisdictions, the project is not expected to have a negative impact on tourism.

**Comment: 12.** *“NPI maintains that using the standard 550m setback will protect the health of residents in the vicinity of their project. They also maintain that the community is generally supportive of this project. There is a growing body of evidence to suggest that a setback of at least 2000m from any dwelling needs to be used to ensure the protection of public health. National and World health organizations are asking government and industry to use a cautious approach in establishing wind farms. There is a growing body of evidence to suggest that there are serious negative health effects resulting from living in close proximity (within 2000m) to wind farms. Also, there is no evidence to suggest that our community is generally supportive of the McLean’s Mountain Wind Farm. Surveying the local newspaper and online discussions suggests the community is firmly against the project as it is proposed in the REA draft submission package.”*

**NPI Response:**

The Province of Ontario has some of the most stringent regulations in North America regarding wind turbine siting and sound restrictions and Northland Power intends to meet or exceed these regulations. Ontario’s Chief Medical Officer of Health, Dr. Arlene King, (see also May 2010 report on *The Potential Health Impacts of Wind Turbines*) recently sent a memorandum to all Medical Officers of Health and Environmental Health Directors stating the following about wind energy and human health: “(...) there is no scientific evidence, to date, to demonstrate a causal association between wind turbine noise and adverse health effects.”

It is important to note that although wind energy is relatively new to Ontario, it’s a very well-established and proven form of electrical generation around the world. For more than thirty (30) years, tens of thousands of people have been living near wind turbines with no ill effects. All of the proposed wind turbines are greater than 698 meters away from any residence, so there should clearly be no issue. The MOE noise standard also meets the range of the Health Canada guidelines of 40 dB(A) to residences.

NPI is continuing its consultation with the local community in effort to address any issues and concerns regarding the proposed project.

**Comment: 13.** *“An additional point of concern I encountered after submitting my elevation request deals with two of the breeding bird sampling locations on Fig. 4 (Map of the 2007/2008) breeding bird sampling locations) of the Bird Study Report in the Appendix of the ESR prepared by Dillon Consulting. Two of the breeding bird sampling locations are shown to have been on my family’s farm (Lot 9 Con 2). Dillon Consulting did not receive permission from my family to access our lands. This means either the sites were not visited (raising concerns about the reliability of the work conducted by this company) or Dillon Consulting is guilty of trespassing. The only other explanation is that the sites have been improperly positioned on the map, which also raises concerns about the quality of work carried out by Dillon Consulting.”*

**NPI Response:**

Lot 9, Concession 2 is located directly adjacent to lands for which Dillon had permission to enter. A slight error in the bird survey mapping has connected point counts in the incorrect order, linking #44 directly to #46 and skipping #45, indicating a travel path crossing Lot 9, Concession 2. The travel path actually taken did not cross over onto Lot 9, Concession 2.

The following are responses to the measures recommended in your March 18<sup>th</sup>, 2010 letter:

**Comment: 1.** *“A thorough economic impact study should be conducted to ensure this project will not have a negative impact on our local tourist driven economy. This economic impact study should survey tourists’ acceptance of the project, a survey to determine the level of support from seasonal residents, and a survey of future tourist driven business envelopes for the area.”*

**NPI Response:**

The REA process does not require an economic impact study to be carried out for the proposed project. As previously noted, based on the location of the project (well removed from the shoreline) and the experience of other jurisdictions, the project is not expected to have a negative impact on tourism.

**Comment: 2.** *“Public support for this project should be evaluated by circulating a survey to all NEMI taxpayers.”*

**NPI Response:**

We are of the opinion that the consultation with the local community exceeds what is required by applicable legislation. NPI acknowledges and has addressed the questions and concerns regarding the proposed project that have been raised by the public. We do not feel that a survey to all NEMI Taxpayers is necessary nor is it required under the REA process.

**Comment: 3.** *“A more thorough environmental assessment should be completed by someone other than Dillon Consulting.”*

**NPI Response:**

It is our view that the previously completed environmental screening and the more recently completed REA draft documentation meets (if not exceeds) the applicable legislation. The MNR is currently undertaken its review of the draft REA Natural Heritage documentation package to confirm its completeness.

**Comment: 4.** *“An updated map needs to be produced and must include future building envelopes (receptors). This map would show that many of the turbines are located within the 550m setback from a receptor as mandated by the Green Energy Act. These turbines will need to be a moved to new locations and this is not illustrated in the map that is included in the REA draft submission package. The map provided in this package also shows turbine #3 on a lot for which NPI has not secured a lease agreement with the landowner.”*

**NPI Response:**

Please refer to response provided on Page 6 of this letter addressing comment #10. NPI has updated all maps based on the final wind turbine layout and the consideration of comments received. Updated mapping will be presented at the upcoming PIC.

**Comment:** 5. *“Local First Nations must be in support of this project before it is allowed to move forward.”*

**NPI Response:**

Communication with First Nation communities that may have interests in the proposed project has been ongoing for several years and in compliance with government requirements. In February 2011, Mnidoo Mnising Power, a company formed by the United Chiefs and Councils of Mnidoo Mnising First Nations (UCCMM), has entered into a 50/50 partnership with Northland Power Inc. to share equally in the McLean’s Mountain 60 MW Wind Farm Project and on-going renewable power developments.

Membership of UCCM include M'Chigeeng First Nation; Sheguiandah First Nation; Sheshegwaning First Nation; Aundeck-Omni-Kaning First Nation; Whitefish River First Nation; and Zhiibaahaasing First Nation. UCCMM formed Mnidoo Mnising Power to lead renewable energy projects on Manitoulin Island in order to protect First Nations’ rights, heritage and ensure the future for First Nations’ youth.

Band Council resolutions are in place with each band council supporting their position in this agreement.

**Comment:** 6. *“ Northland Power Inc. should be required to sign legal agreements with landowners and residents of the project area holding them liable to any negative health affects, property devaluation, and alteration of groundwater quality and flow experienced by these people.”*

**NPI Response:**

Land lease agreements have been established with the owners of the private lands. A legal description of the land parcels was submitted to the MOE. The project is being developed to meet if not exceed all applicable standards and requirements to ensure that the project does not result in significance environmental and health effects.

**Comment:** 7. *All turbines should be sited at least 2000m from any dwelling or dwelling for which a building permit has been obtained.”*

**NPI Response:**

The proposed project will require approval under Ontario Regulation 359/09 – Renewable Energy Approval (REA) under the *Green Energy Act* and NPI is complying with all of the REA requirements including setback requirements. The 2000 m setback as suggested in your letter is unjustifiable and unnecessary.

Please feel free to contact me for more detailed information. My phone number is 705-271-5358 and my email is [rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca).



Thank you.

A handwritten signature in black ink, appearing to read "Rick Martin". The signature is fluid and cursive, with the first name "Rick" and last name "Martin" clearly distinguishable.

Rick Martin  
Project Manager  
Northland Power Inc. Little Current Office

Encl. Notice of Public Information Centre  
Letter dated August 3, 2010 from MOE Director of Environmental Approvals, Doris Dumais

# **Municipal Consultation Form**

To Dillon From NP6

To: Beatrice From: Kristen

~~#1~~

April 15/10

2:50pm

11 pages



Ministry of the Environment

**Renewable Energy Approval  
Consultation Form: municipalities, local authorities  
ss. 18(2) Ontario Regulation 359/09**

Ce formulaire est disponible en français

**PART A: TO BE COMPLETED BY THE APPLICANT BEFORE SUBMITTING TO  
MUNICIPALITY OR LOCAL AUTHORITY**
**Section 1 - Project Description**
**1.1 - Renewable Energy Project**

Project Name (Project Identifier to be used as a reference in correspondence)

M<sup>C</sup>LEAN'S MOUNTAIN WIND FARM L.P.
**Project Location**
Same as Applicant Physical Address?  Yes  No (If no, please provide site address information below)

Civic Address - Street Information (includes street number, name, type and direction)

Unit Identifier (i.e. apartment number)

PLEASE REFER TO SECTION 6.10.1.2 OF ATTACHED INFORMATION

Survey Address (Not required if Street Information is provided)

Lot and Conc.:  
used to indicate location within a subdivided township  
and consists of a lot number and a concession  
number.

Part and Reference:

used to indicate location within unorganized territory, and consists of a part and a reference plan  
number indicating the location within that plan. Attach copy of the plan.

Lot

Conc.

Part

Reference Plan

PLEASE REFER TO SECTION 6.10.1.2 OF ATTACHED SUPPLEMENTARY INFORMATION

Location Information (includes any additional information to clarify physical location) (e.g. municipality, ward/township)

MUNICIPALITY OF NORTHEASTERN MANITOULIN AND THE ISLANDS (NEMI)

Geo Reference (e.g. southwest corner of property)

Map Datum	Zone	Accuracy Estimate	Geo Referencing Method	UTM Easting	UTM Northing
NAD 83	17	+/- 1m	GPS	414445	5081398

**Project Phasing (outline construction, operation and decommissioning activities)**

PLEASE REFER TO THE ATTACHED SUPPLEMENTARY INFORMATION

- SECTION 2.2 - DESCRIPTION OF PROJECT ACTIVITIES

- PROJECT DESCRIPTION REPORT (SECTION 3.0)

**1.2 - Environmental Context**

Describe any negative environmental effects that may result from engaging in the project (consider construction, operation and decommissioning activities.)

PLEASE REFER TO THE ATTACHED SUPPLEMENTARY INFORMATION

- PROJECT DESCRIPTION REPORT (SECTION 4.0)

Propose early avoidance/prevention/mitigation concepts and measures.

PLEASE REFER TO THE ATTACHED SUPPLEMENTARY INFORMATION

- SECTION 6.6.3 - MITIGATION MEASURES

**1.3 - Renewable Energy Generation Facility**

Type of Facility / Operation (select all that apply & complete all appropriate sections)

<input checked="" type="checkbox"/> Wind Facility (Land Based)	<input type="checkbox"/> Biofuel Facility
<input type="checkbox"/> Wind Facility (Off-Shore)	<input type="checkbox"/> Solar Photo Voltaic Facility
<input type="checkbox"/> Biogas Facility (Anaerobic Digesters)	<input type="checkbox"/> Other Describe :
<input type="checkbox"/> Biomass Facility (Thermal Treatment)	<input type="checkbox"/> Class (if applicable) :

Name Plate Capacity	Expected Generation	Service Area	Total Area of Site (hectares)
77.4 MW	77.4	CONNECTED TO S2B AT GOAT ISLAND	8000 H

Provide a description of the facilities equipment or technology that will be used to convert the renewable energy source or any other energy source to electricity.

PLEASE REFER TO THE ATTACHED SUPPLEMENTARY INFORMATION  
 - PROJECT DESCRIPTION REPORT

**1.4 - Renewable Energy Generation Activities**

Describe the activities that will be engaged in as part of the renewable energy project

PLEASE REFER TO THE ATTACHED SUPPLEMENTARY INFORMATION  
 - SECTION 2.2 - DESCRIPTION OF PROJECT ACTIVITIES  
 - PROJECT DESCRIPTION REPORT (SECTION 3.0)

**Section 2 - Supporting Documents**

2.1 - Requirement	Name of Draft documents distributed for consultation	Date available to Municipal or Local Authority Contact
DRAFT Project Description Report	NORTHLAND POWER INC. - McLEAN'S MOUNTAIN WIND FARM	DEC 16, 2009
DRAFT Design and Operations Report		LATE 2009 EARLY 2010
DRAFT Construction Plan Report		
DRAFT Decommissioning Plan Report		
List of other Documents		
(REFER TO THE ATTACHED SUPPLEMENTARY INFORMATION)		

Location where written draft reports can be obtained for public inspection (physical location for viewing and the applicants project website if one is available):  
**MCLEAN'S MOUNTAIN WIND FARM SITE OFFICE (**  
**TOWNSHIP OF NORTHEASTERN MANITOULIN AND THE ISLANDS**

**Section 3 – Applicant Address and Contact Information**

<b>3.1 - Applicant Information (Owner of project/facility)</b>				
Applicant Name (legal name of individual or organization as evidenced by legal documents)			Business Identification Number	
MCLEAN'S MOUNTAIN WIND FARM L.P.			85176743-RT0001	
Business Name (the name under which the entity is operating or trading - also referred to as trade name)			<input checked="" type="checkbox"/> same as Applicant Name	
MCLEAN'S MOUNTAIN WIND FARM L.P.				
Civic Address- Street Information (includes street number, name, type and direction)			Unit Identifier (i.e. apartment number)	
23 A VANKOUGHNET ST. E. LITTLE CURRENT, ON POPIKO			UNIT "A"	
Survey Address (Not required if Street Information is provided)				
Lot and Conc.:		Part and Reference:		
used to indicate location within a subdivided township and consists of a lot number and a concession number.		used to indicate location within an unsubdivided township or unsurveyed territory, and consists of a part and a reference plan number indicating the location within that plan. Attach copy of the plan.		
Lot	Conc.	Part	Reference Plan	
PLEASE REFER TO SUPPLEMENTARY INFORMATION		PART "A" SECTION 6.10.1.2		
Municipality	County/District	Province/State	Country	Postal Code
NORTHEAST MANITOULIN	MANITOULIN	ONTARIO	CANADA	POP IKO

AND THE ISLANDS

**PART B: TO BE COMPLETED BY THE MUNICIPALITY OR LOCAL AUTHORITY****Section 4 - Municipal or Local Authority Contact Information (check the one that applies)**

<b>Local Municipality</b> (include each local municipality in which project location is situated)				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Name of Municipality	Address	Phone	Clerk's Name	Clerk's Phone/Fax	E-Mail Address
Northeastern Manitoulin and	Postal Bag 2000 Little Current, ON P0P 1K0	705-368-3500	Janet Moore	705-368-3500 x228 705-368-2245	jmoore@townofnemi. on.ca
<b>Upper Tier Municipality</b> (include each upper tier municipality in which project location is situated)				<input type="checkbox"/> Yes	<input type="checkbox"/> No
Name of Municipality	Address	Phone	Clerk's name	Clerk's Phone/Fax	E-Mail Address
<b>Local roads area</b> (include each local roads area in which project location is situated)				<input type="checkbox"/> Yes	<input type="checkbox"/> No
Name of local roads board	Address	Phone	Secretary-treasurer's Name	Secretary-treasurer's Phone/Fax	E-Mail Address
<b>Board Area</b> (include each board area in which project location is situated)				<input type="checkbox"/> Yes	<input type="checkbox"/> No
Name of Local Service Board	Address	Phone	Secretary's name	Secretary's Phone/Fax	E-Mail Address

**Section 5: Consultation Requirement**

<b>5.1 - Project Location</b>
Provide comment on the project location with respect to infrastructure and servicing.
as per attached
<b>5.2 - Project Roads</b>
Provide comment on the proposed project's plans respecting proposed road access.
as per attached
Identify any issues and provide recommendations with respect to road access
as per attached
Provide comment on any proposed Traffic Management Plans
as per attached
Identify any issues and provide recommendations with respect to the proposed Traffic Management Plans
as per attached

**5.3 – Municipal or Local authority Service Connections**

Provide comment on the proposed project plans related to the location of and type of municipal service connections, other than roads.

as per attached

Identify any issues and provide recommendations with respect to the type of municipal service connections, other than roads.

as per attached

**5.4 – Facility Other**

Identify any issues and recommendations with respect to the proposed landscaping design for the facility

as per attached

Provide comment on the proposed project plans for emergency management procedures / safety protocols.

as per attached

Identify any issues and recommendations with respect to the proposed emergency management procedures / safety protocols.

as per attached

Identify any issues and recommendations with respect to any Easements or Restrictive Covenants associated with the Project Location

as per attached

**5.5 Project Construction**

Identify any issues and recommendations with respect to the proposed rehabilitation of any temporary disturbance areas and any municipal or local authority infrastructure that could be damaged during construction.

as per attached

Identify any issues and recommendations with respect to the proposed location of fire hydrants and connections to existing drainage, water works and sanitary sewers

as per attached

Identify any issues and recommendations with respect to the proposed location of buried kiosks and above-grade utility vaults



Identify any issues and recommendations with respect to the proposed location of existing and proposed gas and electricity lines and connections

as per attached

Provide comment on the proposed project plans with respect to Building Code permits and licenses.

as per attached

Identify any issues and recommendations related to the identification of any significant natural features and water bodies within the municipality or territory.

as per attached

Identify any issues and recommendations related to the identification any archaeological resource or heritage resource.

as per attached

*The Town of*  
**NORTHEASTERN MANITOULIN**  
*and the ISLANDS*

Municipal Office  
15 Manitowaning Rd

Postal Bag 2000  
Little Current, ON  
POP 1K0

March 8, 2010

Rick Martin  
Project Manager  
Northland Power Inc.  
30 St. Clair Avenue West, 17<sup>th</sup> Floor  
Toronto, Ontario  
M4V 3A1

Dear Mr. Martin:

Further to your letter of December 16, 2009, I am returning the municipal consultation form from the Town of Northeastern Manitoulin and the Islands on your McLean's Mountain Wind Farm Project.

Our responses are designed to ensure that you are aware of the potential impact of your project on municipal infrastructure. In identifying potential issues, we have also ensured that we provided potential solutions for your consideration.

You will note a number of areas in which the municipality was not provided with sufficient detail to enable a meaningful response. Please be advised that the municipality is prepared to comment on this material when it becomes available.

Under section 5.2 our response indicates that there is no agreement in place with the proponent permitting the use of municipal roads. As you are aware, that agreement has now been negotiated and we expect to have it signed within the next two weeks. Any of the issues identified in section 5.2 not covered by the road use agreement will still need to be addressed by your company.

If you have any questions or require further clarification on any of the issues identified in our response, please give me a call at (705) 368-3500, extension 224.

Yours truly,



David A. Williamson  
Chief Administrative Officer

cc: Ministry of the Environment – Approvals Branch

## ***RESPONSE TO MUNICIPAL CONSULTATION***

***MARCH 8, 2010***

On December 16, 2009, Northland Power Inc. provided the Town of Northeastern Manitoulin and the Islands with the draft project description report. The balance of the required reports were provided on January 18, 2010 and included the supplementary information for the design and operations report, the supplementary information for the construction plan report, and the decommissioning plan report.

### **Section 5**

#### **5.1 Project Location**

There are a limited number of open roadways in the project area. The proposed transmission line goes through an area that does have municipal water and sewer infrastructure in place.

The proponent identifies that they will be placing a high voltage line down the side of Gammie Street and Harbour Vue Road. There is sewer and water infrastructure on Gammie Street that needs to be considered when placing poles. There is also existing poles and lines on Harbour Vue Road that will need to be taken into consideration when determining where to place the high voltage line. Bell Canada and Hydro One currently have easements for those lines which will have to be considered by Northland Power when placing poles and lines along that roadway. Permission may be required from either company if their easements are to be encroached upon.

The road allowance at the end of Harbour Vue Road currently has a cottage constructed on it. The proponent will have to ensure that their line can be placed a safe distance from this dwelling.

There is very little infrastructure other than roadways in the bulk of the project area. Many of the roads in the project area are seasonal and not maintained during the winter months.

The municipality's radio and emergency communications infrastructure is located within the project area and the municipality will need confirmation that the proponents activities during the construction and operation phase of the project will not interfere with that service.

Several of the First Nation Communities on the Manitoulin Island have unresolved land claims that extend to the unopened road allowances in the project area. Negotiations are currently ongoing between the Federal and Provincial Governments and the First Nations to resolve those claims however in the interim the Municipality cannot guarantee free and unencumbered access to those road allowances.

The municipality has not received any detailed information on the process or infrastructure required to cross the North Channel from Harbour Vue Road to Goat Island. The installation of submarine lines or Towers will require two crossings of the municipal shoreline road allowance which is still subject to land claims by First Nations. The Channel is also used heavily by boat traffic, including cruise ships, which are critical to the municipality's tourism sector so it is essential that the "crossing" be designed to be as unobtrusive as possible and not interfere with boat traffic.

## **5.2 Project Roads**

At the present time there is no agreement in place with the proponent permitting the use of municipal roads. The negotiations on the road use agreement need to be completed.

The proponent's documentation indicates that they require 10 meters for access. The majority of the municipality's roads are 4.5 to 7 meters and will not meet the minimum required width. The proponent will have to construct the road to the required width.

The established roads may not actually be fully situated on municipal property (given roads). This means that the municipality may not own the property on either side of the road so widening of those roads will require permission from the actual owners of the property. This also means that the proponent will have to survey all of the roadways (opened and unopened) to ensure that any work that is undertaken is in fact on municipal roads.

The established roads are subject to load restrictions during specific times of the year so construction will have to be carried out during those periods when the load restrictions do not apply.

The existing roads have not been constructed with a view to supporting heavy loads and traffic that this project may create. These roads may need to be upgraded by the proponent to ensure the integrity of the roads and protect the safety of the traveling public.

The existing roads do not have a sufficient turn radius to meet the requirements of the proponent. The proponent will have to build adequate accesses from the provincial highway and from the municipal roads to their specific project sites.

The proponent did not provide sufficient detail on the actual areas of unopened road allowance that they will be requesting the use of. Further detail will be required.

Any work on unopened road allowances will need to be completed to municipal standards to ensure the safety of the traveling public and in a manner that will ensure there is no negative impact on drainage.

The proponent will be required to provide proof of adequate insurance to protect the municipality from liability for its actions while working on municipal roadways (opened or unopened).

Access roads from existing and upgraded municipal roads must be properly engineered to address potential drainage issues along municipal roadways. Entrance permits will be required for each of these access roads.

The Town does not have a traffic management plan and we have not received a traffic management plan from the proponent that reflects the impact of this project on traffic flow or volumes.

### **5.3 Municipal Service Connections**

There are water and sewer services on Gammie Street that is in the project area. However, there is no indication that the proponent plans on accessing those services.

Hydro One is the provider of electrical services in the municipality and should be contacted by the proponent to determine the impact on their infrastructure. Bell Canada also has infrastructure in the project area that may be impacted by the project. CFRM Radio Inc., Bell Canada and CBC also have infrastructure in the project area that may be impacted by the proponent. The proponent is responsible for identifying any other infrastructure in the project area that may be impacted by their activities.

### **5.4 Facility Other**

The municipality has not been provided with any information by the proponent on the areas of landscaping, emergency management, easements, restrictive covenants or safety protocols. We are unable to comment on this area until we receive that information.

### **5.5 Project Construction**

At the present time we are not in receipt of any information that indicates what the proposed rehabilitation of any temporary disturbance areas. The municipality will expect that any disturbance to areas or municipal infrastructure damaged during construction will be restored to its original condition at a minimum.

The proponent will have to ensure that their efforts in the project area do not interfere with drainage either on or along municipal property and roadways.

We have not been provided with any plans that suggest that there are buried kiosks or above grade vaults in the project area.

We have not been provided with any information to suggest that there are any gas lines in the project area. The location of electrical lines and poles on municipal roadways has not been agreed to yet as this is an outstanding item in the road use agreement currently being negotiated between Northland Power and the Municipality.

All construction will have to be in compliance with the applicable building codes and is subject to the municipality's established fees.

The municipality has not received any detailed information on the process or infrastructure required to cross the North Channel from Harbour Vue Road to Goat Island. The installation of submarine lines or Towers will require two crossings of the municipal shoreline road allowance which is still subject to land claims by First Nations. The proponent will have to ensure that they have met the requirements for meaningful consultation with First Nation Communities.

The Channel is also used heavily by boat traffic, including cruise ships, which are critical to the municipality's tourism sector so it is essential that the "crossing" be designed to be as unobtrusive as possible and not interfere with boat traffic.

The proponent has not confirmed whether this is potentially a significant site from an archaeological or heritage resource perspective. The proponent will have to undertake the appropriate studies required to satisfy this requirement for the Province and Federal government.

**Response to Comments Received from  
The Municipality of Northeastern Manitoulin and the Islands (Town of NEMI)  
regarding the Municipal Consultation Form for the proposed McLean's Mountain  
Wind Farm (MMWF)**

May 5, 2010

The following addresses issues and concerns expressed by The Municipality of Northeastern Manitoulin and the Islands (NEMI) to NPI regarding the submission of the Renewable Energy Approval (REA) Municipal Consultation form.

**Re: 5.1 Project Location**

Northland Power Inc (NPI) acknowledges the sewer and water infrastructure along Gammie Road and will stay in communication with the NEMI Roads Superintendent during the entire construction phase of the proposed project along the Town roadways as agreed in the Road Use Agreement that is now completed between the Town of NEMI and NPI. NPI will also contact Bell Canada to establish a shared line use agreement in place along this route.

The cottage at the end of Harbor Vue road is known to NPI and its contractor. NPI and its contractor will conduct all work within the 45' between the cottage and the southern limit of the road allowance.

During the winter months roads will be maintained for snow removal by the Owner of the proposed McLean's Mountain Wind Farm (MMWF).

NPI/MMWF will ensure that the emergency communications infrastructure will be continuous and will conduct studies to investigate possible issues and mitigation strategies will be addressed.

NPI/MMWF has continually attempted to engage the surrounding First Nation Communities to realize the issues associated with the project layout. No comments have come forward to assist NPI/MMWF in this regard. To date NPI/MMWF received only references to the 1990 agreement and the issues with the Crown. If it comes to the attention of NPI/MMWF that the ownership of the roadways, that are to be utilized for the project, are that of First Nations, an agreement will be sought out with the respective community.

The channel crossing will proceed in such a way that it will be as unobtrusive as possible and all permits will be obtained as are required from the Ministry of Natural Resources (MNR), the Department of Fisheries and Oceans (DFO) the Coast Guard. NavCanada will also be informed so that the crossing and "no anchor zone" will be noted on navigational charts.

**RE: 5.2 Project Roads**

A Roads Users Agreement is now in place with the local Municipality and will be adhered to throughout the construction of the electrical transmission facility. This agreement addresses the concerns regarding the use of municipal roads.

**RE: 5.3 Municipal Service Connections**

All infrastructure in the proposed project area is noted and disturbances are not expected. Should any disturbances occur appropriate action measures will be taken to return the disturbed areas to their original state or better.

**RE: 5.4 Facility Other**

Landscaping, emergency management, and safety protocols are all addressed in the REA document that was released as a draft document on January 18, 2010, and made available for public review. This document has been finalized and submitted to the Ministry of Environment (MOE) Environmental Assessment and Approvals Branch (EAAB) on May 11, 2010.

**Re: 5.5 Project Construction**

Any disturbed areas as a result of construction by the NPI/MMWF to municipal lands will be restored to its original condition or better.

The existing drainage will be maintained.

Buried Kiosks may be utilized in areas where a 90degree turn is made to cross a roadbed.

As indicated earlier the Road use agreement is in place currently to address the issues of line placement.

A pay scale will be established to reflect the scale of the project and the costs required to care for it.

NPI/MMWF has completed a Stage 1 Archaeological Assessment and has begun a Stage 2 Archaeological Assessment study.





McLean's Mountain Wind Farm

Incumbent Deputy Mayor Alan MacNevin

Tuesday, November 30, 2010

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**TOWN COUNCIL OFFICES**

**Town of Northeastern Manitoulin & The Islands (NEMI)**

15 Manitowaning Road, P.O. 2000  
LITTLE CURRENT, Ontario, POP 1K0

Dear Deputy Mayor,

This is the final week of your term as Deputy Mayor of NEMI under the 2006-2010 mandate. We trust you are proud of the accomplishments of the last administration. We were delighted to see you win again in the October 2010 election and look forward to working with you during the 2010-2014 term of office. I believe it may be premature to congratulate you on renewal of the Deputy position, but we do know you will remain a strong and dedicated member of Council.

We would like to take this opportunity to officially acknowledge the professionalism and the courtesy you extended to Northland Power over the years. You have been open and fair, diligent in your review and thorough in your monitoring of the project, while ensuring community interests were addressed.

The province's move to increasing the use of renewable energy sources such as wind power has been controversial. For the most part, trouble arises when communication has not been open, two-way and clear in all aspects of the project including the location of turbines. We have worked well with local landowners, reached out in respect to the local First Nations and tried to address all of Council's questions and the Town's needs. We believe it was a constructive relationship and hope to continue it with the incoming Council.

On behalf of all of us at Northland Power, please know your contributions to the community are both numerous and well-recognized. There can be no doubt many more are to come as a result of your ongoing stewardship of Town business. You can rest assured the McLean's Mountain Wind Farm will create jobs and new economic opportunities for the residents of Manitoulin Island. It will also play a role supporting the Province of Ontario's transition from coal power to clean renewable energy sources.

We hope McLean's Mountain Wind Farm plays a significant role, now and in the future. All the very best wishes as you are sworn in to office, again, on December 7, 2010. Remember, I am a phone call away.

Respectfully yours,

Rick Martin  
Senior Manager, Business Development, Wind Energy  
Project Manager, McLean's Mountain Wind Farm  
Northland Power Inc.  
(705)271-5358 cell / (705)368-0303 Manitoulin Island Office  
[rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca)



McLean's Mountain Wind Farm

David Williamson, Chief Administrative Officer

Tuesday, November 30, 2010

**TOWN OF NEMI OFFICES**

**Town of Northeastern Manitoulin & The Islands (NEMI)**

15 Manitowaning Road, P.O. 2000  
LITTLE CURRENT, Ontario, POP 1K0

Dear David,

There can be no doubt that as NEMI's Chief Administrative Officer (CAO) you are extremely busy right now preparing transition briefings and supervising the upcoming swearing in ceremony for the 2010-2014 NEMI Council. We expect to enjoy the same professional and courteous relations with this new Council.

I presume Mayor-Elect Joe Chapman might want an update on the McLean's Mountain Wind Farm project and new Councillor Mike Erskine would probably benefit from one too. I want you to know I am happy to assist in such a briefing or to prepare a presentation to them separately, collectively or for the full Council.

I am getting this letter off to you partly as a year-end greeting and partly as a note of appreciation for the exemplary job you did over the past term. You effectively guided us and NEMI Council through the building permit process and a host of other important matters related to the project. Being the first major wind farm project under the provincial government's new policies on Manitoulin, we needed and we benefitted from an experienced CAO. You are clearly a seasoned municipal administrator. I found your expertise and conduct put all contact and interactions on a high-level, no nonsense basis that was always fair.

The Renewable Energy Act and the Green Energy Act are all new territory for municipalities and from media clippings, I gather not many have achieved the kind of candid, factual and progressive relationship your experience, along with the open-minded approach of NEMI Council, have extended to us.

I am looking forward to continuing an excellent working relationship with you in the coming years. All the best wishes for the Holiday Season. Please remember, I am a phone call away.

Respectfully yours,

Rick Martin

Senior Manager, Business Development, Wind Energy  
Project Manager, McLean's Mountain Wind Farm  
Northland Power Inc.  
(705)271-5358 cell / (705)368-0303 Manitoulin Island Office  
[rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca)



McLean's Mountain Wind Farm

Tuesday, November 30, 2010

Mayor-Elect Joe Chapman

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**OFFICE OF THE MAYOR**  
**Town of Northeastern Manitoulin & The Islands (NEMI)**

15 Manitowaning Road, P.O. 2000  
LITTLE CURRENT, Ontario, P0P 1K0

Dear Mayor-Elect Chapman:

Welcome back. On December 7th you will once again be Mayor of NEMI. Public service is clearly a driving passion of yours and from local media coverage of your campaign and victory, it would seem you want to address financial priorities and the relationships with neighbouring municipalities. A project that will likely remain important is the McLean's Mountain Wind Farm. You are no stranger to the project as we first came before NEMI Council when you were the Mayor and Jim Stringer was a NEMI Councillor. If you would like an update on the project, I'd be delighted to meet with you at your earliest convenience.

In fact, I would like to use this opportunity to both congratulate you on your electoral victory and to request we do find time to meet shortly after your swearing in.

There is currently a lot of misinformation in the public domain about the McLean's Mountain Wind Project and wind power generally within the Province of Ontario. Northland Power is writing to ensure that you and your new Council are aware that I am, and our executive team is, only a phone call away in the event information is required, meetings are requested or questions on the project arise. Please do not hesitate to contact us if there is any way we can be of assistance to you in dealing with constituents on issues related to the wind project.

Open communication is the best way to facilitate a good relationship. We have the facts ready to share particularly when it comes to questions about the turbine setbacks which are greater than the provincial minimum of 550 metres from sensitive receptors. We have worked with local landowners, reached out in respect to the local First Nations and tried to address all of Council's questions and the Town's needs. We believe it was a constructive relationship and hope to continue it with the incoming Council.

The McLean's Mountain Wind Farm will create jobs and new economic opportunities for the residents of Manitoulin Island. It will also play a role supporting the Province of Ontario's transition from coal power to clean renewable energy sources. Again, congratulations and let's work together to achieve positive results.

Respectfully yours,

Rick Martin  
Senior Manager, Business Development, Wind Energy  
Project Manager, McLean's Mountain Wind Farm  
Northland Power Inc.  
(705)271-5358 cell / (705)368-0303 Manitoulin Island Office  
[rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca)



## **NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

Councillor Bruce Wood

Tuesday, November 30, 2010

### **TOWN COUNCIL OFFICES**

#### **Town of Northeastern Manitoulin & The Islands (NEMI)**

15 Manitowaning Road, P.O. 2000  
LITTLE CURRENT, Ontario, P0P 1K0

Dear Councillor Wood,

In this current political environment when a Councillor is acclaimed, it can only be seen as testimony to a job well done – no competition. Congratulations on your electoral victory last month and the upcoming swearing in ceremony scheduled for December 7, 2010. This is the final week of your current mandate. As you prepare to accept the duties and responsibilities of the upcoming 2010-2014 term of office, we trust you will look back upon the approval of the McLean's Mountain Wind Farm project as one of the accomplishments of the incumbent Council.

On behalf of all of us at Northland Power, please know you have made a difference to this community and rest assured the McLean's Mountain Wind Farm will create jobs and new economic opportunities for the residents of Manitoulin Island. It will also play a role in supporting the Province of Ontario's transition from coal power to clean renewable energy sources.

There can be nothing more important to sustaining a Town like NEMI than a strong Council. We enjoyed working with you and your Council colleagues. We have also worked well with local landowners, reached out in respect to the local First Nations and tried to address all of Council's questions and the Town's needs. We believe it was a constructive relationship and hope to continue it with the incoming Council.

Please do not hesitate to contact me if resident concerns arise, if you need confirmation of facts or further information on the project's development milestones. Our doors are always open and I am a phone call away.

Respectfully yours,

Rick Martin

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



**NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

(705)271-5358 cell / (705)368-0303 Manitoulin Island Office  
[rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca)



McLean's Mountain Wind Farm

Councillor Christina Jones

Tuesday, November 30, 2010

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**TOWN COUNCIL OFFICES**

**Town of Northeastern Manitoulin & The Islands (NEMI)**

15 Manitowaning Road, P.O. 2000  
LITTLE CURRENT, Ontario, P0P 1K0

Dear Councillor Jones,

Congratulations on your acclamation last month as a NEMI Councillor and the upcoming swearing in ceremony scheduled for December 7, 2010. This is the final week of your current mandate. As you prepare to accept the duties and responsibilities of the upcoming 2010-2014 term of office, we trust you will look back upon the approval of the McLean's Mountain Wind Farm project as one of the accomplishments of the incumbent Council. I recognize that you had your own issues and concerns about the project, but hope most if not all have since been satisfied.

McLean's Mountain Wind Farm will create jobs and new economic opportunities for the residents of Manitoulin Island. It will also play a role in supporting the Province of Ontario's transition from coal power to clean renewable energy sources.

There can be nothing more important to sustaining a Town like NEMI than a strong Council. We enjoyed working with you and your Council colleagues. We have also worked well with local landowners, reached out in respect to the local First Nations and tried to address all of Council's questions and the Town's needs. We believe it was a constructive relationship and hope to continue it with the incoming Council.

In many communities across this province issues have arisen related to renewable energy projects when communication has not been open and misinformation has resulted. The McLean's Mountain Wind Farm project is also distinguished by turbine setbacks far greater than the provincial minimum of 550 metres from sensitive receptors. We are always available with facts and information to help Council address public information needs with informed responses to such concerns.

Please do not hesitate to contact me if you continue to have any reservations or concerns or if your constituents have any issues about the McLean's Mountain project. I am a phone call away and would be happy to meet with you or your colleagues as required. Facts are often the best remedy to fears.

Respectfully yours,

Rick Martin  
Senior Manager, Business Development, Wind Energy  
Project Manager, McLean's Mountain Wind Farm  
Northland Power Inc.  
(705)271-5358 cell / (705)368-0303 Manitoulin Island Office  
[rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca)



## **NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

Councillor Dawn Orr

Tuesday, November 30, 2010

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### **TOWN COUNCIL OFFICES**

#### **Town of Northeastern Manitoulin & The Islands (NEMI)**

15 Manitowaning Road, P.O. 2000  
LITTLE CURRENT, Ontario, P0P 1K0

Dear Councillor Orr,

In this current political environment when a Councillor is acclaimed, it can only be seen as testimony to a job well done – no competition. Congratulations on your electoral victory last month and the upcoming swearing in ceremony scheduled for December 7, 2010. This is the final week of your current mandate. As you prepare to accept the duties and responsibilities of the upcoming 2010-2014 term of office, we trust you will look back upon the approval of the McLean's Mountain Wind Farm project as one of the accomplishments of the incumbent Council.

On behalf of all of us at Northland Power, please know you have made a difference to this community and rest assured the McLean's Mountain Wind Farm will create jobs and new economic opportunities for the residents of Manitoulin Island. It will also play a role in supporting the Province of Ontario's transition from coal power to clean renewable energy sources.

There can be nothing more important to sustaining a Town like NEMI than a strong Council. We enjoyed working with you and your Council colleagues. We have also worked well with local landowners, reached out in respect to the local First Nations and tried to address all of Council's questions and the Town's needs. We believe it was a constructive relationship and hope to continue it with the incoming Council.

Please do not hesitate to contact me if resident concerns arise, if you need confirmation of facts or further information on the project's development milestones. Our doors are always open and I am a phone call away.

Respectfully yours,

Rick Martin

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



**NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

(705)271-5358 cell / (705)368-0303 Manitoulin Island Office  
[rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca)





McLean's Mountain Wind Farm

Tuesday, November 30, 2010

Councillor Marcel Gauthier

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**TOWN COUNCIL OFFICES**

**Town of Northeastern Manitoulin & The Islands (NEMI)**

15 Manitowaning Road, P.O. 2000  
LITTLE CURRENT, Ontario, P0P 1K0

Dear Councillor Gauthier:

Congratulations on your electoral victory last month and the upcoming swearing in ceremony scheduled for December 7, 2010. This is the final week of your current mandate. As you prepare to accept the duties and responsibilities of the upcoming 2010-2014 term of office, we trust you will look back upon the approval of the McLean's Mountain Wind Farm project as one of the accomplishments of the incumbent Council.

On behalf of all of us at Northland Power, please know you have made a difference to this community and rest assured the McLean's Mountain Wind Farm will create jobs and new economic opportunities for the residents of Manitoulin Island. It will also play a role in supporting the Province of Ontario's transition from coal power to clean renewable energy sources.

There can be nothing more important to sustaining a Town like NEMI than a strong Council. We enjoyed working with you and your Council colleagues. We have also worked well with local landowners, reached out in respect to the local First Nations and tried to address all of Council's questions and the Town's needs. We believe it was a constructive relationship and hope to continue it with the incoming Council.

Please do not hesitate to contact me if resident concerns arise, if you need confirmation of facts or further information on the project's development milestones. Our doors are always open and I am a phone call away.

Respectfully yours,

Rick Martin

Senior Manager, Business Development, Wind Energy  
Project Manager, McLean's Mountain Wind Farm  
Northland Power Inc.  
(705)271-5358 cell / (705)368-0303 Manitoulin Island Office  
[rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca)



McLean's Mountain Wind Farm

Councillor-Elect Michael Erskine

Tuesday, November 30, 2010

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**OFFICE OF THE MAYOR**  
**Town of Northeastern Manitoulin & The Islands (NEMI)**

15 Manitowaning Road, P.O. 2000  
LITTLE CURRENT, Ontario, P0P 1K0

Dear Councillor-Elect Erskine:

Congratulations on your municipal election to NEMI Council last month and the upcoming swearing in ceremony scheduled for December 7, 2010.

NEMI has benefited from a strong Council and we at Northland Power are looking forward to the 2010-2014 Council being distinguished by the same open style and focus on advancing the best interests and the sustainability of the Town and its community.

Northland Power is the developer of the McLean's Mountain Wind Farm project as you are well aware. We are a Canadian company and I am the project manager. My office is just down the road and the doors are open to the public and to you and Council members.

The McLean's Mountain Wind Farm will create jobs and new economic opportunities for the residents of Manitoulin Island. It will also play a role supporting the Province of Ontario's transition from coal power to clean renewable energy sources.

The province's move to increasing the use of renewable energy sources such as wind power has been controversial. For the most part, trouble arises when communication has not been open, two-way and clear in all aspects of the project including the location of turbines. We have worked well with local landowners, reached out in respect to the local First Nations and tried to address all of Council's questions and the Town's needs. We believe it was a constructive relationship and hope to continue it with the incoming Council.

If you have any questions about the project, if you'd appreciate a project briefing or if you'd just like to meet and hear first-hand the development milestones ahead, please do not hesitate to give me a call.

Respectfully yours,

Rick Martin  
Senior Manager, Business Development, Wind Energy  
Project Manager, McLean's Mountain Wind Farm  
Northland Power Inc.  
(705)271-5358 cell / (705)368-0303 Manitoulin Island Office  
[rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca)



## **NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

Councillor Paul Skippen

Tuesday, November 30, 2010

### **TOWN COUNCIL OFFICES**

#### **Town of Northeastern Manitoulin & The Islands (NEMI)**

15 Manitowaning Road, P.O. 2000  
LITTLE CURRENT, Ontario, P0P 1K0

Dear Councillor Skippen,

In this current political environment when a Councillor is acclaimed, it can only be seen as testimony to a job well done – no competition. Congratulations on your electoral victory last month and the upcoming swearing in ceremony scheduled for December 7, 2010. This is the final week of your current mandate. As you prepare to accept the duties and responsibilities of the upcoming 2010-2014 term of office, we trust you will look back upon the approval of the McLean's Mountain Wind Farm project as one of the accomplishments of the incumbent Council.

On behalf of all of us at Northland Power, please know you have made a difference to this community and rest assured the McLean's Mountain Wind Farm will create jobs and new economic opportunities for the residents of Manitoulin Island. It will also play a role in supporting the Province of Ontario's transition from coal power to clean renewable energy sources.

There can be nothing more important to sustaining a Town like NEMI than a strong Council. We enjoyed working with you and your Council colleagues. We have also worked well with local landowners, reached out in respect to the local First Nations and tried to address all of Council's questions and the Town's needs. We believe it was a constructive relationship and hope to continue it with the incoming Council.

Please do not hesitate to contact me if resident concerns arise, if you need confirmation of facts or further information on the project's development milestones. Our doors are always open and I am a phone call away.

Respectfully yours,

Rick Martin

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



**NORTHLAND POWER**

McLean's Mountain Wind Farm Project

P.O. Box 73, Little Current ON, P0P 1K0

(705)271-5358 cell / (705)368-0303 Manitoulin Island Office  
[rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca)



McLean's Mountain Wind Farm

Tuesday, November 30, 2010

Councillor William Koehler

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**TOWN COUNCIL OFFICES**

**Town of Northeastern Manitoulin & The Islands (NEMI)**

15 Manitowaning Road, P.O. 2000  
LITTLE CURRENT, Ontario, POP 1K0

Dear Councillor Koehler:

Congratulations on your electoral victory last month and the upcoming swearing in ceremony scheduled for December 7, 2010. This is the final week of your current mandate. As you prepare to accept the duties and responsibilities of the upcoming 2010-2014 term of office, we trust you will look back upon the approval of the McLean's Mountain Wind Farm project as one of the accomplishments of the incumbent Council.

McLean's Mountain Wind Farm will create jobs and new economic opportunities for the residents of Manitoulin Island. It will also play a role in supporting the Province of Ontario's transition from coal power to clean renewable energy sources.

There can be nothing more important to sustaining a Town like NEMI than a strong Council. We enjoyed working with you and your Council colleagues. We have also worked well with local landowners, reached out in respect to the local First Nations and tried to address all of Council's questions and the Town's needs. We believe it was a constructive relationship and hope to continue it with the incoming Council.

In many communities across this province issues have arisen related to renewable energy projects when communication has not been open and misinformation has resulted. The McLean's Mountain Wind Farm project is also distinguished by turbine setbacks far greater than the provincial minimum of 550 metres from sensitive receptors. We recognize that there remain some resident concerns and want you to know we are always available with facts and information to help Council address public information needs with informed responses to such concerns.

Please do not hesitate to contact me with any issues or concerns. I am a phone call away and would be happy to meet with you or your colleagues as required.

Respectfully yours,

Rick Martin  
Senior Manager, Business Development, Wind Energy  
Project Manager, McLean's Mountain Wind Farm  
Northland Power Inc.  
(705)271-5358 cell / (705)368-0303 Manitoulin Island Office  
[rickmartin@northlandpower.ca](mailto:rickmartin@northlandpower.ca)

THIS ROAD USER AGREEMENT made this 22 day of April, 2010, between,

**THE CORPORATION OF THE TOWN OF  
NORTHEASTERN MANITOULIN AND THE ISLANDS**  
hereinafter referred to as the "Corporation"

OF THE FIRST PART

- AND -

**McLEAN'S MOUNTAIN WIND LIMITED PARTNERSHIP**  
hereinafter referred to as the "Electric Power Producer"

OF THE SECOND PART

WHEREAS the Electric Power Producer desires the right to use certain portions of the Municipal Road Allowances which are under the jurisdiction of the Corporation for the purpose of conducting Electric Power by Electrical Interconnections from wind turbines located (or to be located) in the jurisdiction of the Corporation upon the terms and conditions hereinafter set forth;

AND WHEREAS the Corporation has agreed to grant to the Electric Power Producer certain rights in respect to the Municipal Road Allowances;

NOW THEREFORE IN CONSIDERATION of the undertakings and agreement hereinafter expressed and upon the terms hereinafter set forth, the Corporation and Electric Power Producer mutually covenant and agree as follows:

1. In this Agreement:

- (a) "Affiliate(s)" means, with respect to any Person, any other Person which directly or indirectly controls or is controlled by or is under direct or indirect common control with the Person or any other Person which is directly or indirectly controlled by an entity which controls the Person;
- (b) "Applicable Law" means, in respect of any Person, property, transaction or event, all present or future applicable laws, statutes, regulations, treaties, judgements and decrees and all present or future applicable published directives, rules, policy statements and orders of any Public Authority including the Corporation and all applicable orders and decrees of courts and arbitrators of like application to the extent, in each case, that the same are legally binding;
- (c) "Corporation" means The Corporation of the Town of Northeastern Manitoulin and the Islands and its successors;
- (d) "Drainage Superintendent" means the most senior individual employed by the Corporation with responsibility for drainage matters on Municipal Road Allowances within the Municipality or such other person as may from time to time be designated by the Council of the Corporation.

- (e) **"Electric Power"** means electrical energy, produced from the wind turbines located in the jurisdiction of the Corporation and more particularly located on the drawing attached to this Agreement as Schedule "A" or such other wind turbines located in the jurisdiction of the Corporation as may in the future be owned or operated by the Electric Power Producer;
  - (f) **"Electrical Interconnections"** means such poles, electrical interconnections, electric conductors, transformers and other equipment situate in the Municipality as the Electric Power Producer may from time to time require or deem desirable for the conduction of Electric Power, along or across the Municipal Road Allowances; and **"Electrical Interconnection"** means any one of such.
  - (g) **"Municipal Road Allowances"** means those portions of common and public highways located in the Corporation of the Town of Northeastern Manitoulin and the Islands, which are currently shown on Schedule "A" to this Agreement (subject to amendment from time to time as further agreed by the parties hereto, both acting reasonably), and shall include ditches, driveways, sidewalks, and sodded or other areas forming part of the road allowance and shall also include unopened road allowances now or at any time during the term hereof under the jurisdiction of the Corporation;
  - (h) **"Municipality"** means and includes the territorial limits under and subject to the jurisdiction of the Corporation as of the date when this Agreement takes effect;
  - (i) **"Person"** means an individual, corporation, partnership, joint venture, association, trust, pension fund, union, governmental agency, board, tribunal, the Corporation commission or department and the heirs, beneficiaries, executors, legal representatives or administrators of an individual;
  - (j) **"Public Authority"** means any governmental, regional, municipal or local body having authority over the Corporation, the Electric Power Producer, any other relevant Person, Electric Power, the Electrical Interconnections or the Municipal Road Allowances;
  - (k) **"Public Works Superintendent"** means the most senior individual employed by the Corporation with responsibility for Municipal Road Allowances within the Municipality or such other person as may from time to time be designated by the Council of the Corporation.
2. This Agreement is conditional upon the Electric Power Producer obtaining and maintaining both a contract with Ontario Power Authority (OPA) under the Feed-In Tariff provisions (FIT) for Wind Farms as well as a Renewable Energy Approval (REA) from the Ministry of the Environment (MOE) as set out pursuant to the provisions of the Green Energy Act and applicable regulations thereto, as such contract or approval or governing program may be succeeded, amended or replaced with other required contracts, approvals or governing programs under Applicable Law from time to time.

3. The location of the proposed Municipal Road Allowances comprising the Electrical Interconnections shall be set out in Schedule "A" to this Agreement (which Schedule, wherever referred to in this Agreement, shall be subject to amendment from time to time as further agreed by the parties hereto, both acting reasonably). Many travelled roads within the Corporation do not have Municipal Road Allowances. To the extent that any further surveying or title searches are required to show the location or title of the Municipal Road Allowances within Schedule "A" for the Electric Power Producer's purposes, the Electric Power Producer shall complete such work at the Electric Power Producer's expense.
4. The term of this Agreement shall commence on May 1, 2010, and shall continue and be in full force and effect for a 22 year period until April 1, 2032, at which point it shall terminate. At the end of the term, this Agreement shall be further automatically renewed for successive terms of one (1) year each on the same terms and conditions unless either party provides sixty (60) days' prior written notice to the other party that it is terminating this Agreement. The parties acknowledge and agree that the termination of this Agreement shall not be deemed a waiver of any rights that the Electric Power Producer may have to the Municipal Road Allowances or otherwise under the *Electricity Act, 1998* or any other Applicable Law.
5. Pursuant to the *Electricity Act, 1998*, the Electric Power Producer and its successors, assigns, wholly owned subsidiaries, agents, licensees, employees and contractors shall have the right to enter upon the Municipal Road Allowances to the extent that any Municipal Road Allowances remains under the jurisdiction of the Corporation to construct, maintain, replace, remove, operate, patrol, inspect, alter, reconstruct, relocate, enlarge and repair Electrical Interconnections for the conduction of Electric Power, to carry out certain work with respect to any Electrical Interconnection required in order to comply with Applicable Law or required by any Public Authority and to clear the Municipal Road Allowances of all obstructions that would interfere with the use of the Electrical Interconnections on the terms and conditions set out herein.
6. The Corporation represents that subject to the provisions of Paragraph 3:
  - (a) it has good right, full power and authority in law to grant the rights over the Municipal Road Allowances confirmed to be in Schedule "A" in the manner set out in this Agreement;
  - (b) there are Persons claiming an interest in the Municipal Road Allowances currently shown in Schedule "A" or any part thereof adverse to or inconsistent with its registered title thereto and that the Electric Power Producers shall satisfy themselves as to the title status of the Municipal Road Allowances shown in Schedule "A", including any claims of adverse possession and First Nation Land claims.
7. The Electric Power Producer will comply with the requirements of any existing easements or utilities infrastructure situated with the Municipal Road Allowances in constructing and operating the Electrical Interconnections.



8. The Electric Power Producer shall ensure that neither its work nor the Electrical Interconnections unduly interferes with the use of any Municipal Road Allowances by members of the public. Without limiting the generality of the foregoing, the Electrical Power Producer shall not be entitled to close or temporarily block any of the Municipal Road Allowances without the prior written consent of the Corporation, acting reasonably. The Electric Power Producer acknowledges that the rights granted hereunder are non-exclusive, and do not constitute a grant of easement or any other permission other than as expressed herein in writing or as otherwise granted to the Electric Power Producer under the *Electricity Act*.
9. The Electric Power Producer acknowledges that the winter and year-round maintenance of the Municipal Road Allowances is, and will continue to be limited and that the Corporation does not provide twenty-four (24) hour snow clearance on any of the Municipal Road Allowances, or any snow clearance at all on some. The Electric Power Producer agrees that the Corporation shall not in any way be responsible for ploughing or maintaining any of the Municipal Road Allowances to a condition to permit the Electric Power Producer's operations hereunder. In the event that the Electric Power Producer chooses to provide, and the Corporation chooses to permit, winter maintenance of the Municipal Road Allowances that the Corporation would not otherwise maintain during the winter season, the Electric Power Producer shall ensure that it maintains the Municipal Road Allowances to a standard that will ensure public safety at all times and to the satisfaction of the Corporation. Without limiting any other provision of this Agreement, the Electric Power Producer shall save harmless and indemnify the Corporation, its servants, officers, councillors and agents from all demands, losses, damages, costs, charges and expenses which may be claimed or recovered against the Corporation by any person or persons as a result of the Electric Power Producer's maintenance of any Municipal Road Allowances for the winter season under the terms of this Agreement.
10. Save as hereinafter provided, the consent, permission and authority hereby given and granted to the Electric Power Producer to enter upon the Municipal Road Allowance shall be at all times subject to the approval of the Public Works Superintendent, not to be unreasonably withheld or delayed. All work done under this Agreement is subject to the approval (which approval shall not be unreasonably withheld or delayed) and direction of the Public Works Superintendent who has full power and authority, in connection with the approval of the Corporation, to give directions and orders that he/she considers in the best interest of the Corporation in connection with the matters approved by the Corporation and the Electric Power Producer will follow the directions and orders that the Public Works Superintendent gives. Notwithstanding the foregoing, the Electric Power Producer shall have the right to carry out routine maintenance and field testing work without the approval of the Public Works Superintendent.
11. Before commencing any work, the Electric Power Producer will deposit with the Public Works Superintendent a plan, drawn to scale, showing the Municipal Road Allowances where the work is proposed and the location, including height of the Electrical Interconnections or part thereof, together with specifications relating to the proposed Electrical Interconnections or part thereof. For the purposes of this paragraph, works of

the Electric Power Producer include not only original installations, but also any and all repair or relocation work or additions to or replacements of any part of the Electrical Interconnections.

12. The Public Works Superintendent shall review the plans and specifications submitted by the Electric Power Producer and may not approve the work or may approve the work with such, if any, modifications to the plans and specifications and upon such terms and conditions as he/she considers in the best interest of the Corporation. No work, including any excavation, opening or other work which may disturb or interfere with any road or Municipal Road Allowance or its traveled surface, shall be undertaken by the Electric Power Producer unless the plans and specifications therefor have been approved in writing by the Public Works Superintendent and then the work shall be undertaken and completed in accordance with the approved plans and specifications with such modifications, if any, as may have been made by the Public Works Superintendent and in accordance with any terms and conditions that may have been included by the Public Works Superintendent. The Corporation agrees that any response required from the Public Works Superintendent or the Drainage Superintendent pursuant to this Agreement shall be given as soon as commercially reasonable.
13. The Electric Power Producer shall where possible endeavour to utilize co-location opportunities using existing infrastructure so as to minimize the need to install new poles and wires within the Municipal Road Allowances.
14. For the purposes of paragraphs 10, 11 and 12 of this Agreement, in the circumstances that the work of the Electric Power Producer interferes with or may interfere with a municipal drain, the Drainage Superintendent or other person responsible for drainage matters appointed by the proper authority under the Drainage Act with respect to such municipal drain, shall have the same rights as the Public Works Superintendent to receive, review and consider the plans and specifications submitted by the Electric Power Producer and to deny approval of the work or to approve the work with such, if any, modifications to the plans and specifications and upon such terms and conditions as he/she, the Drainage Superintendent or other person responsible for drainage matters, considers will best preserve effective operation and maintenance of the municipal drain.
15. The construction, installation, maintenance and repair of the Electrical Interconnections shall be the full and entire responsibility of the Electric Power Producer, and the approval or non-approval or the modification or the imposition of any terms and conditions in connection with the granting of approval shall not relieve the Electric Power Producer of responsibility for any errors or omissions or from the Electric Power Producer's obligation to construct, install, maintain and repair the Electrical Interconnections in a good and complete manner and in accordance with sound and safe engineering practice.
16. The Electric Power Producer will not cut, trim or interfere with any trees on the Municipal Road Allowances without providing details of such work to the Public Works Superintendent, to allow the Public Works Superintendent to receive, review and consider such details and provide comments, if any, to the Electric Power Producer before the Electric Power Producer commences such work.

17. Notwithstanding any provisions of this Agreement, in the event of any emergency involving the Electrical Interconnections, the Electric Power Producer shall notify the appropriate authorities immediately upon becoming aware of the situation and shall do all that is necessary and desirable to control the emergency, including such line repair and other work in and to the Electrical Interconnections or the Municipal Road Allowances as may be required for the purpose. As soon as practical after the emergency is discovered, the Electric Power Producer shall advise the Public Works Superintendent by telephone and shall keep him advised throughout the emergency. The Electric Power Producer shall reimburse the Corporation for any and all costs incurred in connection with the emergency. Forthwith after it has become necessary for the Electric Power Producer to exercise its emergency powers under this paragraph, the Electric Power Producer shall make a written report to the Public Works Superintendent of what work was done and the further work to be undertaken, if any, and seek the approval of the Public Works Superintendent for the further work as contemplated in the preceding paragraphs.
18. The Electric Power Producer shall repair to the reasonable satisfaction of the Public Works Superintendent, all damages to the Municipal Road Allowances or municipal drains, ditches, street surfaces, storm or sanitary sewer systems located therein which it may interfere with in the course of constructing, repairing or removing the Electrical Interconnections, and shall make good any settling or subsidence thereafter caused by such construction interference. Such restoration shall be to the same condition, as nearly as may be possible, as was in existence of the Municipal Road Allowances when the excavation or interference commenced. If the Electric Power Producer fails at any time to do any work required by this paragraph within a reasonable time the Corporation may do or may cause such work to be done and the Electric Power Producer shall on demand pay any reasonable account therefor as certified by the Public Works Superintendent. The Corporation may elect to undertake such restoration of the Municipal Road Allowances, in which case the Electric Power Producer shall reimburse the Corporation for all of the reasonable direct costs of so doing as certified by the Public Works Superintendent; but if the Corporation does not choose to carry out the restoration, it shall be completed by the Electric Power Producer at the Electric Power Producer's sole expense. Notwithstanding the foregoing, the Electric Power Producer shall not be required to carry out and shall not be responsible for any costs associated with any maintenance, repairs or restoration of the Municipal Road Allowances other than as set out in this paragraph nor shall the Electric Power Producer be required to restore or replace any crops located on the Municipal Road Allowances which it may interfere with in the course of constructing, repairing or removing the Electrical Interconnections or be responsible for any costs relating to such restoration or replacement of crops.
19. In the placing, maintaining, operating and repairing of the Electrical Interconnections or any part thereof, the Electric Power Producer will use care and diligence to ensure that there will be no unnecessary interference with any Highway or any other municipal works or improvements. If any additional municipal works or improvements are made necessary by reason of any work done as approved by the Public Works Superintendent as described in this Agreement or omitted to be done by the Electric Power Producer, such work will be constructed and maintained by the Electric Power Producer at its own expense.

20. The Electric Power Producer agrees on behalf of itself, its agents, trustees, administrators and permitted assigns to indemnify and save harmless the Corporation its servants, officers, councillors and agents from and against all claims, liability, loss, costs, damages or other expenses of every kind that the Corporation may incur or suffer as a consequence of personal injury, including death, and property damage arising out of or in any way incurred or suffered in connection with the construction, maintenance, operation, removal or repair of the Electrical Interconnections or any part thereof, except to the extent that such liability is attributable to the wilful or negligent acts or omissions of the Corporation as a result of or arising out of or in relation to any of the terms of this Agreement.
21. The Electric Power Producer shall purchase and maintain Commercial General Liability insurance in a form satisfactory to the Corporation and with a minimum coverage limit of \$10,000,000 (ten million dollars) per occurrence, covering the legal liability arising out of the installation of the Equipment and the operations of the Electrical Interconnections of The Electric Power Producer related to the Municipal Road Allowances, which shall name the Corporation as an additional insured and include cross liability and contractual liability, non-owned automobile coverage with blanket contractual and physical damage coverage for hired automobiles and thirty (30) days written notice of cancellation. The Electric Power Producer shall provide the Corporation with a valid certificate of such insurance as evidence of the foregoing coverage upon signing this Agreement. The Electric Power Producer shall provide the Corporation with any renewal and replacement certificates as may be necessary during the term of the Agreement.
22. The Corporation agrees, in the event of the voluntary closing by by-law of any of the Municipal Road Allowances identified on Schedule "A" to this Agreement to give the Electric Power Producer reasonable prior notice of such closing and to provide the Electric Power Producer, at no cost to the Electric Power Producer and prior to the closure of the applicable Municipal Road Allowance, with easements, in registrable form, over that part of the Municipal Road Allowance closed sufficient to allow the Electric Power Producer to preserve any part of the Electrical Interconnections in its then existing location, and to enter upon the closed Municipal Road Allowance to maintain and repair such part of the Electrical Interconnections on the terms and conditions set out in this Agreement. In the event of any other adverse claim or encumbrance affecting the Municipal Road Allowance of which the Corporation becomes aware (including, without limitation, First Nation land claims), the Corporation will provide notice of such claim or encumbrance to the Electric Power Producer as soon as reasonably possible.
23. If the Corporation, in pursuance of its statutory powers, decides to alter the construction of the Municipal Road Allowances identified on Schedule "A" to this Agreement or of any associated municipal works or improvements, or to construct, lay down, or establish any municipal works or improvements, and if the location of any part of the Electrical Interconnections interferes with the location of construction of such alteration, work or improvement, then upon receipt of reasonable notice in writing from the Corporation specifying the point where such part of the Electrical Interconnections interferes with the plans of the Corporation, the Electric Power Producer shall, at the cost and expense of the Corporation, alter or relocate such part of the Electrical Interconnections at the point

specified to a location owned by the Corporation as designated by the Public Works Superintendent within a reasonable period of time.

24. The Electric Power Producer may elect to permanently discontinue the use of ("abandon") any part of the Electrical Interconnections on at least sixty (60) days prior written notice of such abandonment to the Corporation specifying the part of the Electrical Interconnections to be abandoned and the date when the abandonment will occur.
25. If during the term of this Agreement, the Electric Power Producer abandons any part or all of the Electrical Interconnections, or in the event of the termination or expiry of the Agreement, in which event the Electric Power Producer will be deemed to have abandoned all of the Electrical Interconnections, the Electric Power Producer shall have the right to remove such part of its Electrical Interconnections as have been abandoned, but if the Electric Power Producer does not remove such of the Electrical Interconnections as have been abandoned, within three months the Electric Power Producer shall at the conclusion of the three month period deactivate such parts of the abandoned Electrical Interconnections in the Municipality as are not so removed and the Corporation shall have the right to require the Electric Power Producer to remove overhead and above-grade Electrical Interconnections at its expense within a further six month period in accordance with the Decommissioning Plan which is approved by the Ontario Ministry of the Environment as part of the Renewable Energy Approval Plan (the "Decommissioning Plan"). If the Electric Power Producer fails to remove the Electrical Interconnections within six months after being requested to do so by the Corporation, the Corporation may do the required Decommissioning work itself or cause it to be done by a third party contractor and the Electric Power Producer shall pay the reasonable costs associated with this work.
26. This Agreement and the respective rights and obligations hereunto of the parties hereto are hereby declared to be subject to the provisions of all regulating statutes and regulations and to the provisions of all municipal by-laws, and to all orders and regulations made thereunder and from time to time remaining in effect.
27. All notices, communications and requests for approval which may be or are required to be given by either party to the other herein shall be in writing and shall be given by delivery by courier or by facsimile addressed or sent as set out below or to such other address or facsimile number as may from time to time be the subject of a notice:

To the Corporation:

The Corporation of the Town of Northeastern Manitoulin and the Islands  
Postal Bag 2000  
15 Manitowaning Road  
Little Current, ON POP 1K0  
Attention: Chief Administrative Officer – David Williamson  
Facsimile: 705 368-2245  
Emergency Telephone No.: (Work) 705 368-3500  
(Manager on Call) 888 876-1765

To the Electric Power Producer:

McLean's Mountain Wind Limited Partnership  
c/o Northland Power Inc.  
30 St. Clair Avenue  
Suite 1700  
Toronto, ON M4V 3A1

Attention: John Brace, President  
Facsimile: 416 962-6266  
Emergency Telephone No.:

Any notice, if delivered by courier, shall be deemed to have been validly and effectively given and received on the date of such delivery and if sent by facsimile with confirmation of transmission, shall be deemed to have been validly and effectively given and received on the day it was received, whether or not such day is not a business day.

28. The Electric Power Producer may not assign this Agreement or any part thereof without the written approval of the Corporation, which may not be unreasonably withheld or delayed. Notwithstanding the foregoing, the Electric Power Producer may assign any part of this Agreement without the prior approval of the Corporation to the following:
- (a) any Affiliate of the Electric Power Producer, provided that such Affiliate also assumes the contract referred to in Section 2 and is responsible for the wind power project to which this Agreement relates; or
  - (b) any entity succeeding to the business and assets of the Electric Power Producer, by way of merger, amalgamation or consolidation, provide that such entity also assumes the contract referred to in Section 2 and is responsible for the wind power project to which this Agreement relates; or
  - (c) any entity (a "Secured Party") holding security, whether by way of a mortgage, charge or other encumbrance of this Agreement or the Electrical Interconnections or any part of the Electrical Interconnections or by any other arrangement under which this Agreement or the Electrical Interconnections become security, for any indebtedness or other obligation;

(the above entities being hereinafter referred to as the "Permitted Transferees").

The Electric Power Producer shall provide the Corporation with written notice of the assignment to a Permitted Transferee within thirty days of the occurrence of such assignment. Any assignment by the Electric Power Producer of any part of its interest in this Agreement is subject to the requirement that on or before the making of such assignment, the assignee (including a Permitted Transferee) shall agree in writing with the Corporation (and in a form acceptable to the assignee and the Corporation, both acting reasonably) to observe and perform all the obligations of the Electric Power Producer under this Agreement; provided however that in the case of an assignment to and assumption by a Secured Party, the Secured Party shall only agree to be bound by this Agreement in the event of a foreclosure or entry into possession of the Electrical Interconnections and then only while the Secured Party is in possession of or the owner of the Electrical Interconnections.

Upon the assignment of this Agreement (except in the event of an assignment to a Permitted Transferee, where condition (b) below shall not be required (provided that in the event of an assignment to a Secured Party, condition (b) below shall be required in the event of a foreclosure or entry into possession of the Electrical Interconnections by the Secured Party or any third party taking such possession as a result of the Secured Party enforcing its remedies pursuant to its security), the Electric Power Producer shall be released from any obligations under this Agreement that arise from and after the date of such assignment, provided that:

- (a) the assignee has agreed in writing with the Corporation (in a form acceptable to the assignee and the Corporation, both acting reasonably) to observe and perform all the obligations of the Electric Power Producer under this Agreement; and
- (b) if required by the Corporation, there has been sufficient financial security provided to the Corporation, acting reasonably, to ensure the satisfaction of the Electric Power Producer's obligations under the Decommissioning Plan have been satisfied.

The Electric Power Producer acknowledges that a change in control of the Electric Power Producer shall be considered and deemed an assignment of this Agreement or of any of the Electric Power Producer's rights and obligations under this Agreement and all of the terms and conditions contained in this paragraph applicable to an assignment thereof shall apply to the deemed assignment.

29. In addition to its obligations under Section 22 of this Agreement, the Corporation shall only have the right to assign, transfer or dispose all or any part of its interest under this Agreement in conjunction with an assignment, transfer or other disposition of its interest in all or any part of the Municipal Road Allowances which are subject to this Agreement, in which case the Corporation shall provide the Electric Power Producer with written notice of any such assignment, transfer or other disposition within thirty days of its occurrence and any such assignment, transfer or disposition by the Corporation is subject

to the requirement that on or before the making of such assignment, transfer or disposition, the assignee shall agree in writing with the Electric Power Producer (and in a form acceptable to the assignee and the Electric Power Producer, both acting reasonably) to observe and perform all the obligations of the Corporation under this Agreement.

30. Other or special conditions:

- (a) The Electric Power Producer shall pay to the Corporation the sum of \$5,000.00 by way of reimbursing the Corporation for the staff time required to process this Agreement; and as well the Electric Power Producer shall reimburse the Corporation for all reasonable legal fees incurred in connection with the review of this Agreement;
- (b) The Electric Power Producer shall provide the Corporation with a certified cheque for the amount of \$10,000.00 prior to the initial installation of the Electrical Interconnections under this Agreement; and such funds shall be held in trust until the initial installation work is completed to the satisfaction of the Public Works Superintendent, acting reasonably; and, in addition to any other remedies which may be available to the Corporation for breach of this Agreement, the Public Works Superintendent is authorized to apply such funds to see to the proper completion of such initial installation work if it is not completed to his satisfaction, acting reasonably; and after the Public Works Superintendent is satisfied, acting reasonably, with the completed work, the funds shall be released, without interest, to the Electric Power Producer;
- (c) The Electric Power Producer agrees that upon the commencement of construction by the Electric Power Producer on the Municipal Road Allowances and on each anniversary of such date thereafter until the date that this Agreement expires or is earlier terminated in accordance with the provisions hereof, the Electric Power Producer will pay to the Corporation \$10,000. These payments shall be used by the Corporation for worthy individual, community and charitable causes as judged by a panel composed of two (2) members nominated by the Council of the Corporation and one (1) member nominated by the Electric Power Producer; and
- (d) The Electric Power Producer shall pay to the Corporation the sum of \$30.00 per hour for each Corporation staff member (including administrative staff) supervising the installation of the Electrical Interconnections and restoration work done on the Municipal Road Allowances (such sum to be adjusted from time to time to reflect any increase in pay to such staff by the Corporation, provided that such increases are reasonable).

31. If the Electric Power Producer shall commit a breach of or omit to comply with any of the provisions of this Agreement, the Corporation may give to the Electric Power Producer notice in writing specifying the breach complained of and indicating the intention of the Corporation to terminate the consent, permission and authority of the Corporation hereby granted to the Electric Power Producer unless the Electric Power



Producer shall have remedied the breach within the period mentioned in the notice, which period shall be not less than one month or unless the Electric Power Producer shall have within such notice period commenced to remedy the breach and has diligently pursued the remedying thereof, and such breach, in any event, has been remedied within 60 days after the expiry of the original notice period. Provided that notwithstanding anything contained in this Agreement, the Corporation may give notice to terminate this Agreement on fifteen (15) days written notice for default in payment of any monies owing to the Corporation by the Electric Power Producer and provided further that notwithstanding anything contained in this Agreement, the Corporation may terminate this Agreement immediately without any notice whatsoever upon the happening of any one or more of the following events:

- (a) Bankruptcy of the Power Producer;
- (b) The appointment of a Receiver or Receiver/Manager of all or any part of the assets of the Electric Power Producer;
- (c) The seizure of any major assets of the Electric Power Producer by any creditor of the Electric Power Producer;

“Major asset” means an asset of the Power Producer that is essential to the operation of the Electric Power Producer’s business.


Upon the happening of an event in Clause A or B above, or after the expiration of the fifteen (15) day period noted in Clause C above or the above-noted thirty (30) day period (60 days if extended), the consent, permission and authority of the Corporation hereby given and granted to the Electric Power Producer shall, at the option of the Corporation, terminate and this Agreement shall be of no further force and effect. Notwithstanding the termination of this Agreement, the Electric Power Producer’s obligations under this Agreement with regard to repairing damage or payment of any monies owing under this Agreement, together with any of the obligations under the Decommissioning Agreement annexed hereto as Schedule “B”, shall remain in full force and effect and the Electric Power Producer shall be liable for the payment or performance thereof.


32. This Agreement shall extend to, benefit and bind the parties thereto, their successors and assigns, respectively.

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IN WITNESS WHEREOF the parties hereto had duly executed these presents with effect from the day first above written.

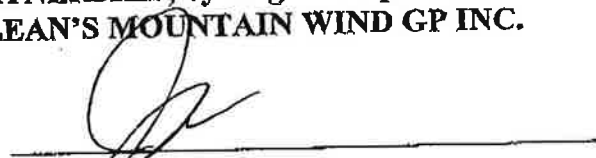
**THE CORPORATION OF THE TOWN OF  
NORTHEASTERN MANITOULIN AND  
THE ISLANDS**

Per:   
Name: JIM STRINBOR  
Title: MAYOR

Per:   
Name: DAVID WILLIAMSON  
Title: Chief Administrative Officer

I/We have authority to bind the Corporation.

**McLEAN'S MOUNTAIN WIND LIMITED  
PARTNERSHIP, by its general partner,  
McLEAN'S MOUNTAIN WIND GP INC.**

Per:   
Name: JOHN W. BRACE  
Title: PRESIDENT & CEO

Per: \_\_\_\_\_  
Name:  
Title:

I/We have authority to bind the Corporation.



**NORTHLAND POWER**  
McLean's Mountain Wind Farm

**Legend**

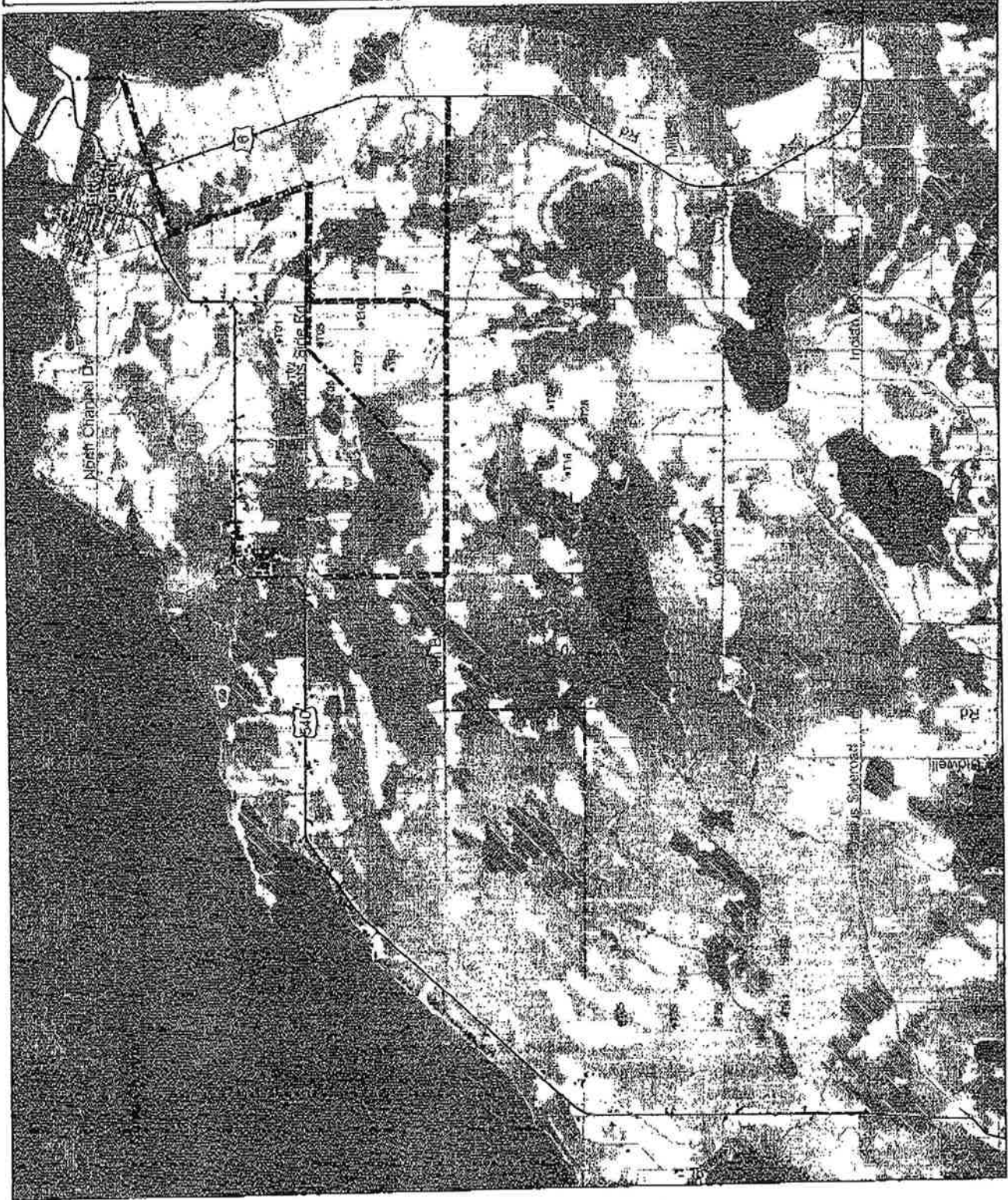
- Turbine
- Residence
- Substation
- Buildings
- Electrical Lines
- Upgraded Roads
- Secondary Roads
- Highway
- Proposed Transmission Line (115kV)
- Watercourse
- Lot
- Pit or Quarry
- Waterbody
- Wetland
- Woodlots

**Schedule "A" of Road User Agreement**  
between The Corporation of the Town of  
MEMI and McLean's Mountain Wind L.P.

**Notes:**  
The wind farm layout is draft and subject to revision based on input received from government agencies, Aboriginal communities, landowners and the public.  
\* All wetlands are assumed to be Provincially Significant



April 16, 2010





**NORTHLAND POWER**

May 12, 2010

The Town of Northeastern Manitoulin and the Islands  
Municipal Office  
15 Manitowaning Road  
Little Current, ON  
POP 1K0


Attn: Janet Moore  
Clerk

**Re: Road Use Agreement**

Dear Ms. Moore,

Please find enclosed a copy of the executed agreement for your records.

Yours truly,

 John W. Brace  
President & CEO

Enclosure