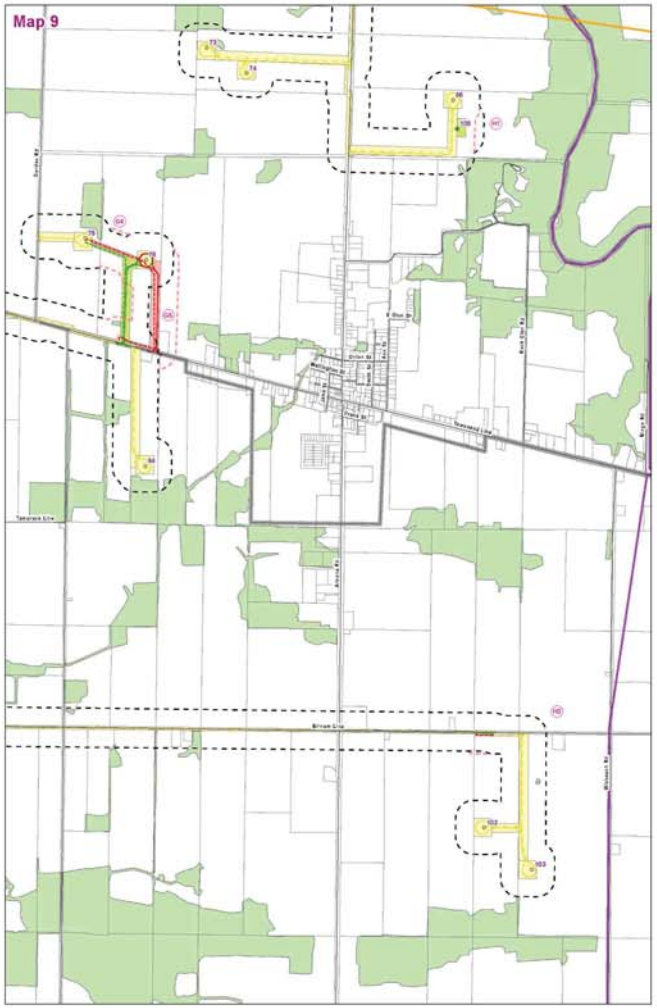

Map 9


Map 10


Map 11-12


LEGEND
Wind Energy Centre Study Area
Transmission Line Study Area
Municipal Division
Adjacent Areas
Properties
October 2013 - 120m Area of Investigation
February 2015 - 120m Area of Investigation
Turbines and Permanent Meteorological Tower
Added
Removed
No Change
Relocated - NEW October 2013 Location
Relocated - February 2015 Location
Layout Modification (Type, Status)
Collection Line, Added
Access Road, Added
Collection Line, Removed
Access Road, Removed
Collection Line, No Change
Access Road, No Change
Transmission Line, No Change
Modification to Disturbance Areas
Added
Removed
No Change
0 150 300 600 900
Meters

Panel C

NEXTera ENERGY CANADA

Comment Form

Jericho Wind Energy Centre

Location: Ailsa Craig Community Centre, Ailsa Craig
October 23, 2013

Your comments will be considered. We are collecting this information to help us understand and address your concerns about the Project. Comments will become part of the public record with the exception of personal information.

1. Did the information at the meeting meet your expectations?

Yes ☐ *Somewhat* ☐ *No* ☐

Please explain: _____

_____

_____

2. If you asked questions during the meeting did you get a satisfactory response?

Yes ☐ *Didn't speak to anyone* ☐ *Somewhat* ☐ *No* ☐

Please explain: _____

_____

_____

3. After attending the meeting, how do you feel about the Project?

Supportive ☐ *Undecided* ☐ *Undecided and would like more information* ☐ *Non Supportive* ☒

Please explain and let us know what other information you would like to receive:

_____

_____

_____

_____

_____

4. What topics would you like to learn more about? (check all that apply)

Aboriginal interests ☐ *Human Health* ☐ *Community Partnerships* ☐

Socio-economic ☐ *Transmission* ☐ *Other (Specify)* ☐ _____

Environment ☐ *Project Details* ☐

NEXTera ENERGY CANADA

Comment Form

Jericho Wind Energy Centre

Location: Ailsa Craig Community Centre, Ailsa Craig
October 23, 2013

5. Please provide your comments or questions in the space provided below:

It's was very confusing to plan meetings and have them overlap into other ones. That are dealing with turbines also. It was early this am. We had to chose one and that stopped us from being able to express our opinions.

We are very much against them. They're going to cause damage in the long run, not only to people but the wildlife especially birds & bats etc.

You seem to get away with a lot of thing that the government & environment would never let us!

(Bornish Wind Energy Project)

If you would like to be kept informed about the status of the Jericho Wind Energy Project, please provide your contact information below.

Name: _____

Street Address: _____

City: _____ **Province:** _____ **Postal Code:** _____

Email: _____

To learn more about the Project, or to send your completed comment form to us, please contact:

- Derek Dudek
  Community Relations Consultant
  NextEra Energy Canada, ULC
  390 Bay Street, Suite 1720
  Toronto, ON M5H 2Y2

Toll Free:..1-877-257-7330
Email:.....Jericho.Wind@NextEraEnergy.com
Website:...www.NextEraEnergyCanada.com

NEXTera ENERGY CANADA

Comment Form

Jericho Wind Energy Centre

Location: Ailsa Craig Community Centre, Ailsa Craig
October 23, 2013

Your comments will be considered. We are collecting this information to help us understand and address your concerns about the Project. Comments will become part of the public record with the exception of personal information.

1. Did the information at the meeting meet your expectations?

Yes ☐ *Somewhat* ☑ *No* ☐

Please explain: The consultants were polite & gave us their time. Presentation standard - would have been nice to see virtual tour of driving the roads of the project.

2. If you asked questions during the meeting did you get a satisfactory response?

Yes ☑ *Didn't speak to anyone* ☐ *Somewhat* ☐ *No* ☐

Please explain: Explained thoroughly using their info. cards + maps.

3. After attending the meeting, how do you feel about the Project?

Supportive ☐ *Undecided* ☐ *Undecided and would like more information* ☐ *Non Supportive* ☐

Please explain and let us know what other information you would like to receive:

4. What topics would you like to learn more about? (check all that apply)

Aboriginal interests ☐ *Human Health* ☐ *Community Partnerships* ☐

Socio-economic ☐ *Transmission* ☐ *Other (Specify)* ☐

Environment ☐ *Project Details* ☐

NEXTera ENERGY CANADA

Comment Form

Jericho Wind Energy Centre

Location: Ailsa Craig Community Centre, Ailsa Craig
October 23, 2013

5. Please provide your comments or questions in the space provided below:

(1) Concerned about land value decrease
(2) This has pitted family against family - farmer against farm
(3) Very costly - no decrease in our hydro bill. Only one benefitting is the company & landowner. Neighbour has to look at them.
(4) population density - still too many windmills close to
(5) We have a vacant piece of property - neighbour has a windmill - we now are limited as to building a house as this piece has a pond 'bush, back & that's where we wanted to build - We no longer can't have last all rights as landowner.
(6) Environment/Aboriginal - tundra swans, turtles, migrat
(7) Farmers who signed have become VERY arrogant.
(8) Why windmills when rural Ontario IS voicing strong opposition. Why not buy Lambton Generating Plant & convert to biomass.

If you would like to be kept informed about the status of the Jericho Wind Energy Project, please provide your contact information below.

Name: _____

Street Address: _____

City: _____ **Province:** _____ **Postal Code:** _____ See 2nd page

Email: _____

To learn more about the Project, or to send your completed comment form to us, please contact:

▶ Derek Dudek
Community Relations Consultant
NextEra Energy Canada, ULC
390 Bay Street, Suite 1720
Toronto, ON M5H 2Y2

Toll Free:..1-877-257-7330
Email:.....Jericho.Wind@NextEraEnergy.com
Website:...www.NextEraEnergyCanada.com

NEXTera ENERGY CANADA

Comment Form

Jericho Wind Energy Centre

Location: Ailsa Craig Community Centre, Ailsa Craig
October 23, 2013

Your comments will be considered. We are collecting this information to help us understand and address your concerns about the Project. Comments will become part of the public record with the exception of personal information.

1. Did the information at the meeting meet your expectations?

Yes ☐ *Somewhat* ☐ *No* ☐

Please explain: _____

_____

_____

2. If you asked questions during the meeting did you get a satisfactory response?

Yes ☐ *Didn't speak to anyone* ☐ *Somewhat* ☐ *No* ☐

Please explain: _____

_____

_____

3. After attending the meeting, how do you feel about the Project?

Supportive ☐ *Undecided* ☐ *Undecided and would like more information* ☐ *Non Supportive* ☐

Please explain and let us know what other information you would like to receive:

_____

_____

_____

_____

_____

4. What topics would you like to learn more about? (check all that apply)

Aboriginal interests ☐ *Human Health* ☐ *Community Partnerships* ☐

Socio-economic ☐ *Transmission* ☐ *Other (Specify)* ☐ _____

Environment ☐ *Project Details* ☐ _____

NEXTera ENERGY CANADA

Comment Form

Jericho Wind Energy Centre

Location: Ailsa Craig Community Centre, Ailsa Craig
October 23, 2013

Page 2 - continued

5. Please provide your comments or questions in the space provided below:

Is there more $ in wind for nextera?

(9) liberal gov. is not listening to the concerns of rural communities - yet they closed the gas plants to buy votes. This fact upsets us greatly.

(10) Turbines - who is going to fight a fire & repair tyrbines if damaged (even by lightning).

(11) We are all for green energy - but this has been too costly - not only in $ but in relationships & family. ~~The one~~

Thank you for your time.

If you would like to be kept informed about the status of the Jericho Wind Energy Project, please provide your contact information below.

Name: _____

Street Address: _____

City: _____ **Province:** _____ **Postal Code:** _____

Email: _____

To learn more about the Project, or to send your completed comment form to us, please contact:

- Derek Dudek
  Community Relations Consultant
  NextEra Energy Canada, ULC
  390 Bay Street, Suite 1720
  Toronto, ON M5H 2Y2

Toll Free:..1-877-257-7330
Email:.....Jericho.Wind@NextEraEnergy.com
Website:...www.NextEraEnergyCanada.com

Appendix A4.

Additional Public Comments

[redacted]

From: [redacted]
Sent: Friday, February 15, 2013 9:07 AM
To: SharedMailbox, JERICHO-WIND
Subject:

Nextera Jericho wind project

A portion of my letter sent to Lambton Shores mayor Bill Weber

The local existing windmills have not bothered me in their small numbers. Moderation is fine but we seem to be exiting moderation and entering a nonsense mentality. Once Suncor and Nextera started revealing their plans the moderation comfort level has gone out the window. I no longer have a desire to live in this area and will be putting my acreage up for sale soon. I will not be attending the meetings to protest windmills although I support those who do. That process is too time consuming for me. My only issue is getting a fair market value price for my land. I have seen 2 separate law firms over the last 6 months to discuss my situation.

Albeit no crime has been committed I am simply gaining advice in case it does. When the time comes and **if** I am forced to sell my property at a value that is below the what the research concludes(MPAC assessment as well as local sales figures for other similar properties in a reasonable period of time), I will be forced to proceed with litigation against the windmill company(s), the property owner(s) that house the windmills, Lambton Shores and possibly some or all members of council that allowed the flood of an unreasonable number of windmills to the area during their term. This could and should be controlled with bylaws regarding above ground wiring vs below ground cable as well as bylaws dealing with distance from residences. I understand litigation of this nature will not be solved in 2 or 3 or 5 years etc. but I am willing to accept this time period as I am annoyed at this faux pas.

I tried not to word this email as a threat against your council or Lambton Shores in any way and hope that is not how this email is interpreted. I have never met you or any member of council but am very aware of your council's operation issues in the last year. This is not personal just business. I am simply trying to convey my process in the event that I **cannot** get a fair price for my land. I am not willing to take a loss because of some poor decisions by others in this area. There are always consequences to poor decisions.

I noticed a London soil testing company across the road from my house yesterday. I am certain the testing has begun to determine the depth of the concrete platforms to anchor the windmills and this time line seems premature to me **if this is not a done deal**. The real solution is simple if farmers won't allow windmills on their property. This has become a council issue as it will become a divisive factor with the residents of Lambton Shores putting morale at a low level causing rift between many neighbours. The soil testing was hired out to a London company which could and should have been done by local contractors. I see how that would present as a little insulting to the local qualified contractors. Council can control some of these things if involvement takes place early in the process.

In conclusion I would like to offer some praise to this area. I purchased this land in 2004 and have had

a lot of positive experiences with my wonderful neighbours. I had plans for this land and possibly other land in the area but don't see that happening now. It has been so quiet and peaceful that I will be sorry to leave. I simply cannot stay where the water table and windmill installation is not controlled.

added for Nextera and Suncor benefit

The irony is the greed of seeing money has consumed the whole nature of what Nextera and Suncor are trying to accomplish with this environmentally friendly project. The flood of windmills predicted takes the word environmental out of the equation. I hope your company and Suncor see the picture soon as it is no longer about finding an alternative source of hydro, it has become a circus mentality of who can put up the most windmills in the smallest area. You can keep preaching your sales pitch but your company (as well as Suncor) need forget business deadlines for a bit to take a step back and look at nonsense your windmill location map indicates. When I place the two windmill location maps together (yours and Suncor), the entire countryside is going to be covered with windmills. This will create an incredible reduction in the efficient operation of individual windmills. There simply is not enough wind for this many windmills and they will interfere with the efficient operation of each windmill (more is not better in this case). I sincerely hope your company will be around to do any cleanup and debt your products incur.

I will not be around to see it. I resent the fact that you intend on ruining the quiet setting I chose to retire on. I have ten windmills surrounding me and I can hear those when I am outside. I can't imagine the noise of hundreds more. I have begun a new search for another quiet retirement location and will be looking for an inefficient windmill location this time.

Sincerely

[redacted]

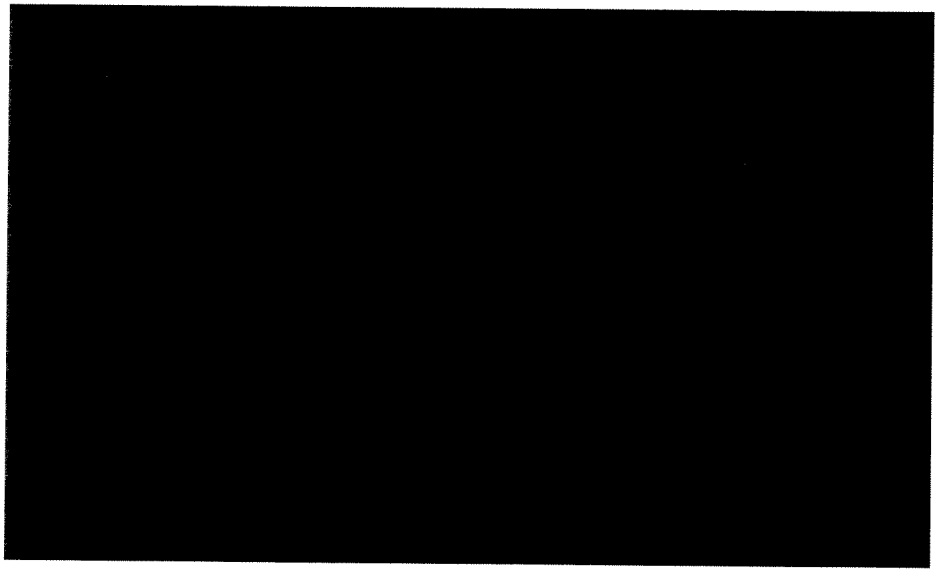
Lambton Shores

From: Dudek, Derek
To: [redacted]
Subject: Jericho - inquiry
Date: Tuesday, February 19, 2013 2:07:00 PM
Attachments: [redacted]

Hello [redacted]

It is my understanding that you attended one of the Jericho open houses last week and had the following questions:

- Map showing the distance between house and the nearest 2 turbines
  See attached.
- Predicted noise level at residence
  As per the Noise Impact Summary Table as found in Appendix B – Noise Assessment Report in the Design and Operations Report the calculated sound level at your residence is 39.5 – 39.9 dBA at selected wind speeds.
- The estimated number of hours your house may be exposed to shadow flicker over the course of a year.
  Based on preliminary modelling done for the open houses, your residence is not shown to have any impacts related to shadow flicker. See image below that was available at the open house.



Please don't hesitate to contact me if you have any other questions.

Thanks,

Derek Dudek| Community Relations Consultant
NextEra Energy Canada, ULC
390 Bay Street, Suite 1720
Toronto, ON M5H 2Y2
Canada
office: 416.364.9714

From: Dudek, Derek
To: [redacted]
Subject: RE: Jericho Wind Project - turbine #[redacted]
Date: Tuesday, February 19, 2013 9:11:00 AM

Hello [redacted],
I will check and see when the reports are being posted to the website.

Derek
519.318.0237

From: [redacted]
Sent: Sunday, February 17, 2013 6:58 PM
To: Dudek, Derek; doris.dumais@ontario.ca; minister.moe@ontario.ca; info@ombudsman.on.ca; jferguson@lambtonshores.ca; monte@montemcnaughton.com
Subject: Re: Jericho Wind Project - turbine #[redacted]

I have just checked the maps available on the NextEra website and turbine #[redacted] still shows the distance as less than 60 metres. When will the changes to these maps be updated and made available to the public?

It is very difficult for the community to review and comment on the Jericho Project when the documentation changes so frequently but NextEra fails to update their documentation accordingly.

Sincerely,
[redacted]

On 2/15/2013 8:36 AM, Dudek, Derek wrote:

> Hello [redacted],
> Thank you for your inquiry into this matter. Since the draft report was prepared for public review, the distance from Turbine #[redacted] to the southerly property line has been confirmed to be 60.8 metres based on field verification. This information has been updated in the final report. We will respond to the property owners to this effect.
>
> Thanks,
>
> **Derek Dudek| Community Relations Consultant**
> NextEra Energy Canada, ULC
> 390 Bay Street, Suite 1720
> Toronto, ON M5H 2Y2
> Canada
> office: 416.364.9714
> mobile: 519.318.0237
> derek.dudek@nexteraenergy.com
>
>

From: [redacted]
Sent: Tuesday, February 12, 2013 8:16 PM
To: Dudek, Derek; SharedMailbox, JERICHO-WIND; moe.serviceintegration@ontario.ca; minister.moe@ontario.ca; monte@montemcnaughton.com; doris.dumais@ontario.ca; info@ombudsman.on.ca; jferguson@lambtonshores.ca
Subject: Jericho Wind Project - turbine #[redacted]

I am writing to you on behalf of [redacted] who are the non-participating neighbours to the south of turbine [redacted] on [redacted], in the Jericho Wind Project. [redacted] do not have access to e-mail or the internet and have asked that I correspond on their behalf.

This turbine has been placed less than 60 metres (the length of the blades, plus 10 metres) from their property line. The NextEra assessment documentation states that an "agreement will be in place and assessment conducted - no setback required."

[redacted] do not have an agreement with NextEra, nor are they willing to entertain such an arrangement. As such, the placement of turbine [redacted] is in violation of Section 53 of the Environmental Act, which states that without an agreement, the wind developer must stay:

a) a minimum equivalent to the height of the wind turbine, excluding the length of any blades (80 metres); or
b) a minimum distance equal to the length of any blades plus 10 metres (60 metres).

[redacted] are notifying you so that this turbine will be moved the appropriate distance from their property boundary. Additionally, this family has been negatively affected by the project information available to the public indicating they are participating in this NextEra project when this is not the case, causing them a great deal of distress within the community.

Should you wish to contact this family directly, they may be reached at [redacted]. All written responses may be directed to their home address at:

[redacted]

[redacted] on behalf of [redacted]

From: Dudek, Derek
To: [redacted]
Subject: RE: Jericho - distance inquiry
Date: Friday, March 08, 2013 2:21:00 PM

Hello [redacted],

The following are approximate distances of the five closest turbines:

[redacted]

Derek Dudek| Community Relations Consultant
NextEra Energy Canada, ULC
390 Bay Street, Suite 1720
Toronto, ON M5H 2Y2
Canada
office: 416.364.9714
mobile: 519.318.0237
derek.dudek@nexteraenergy.com

From: [redacted]
Sent: Friday, March 08, 2013 2:07 PM
To: Dudek, Derek
Subject: RE: Jericho - distance inquiry

Hello,

If it is not too much bother could you tell me how far away the 5 closest turbines are

Thank you

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

From: Dudek, Derek [mailto:Derek.Dudek@nexteraenergy.com]
Sent: Friday, March 08, 2013 2:03 PM
To: [redacted]
Subject: Jericho - distance inquiry

Hello [redacted]
The closest turbine to the dwelling located at [redacted] is Turbine #[redacted], which is on the opposite side of [redacted] Road. This distance is 570 metres.

Thank you,

Derek Dudek| Community Relations Consultant
NextEra Energy Canada, ULC
390 Bay Street, Suite 1720
Toronto, ON M5H 2Y2
Canada
office: 416.364.9714
mobile: 519.318.0237
derek.dudek@nexteraenergy.com

Hello

I am trying to determine how far away your proposed wind turbines are from a piece of property located at [redacted]. This piece of property is for sale and I will need this information before my clients can consider purchasing it.

I have looked through your website and I cannot find something with exact dimensions to be able

to accurately calculate this.

If you could point me in the correct direction perhaps I have overlooked something

Thank you

[redacted]

From: MacKay Ward, Jessica
To: [redacted]
Subject: RE: Tundra Swans - Thedford Bog - Nextera Energy
Date: Monday, March 25, 2013 10:13:06 AM

Hi [redacted],

Thank you for your emails and photographs regarding Tundra Swan observations during the spring 2013 migration. I have passed them along to Derek Dudek at NextEra, and have also filed them with our records of correspondence with residents regarding Tundra Swans, for our avian biologists to consider when completing the evaluations of candidate Tundra Swan stopover and staging habitats.

Our biologists have been out surveying the Tundra Swan migration for the past two weeks and are out again this week.

Best regards,

Jessica

Jessica MacKay Ward, Ph.D.
Ecologist
AECOM
300 Town Centre Blvd, Suite 300, Markham, ON, L3R 5Z6
Tel: 905-477-8400 ext. 225
Cell: 416-333-5274
Fax: 905-477-1456
Jessica.MacKayWard@aecom.com

From: [redacted]
Sent: Sunday, March 24, 2013 8:32 PM
To: MacKay Ward, Jessica
Subject: Tundra Swans - Thedford Bog - Nextera Energy

Hi Jessica,

Further to my e-mail of last week, I am forwarding two photographs of swans flying over my farm at [redacted]. The biologists I spoke to last week from AECOM suggested that I send you some of the pictures I have taken. I acknowledge that these are not great photographs but, these are the best of the ones I have taken. (The others were taken when it was snowing.)

They were taken on March 22, 2013 at approximately 7:00 p.m. in the barnyard of [redacted] (I was standing in between the door to the barn (near the blue silo) and the equipment

sheds (the barns to the east of the evergreen trees). Two swans flew over the line of evergreen trees. They were flying north and flew almost directly over the evergreen trees heading north (the first picture). The second group of swans was the group of 9 swans which seemed to follow the first a few minutes later (the second picture). I was probably not outside for more than 5 or 10 min. Unfortunately, by the time I got my camera out the swans were already in the sky over the neighbour's field north of [redacted] and the pictures therefore do not have any landmarks in them.

Yours truly,

[redacted]

From: Dudek, Derek
To: [redacted]
Subject: Jericho - inquiry
Date: Wednesday, April 10, 2013 11:39:00 AM

Hello [redacted]

Thanks for your email and I did receive your phone message yesterday as well.
The following are the distances you have requested:

- T22 – approx. 1085m (NW of school)
- T23 – approx. 1470 (WNW of school)
- T24 – approx. 855m (WNW of school)
- T29 – approx. 1130m (NE of school)
- T30 – approx. 835m(NE of school)
- Substation – approx. 1185m to closest edge of area used for substation (electrical infrastructure may be further away on property)

Please do not hesitate to contact me if you have any other questions regarding the Jericho Wind Energy Centre project.

Thank you,

Derek Dudek| Community Relations Consultant
NextEra Energy Canada, ULC
390 Bay Street, Suite 1720
Toronto, ON M5H 2Y2
Canada
office: 416.364.9714
mobile: 519.318.0237
derek.dudek@nexteraenergy.com

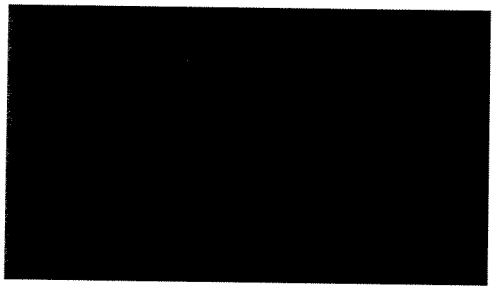
From: [redacted]
Sent: Tuesday, April 09, 2013 3:18 PM
To: SharedMailbox, JERICHO-WIND
Subject: Bosanquet Central Public School & Wind Turbine Distance

I am trying to obtain some information in regards to the proposed Jericho Wind Project on behalf of the Lambton Kent District School Board. I am looking for information on the distance the closest five turbines will be located to Bosanquet Public School in the proposed Jericho Wind Project. Bosanquet Central Public School is located at 8766 Northville Road, Thedford, Ontario. I would also like to know the distance of any substations that are proposed to be located near this school.

Any information you can provide would be greatly appreciated. FYI - we requested and obtained similar information from Suncor in relation to the Cedar Point Winds Project.

If you have any questions regarding this request please feel free to contact me. Looking forward to hearing from you in the immediate future.

[redacted]



ATTENTION: Mr. Groffman, Nextera Energy

I am writing this letter to you in regards to Next Era's "Jericho Wind Project", in Lambton Shores.

I have a young family and I own and operate a dairy farm. I have good reason to have MUCH concern. My wife, baby and I will be surrounded by these giants from every direction. We are afraid of the health effects. The wind turbines will destroy our beautiful agricultural land. Dairy cattle are very sensitive to stray voltage, we could lose our business. It is already tearing apart communities. There is NOTHING green about this topic.

We are very concerned about turbine's numbered [redacted] and [redacted]. These are set to be located in a neighbour's field, a distance of only 700 meters from our house. The location that has been selected to place them is only 69.7 meters from our property/fence line. We know that the developer MUST submit a written assessment that shows that the placement of the turbine will NOT have any adverse impact on the neighbour, which is us. The developer has not contacted us, and having a turbine this close to our lot line is DEFINITELY a problem for us.

A few of the most concerning issues are flicker, especially at sunset, noise, stray voltage, ice throw which can travel 300 meters , blade throw which can travel 1000 meters, fire, structural collapse which can travel 500 meters, personal safety, and many other health concerns.

The suggested location of these turbines is directly in our sunset. We enjoy watching the sun set, we do not want to be tortured by the flickering. What gives anyone the right to take that from my family and I?

Who will be held responsible if my business suffers and how will I be compensated?

How will I be compensated for any damage to my trees or property by ice throw or other disaster?

Who will be held responsible for my restricted land use and how am I to be compensated?

Who will be liable for the safety of my family and I?

I sincerely hope that these turbines do not get built. If this is to proceed, I demand that turbines [redacted] and [redacted] be moved further from my house and to the North-West side of the farm. My rights on my own land are being violated! Legal action will follow.

A response is requested.

[redacted]

[redacted]

[redacted]

REFERENCES:

The Caithness Windfarm Information Forum out of the UK, documented all cases of wind turbine related accidents and incidents which could be found and confirmed through press reports or official information releases up to December 31, 2012.

Their research found the greatest number of accidents was caused by blade failure with blades traveling up to one mile! The second is fire. Because of the turbine height, firefighters can do little but watch it burn itself out. While this may be acceptable in reasonably still conditions, in higher winds it means burning debris will be scattered over a wide area. The third most common accident cause is structural failure. Ice throw in Germany alone was reported 880 times between 1990 and 2003.

Ice throw is a significant problem for those living near turbines particularly if you enjoy snowshoeing, snowmobiling, hiking, or cross-country skiing. Consider the damage that may be caused to your winter crops and your woodlot, especially if the woodlot is a revenue source from lumber or maple syrup.

The distance ice will be thrown is often difficult to determine since the phenomenon is affected by wind speed and direction, rotor speed, icing conditions and the size of the ice pieces being thrown.

Turbine manufacturer GE's literature states "... rotating turbine blades may propel ice fragments some distance from the turbine – up to several hundred metres if condition are right. Falling ice may cause damage to structures and vehicles, and injury to site personnel and the general public, unless adequate measures are put in place for protection."

Wind developer Enbridge, operating the Talbot Wind Farm near Chatham, has posted two signs with respect to ice throw from the turbines. The signs warn people to stay 305 metres (1000 feet) away from the turbines during potential icing conditions and that caution should be exercised from November to April inclusive.

In May 2011, the Ontario Ministry of Labour released a Fire Fighters Guidance Note #6-35 where they identified several safety concerns with respect to turbines:

- most fires in wind turbines will be caused by mechanical failure of equipment in the nacelle or electrical issues resulting from lightning strikes;

- these fires are fuelled by up to 750 litres (164 gallons) of hydraulic oil in the nacelle; and

- Secondary wind driven brush fires originating from wind turbine fires can result in significant additional damage.

This literature states the majority of the major components (rotors, tower and nacelle) have fallen within 500 metres (1640 feet) from the base.

[redacted]

From: [redacted]
Sent: Sunday, April 14, 2013 9:00 PM
To: SharedMailbox, JERICHO-WIND
Subject: Wind turbine concern

Mr. Groffman,

Please read the attached document. We await your response.

[redacted]

From: Dudek, Derek
To: [redacted]
Subject: Jericho - inquiry T47
Date: Monday, April 15, 2013 2:59:00 PM

[redacted]

We have reviewed your comments to the Province against the proposed location of our Turbine #[redacted] in the Jericho Wind Energy Centre.
The proposed turbine location is sited in accordance with Ontario regulations for setbacks from lot lines. The activities described below would not be restricted by the location of this turbine. Indeed the activities described could be undertaken right of to the edge of turbines without impact as evidenced by farmers being able to negotiate farm equipment close to the edge of turbine towers without incident.

Please do not hesitate to contact me if you have any other questions about the project or wind energy in general

Thanks,

Derek Dudek| Community Relations Consultant
NextEra Energy Canada, ULC
390 Bay Street, Suite 1720
Toronto, ON M5H 2Y2
Canada
office: 416.364.9714
mobile: 519.318.0237
derek.dudek@nexteraenergy.com

From: [redacted]
Sent: Thursday, April 11, 2013 12:37 PM
To: SharedMailbox, JERICHO-WIND
Subject: Fw: Turbine Placement

----- Original Message -----
From: [redacted]
To: doris.dumais@ontario.ca ; info@ombudsman.on.ca ; monte.mcnaughtonca@pc.ola.org ; [redacted]
Sent: Wednesday, March 20, 2013 7:14 PM
Subject: Turbine Placement

This letter is in regards to Turbine #[redacted]. This turbine is located next to my brothers property which our place has been severed many years ago from the farm. We own [redacted] acres from this property. We have many concerns about the placement of this turbine. We have lived here for [redacted] years and we

used the walkway along the property line for walks back to the bush area, and it is also a travel area for 4 wheelers, snowmobiles and bicycles. Our children and friends use this walkway to have access to the bush area as they have built an area to paintball. It has taken many years to establish the paintball area to what it is today.

This turbine is placed too close to the property line and will endanger my family and our friends. We are not in favour of turbines and therefore it should not restrict our activities. This infringes our rights, we feel as if we are being handcuffed in pursuing our normal activities.

The turbine should not be located so close to the property line and should be placed at least 300 - 400 meters south of the property line. We should not feel threatened by big industries trying to bully us. They are nothing but schoolyard bullies. They have big resources and can tie up the courts and can cost the little man more money and they hope that they give up.

We are extremely upset by the location of this turbine.

We expect a reply on your solution to this problem----Turbine #[redacted] and others

[redacted]

ATTENTION: Nextera Energy

I am writing this letter to you in regards to Next Era's "Jericho Wind Project", in Lambton Shores.

I have a young family and I own and operate a dairy farm. I have good reason to have MUCH concern. My wife, baby and I will be surrounded by these giants from every direction. We are afraid of the health effects. The wind turbines will destroy our beautiful agricultural land. Dairy cattle are very sensitive to stray voltage, we could lose our business. It is already tearing apart communities. There is NOTHING green about this topic.

We are very concerned about turbine's numbered [redacted] and [redacted]. These are set to be located in a neighbour's field, a distance of only 700 meters from our house. The location that has been selected to place them is only 69.7 meters from our property/fence line. We know that the developer MUST submit a written assessment that shows that the placement of the turbine will NOT have any adverse impact on the neighbour, which is us. The developer has not contacted us, and having a turbine this close to our lot line is DEFINITELY a problem for us.

A few of the most concerning issues are flicker, especially at sunset, noise, stray voltage, ice throw which can travel 300 meters , blade throw which can travel 1000 meters, fire, structural collapse which can travel 500 meters, personal safety, and many other health concerns.

The suggested location of these turbines is directly in our sunset. We enjoy watching the sun set, we do not want to be tortured by the flickering. What gives anyone the right to take that from my family and I?

Who will be held responsible if my business suffers and how will I be compensated?

How will I be compensated for any damage to my trees or property by ice throw or other disaster?

Who will be held responsible for my restricted land use and how am I to be compensated?

Who will be liable for the safety of my family and I?

I sincerely hope that these turbines do not get built. If this is to proceed, I demand that turbines [redacted] and [redacted] be moved further from my house and to the North-West side of the farm. My rights on my own land are being violated! Legal action will follow.

A response is requested.

[redacted]

[redacted]

[redacted]

REFERENCES:

The Caithness Windfarm Information Forum out of the UK, documented all cases of wind turbine related accidents and incidents which could be found and confirmed through press reports or official information releases up to December 31, 2012.

Their research found the greatest number of accidents was caused by blade failure with blades traveling up to one mile! The second is fire. Because of the turbine height, firefighters can do little but watch it burn itself out. While this may be acceptable in reasonably still conditions, in higher winds it means burning debris will be scattered over a wide area. The third most common accident cause is structural failure. Ice throw in Germany alone was reported 880 times between 1990 and 2003.

Ice throw is a significant problem for those living near turbines particularly if you enjoy snowshoeing, snowmobiling, hiking, or cross-country skiing. Consider the damage that may be caused to your winter crops and your woodlot, especially if the woodlot is a revenue source from lumber or maple syrup.

The distance ice will be thrown is often difficult to determine since the phenomenon is affected by wind speed and direction, rotor speed, icing conditions and the size of the ice pieces being thrown.

Turbine manufacturer GE's literature states "... rotating turbine blades may propel ice fragments some distance from the turbine – up to several hundred metres if condition are right. Falling ice may cause damage to structures and vehicles, and injury to site personnel and the general public, unless adequate measures are put in place for protection."

Wind developer Enbridge, operating the Talbot Wind Farm near Chatham, has posted two signs with respect to ice throw from the turbines. The signs warn people to stay 305 metres (1000 feet) away from the turbines during potential icing conditions and that caution should be exercised from November to April inclusive.

In May 2011, the Ontario Ministry of Labour released a Fire Fighters Guidance Note #6-35 where they identified several safety concerns with respect to turbines:

- most fires in wind turbines will be caused by mechanical failure of equipment in the nacelle or electrical issues resulting from lightning strikes;

- these fires are fuelled by up to 750 litres (164 gallons) of hydraulic oil in the nacelle; and

- Secondary wind driven brush fires originating from wind turbine fires can result in significant additional damage.

This literature states the majority of the major components (rotors, tower and nacelle) have fallen within 500 metres (1640 feet) from the base.

[redacted]

From: [redacted]
Sent: Wednesday, April 24, 2013 1:38 PM
To: SharedMailbox, JERICHO-WIND
Subject: CONCERNING JERICHO WIND ENERGY PROJECT

Attention : Ross Groffman, Director Jericho Wind Energy Centre

I have not received a response from you regarding the attached letter that was sent to you last month.

I am sending it to you again, your response is urgent.

[redacted]

[redacted]

From: [redacted]
Sent: Thursday, April 25, 2013 10:35 AM
To: SharedMailbox, JERICHO-WIND; doris.dumais@ontario.ca; info@ombudsman.on.ca; monte.mcnaughtonco@pc.ola.org; bob.baileyco@pc.ola.org; minister.moe@ontario.ca; minister.omafra@ontario.ca; ernie.hardeman@pc.ola.org; randy.pettapiece@pc.ola.org; jvanthof-qp@ndp.on.ca
Subject: Wind Turbine Concerns letter

Please read and reply.

[redacted]

From: Dudek, Derek
To: [redacted]
Subject: Jericho - inquiry
Date: Thursday, April 25, 2013 10:47:00 AM

Hello [redacted],

The Consultation Report will be uploaded to our website with the final version of the reports. We expect to have the final versions of the reports within the next several weeks. As soon as that information is available, we'll post it to our website.

Thank you,

Derek Dudek| Community Relations Consultant
NextEra Energy Canada, ULC
390 Bay Street, Suite 1720
Toronto, ON M5H 2Y2
Canada
office: 416.364.9714
mobile: 519.318.0237
derek.dudek@nexteraenergy.com

From: [redacted]
Sent: Friday, February 22, 2013 10:39 AM
To: SharedMailbox, JERICHO-WIND; jbradley.mpp@liberal.ola.org
Subject: environment studys complete

Now that Nextera have completed there required studys(studys funded by the company for the company) on the heritage , history , wild life , water , etc . and have staged there required info . meetings (of which I have attended 5 in the last 2 years with hugh disapointment each time) . Its now time time to make the required reports of such meetings . I would be interested in seeing that report , I am sure it will state that these meetings were well attended with lots of interest . I would bet that they don't state the great dissatisfaction with which concerns are met . Time and time again we are bombarted with all that the company is doing all the work that is being done , none that meet the local concerns of the people . When will the study be done of the local people , the local business , the farmers and area residents that have to live with industrial turbines invading there space . This is farm land the bread basket of Canada , southwestern Ontario , farm land zoned as such NOT commercial industrial land.
When do we get a say , give us are rights back , this is not the way to do business , wakeup and listen to the people .

I am writing this letter to you in regards to Next Era's wind turbine project, in Lambton Shores.

[redacted] I have good reason to have MUCH concern. My family does not want to be surrounded by these giants. We are afraid of the health effects. The wind turbines will destroy our beautiful agricultural land. Animals are very sensitive to stray voltage, we could lose our business. It is already tearing apart communities. There is NOTHING green about this topic.

There are turbines set to be located in a neighbour's field, a short distance from where we ride our horses and where our clients ride their horses. Horses are very sensitive to noise and flicker. This will endanger the rider, placing them at risk of injury or even death if a horse becomes frightened. If these turbines are built, we will no longer be able to safely operate our business.

[redacted] We are concerned that the ice throw will endanger him when working, and also damage the trees.

Another major concern is for the wildlife. Our property is located in the Carolinian forest region. There are many species of plants and animals that are rare or even endangered living in this region. It is home to Bald Eagles and Flying squirrels as an example.

We are also concerned about stray voltage, blade throw which can travel 1000 meters, fire, structural collapse which can travel 500 meters, personal safety, and many other health concerns.

The developer has not contacted us, and having a turbine this close to our lot line is DEFINITELY a problem for us.

We do not wish to have a turbine this close to our property. This decreases our property safety and enjoyment. What gives anyone the right to take that from my family and I?

Who will be held responsible if my business suffers and how will I be compensated?

How will I be compensated for any damage to my trees or property by ice throw or other disaster?

Who will be held responsible for my restricted land use and how am I to be compensated?

Who will be liable for the safety of my family and I?

I hope that this project does NOT go through. If it does, I would like to see a minimum of 2 kilometers as a set back.

A response is requested.

[redacted]

[redacted]

[redacted]

REFERENCES:

The Caithness Windfarm Information Forum out of the UK, documented all cases of wind turbine related accidents and incidents which could be found and confirmed through press reports or official information releases up to December 31, 2012.

Their research found the greatest number of accidents was caused by blade failure with blades traveling up to one mile! The second is fire. Because of the turbine height, firefighters can do little but watch it burn itself out. While this may be acceptable in reasonably still conditions, in higher winds it means burning debris will be scattered over a wide area. The third most common accident cause is structural failure. Ice throw in Germany alone was reported 880 times between 1990 and 2003.

Ice throw is a significant problem for those living near turbines particularly if you enjoy snowshoeing, snowmobiling, hiking, or cross-country skiing. Consider the damage that may be caused to your winter crops and your woodlot, especially if the woodlot is a revenue source from lumber or maple syrup.

The distance ice will be thrown is often difficult to determine since the phenomenon is affected by wind speed and direction, rotor speed, icing conditions and the size of the ice pieces being thrown.

Turbine manufacturer GE's literature states "... rotating turbine blades may propel ice fragments some distance from the turbine – up to several hundred metres if condition are right. Falling ice may cause damage to structures and vehicles, and injury to site personnel and the general public, unless adequate measures are put in place for protection."

Wind developer Enbridge, operating the Talbot Wind Farm near Chatham, has posted two signs with respect to ice throw from the turbines. The signs warn people to stay 305 metres (1000 feet) away from the turbines during potential icing conditions and that caution should be exercised from November to April inclusive.

In May 2011, the Ontario Ministry of Labour released a Fire Fighters Guidance Note #6-35 where they identified several safety concerns with respect to turbines:

- most fires in wind turbines will be caused by mechanical failure of equipment in the nacelle or electrical issues resulting from lightning strikes;

- these fires are fuelled by up to 750 litres (164 gallons) of hydraulic oil in the nacelle; and

- Secondary wind driven brush fires originating from wind turbine fires can result in significant additional damage.

This literature states the majority of the major components (rotors, tower and nacelle) have fallen within 500 metres (1640 feet) from the base.

From: Dudek, Derek
To: [redacted]
Subject: Jericho - inquiry
Date: Friday, May 03, 2013 8:47:00 AM

Hello,
Thank you for your inquiry regarding our Jericho Wind Energy Centre Project. Your letter outlines a number of concerns related to proximity of turbines to your property line. To confirm you are located at [redacted] The distance of the nearest turbine to your property is 82 metres ([redacted]).

The turbine is located in accordance with Ontario Regulation 359/09. The setbacks developed under this regulation are intended to protect public health and safety. In addition, studies have been prepared in support of our Renewable Energy Approval application to the Province, which address matters related to wildlife impacts. These studies can be found in the Design and Operations Report. It has not been our experience that wind turbine operations have any negative impact on livestock, including horses.

Regarding stray voltage, it should be noted that there is nothing unique about the electricity moving through the proposed underground distribution lines or transmission lines as compared to any other such networks found in Canada. Within Ontario, power provider transmission lines of varying sizes are common within our environment and those lines are built in accordance with the Distribution System Code, the Transmission System Code (both managed by the Ontario Energy Board), the Canadian Standards Association, the Ontario Electricity Act and the Electrical Safety Authority to ensure public safety. By following these stringent requirements, we feel that the safety and welfare of livestock are considered and must be addressed by electrical distributors and generators. Stray voltage has traditionally occurred as a result of improperly designed on-site electrical systems, or within the existing electrical distribution system. Our proposed electrical system is in no way connected to the local electrical distribution system.

With respect to your specific questions we offer the following responses:

Who will be held responsible if my business suffers and how will I be compensated?
The Project is being developed in accordance with Ontario regulations and we would not anticipate any impacts to livestock operations as outlined above. It has not been our experience that wind turbine operations have any negative impact on livestock or crops.

How will I be compensated for any damage to my trees or property by ice throw or other disaster?
If damage occurs on a neighboring property, that person(s) could make a claim against us or use appropriate means under Ontario law to recover any damages.

Who will be held responsible for my restricted land use and how am I to be compensated?
There would be no restrictions on land use as a result of development of the project.

Who will be liable for the safety of my family and I?
We take great pride in the safe operation of our wind turbines. We are required to develop the

Project in accordance with Ontario regulations which have been developed to provide for the protection of public health and safety.

Please do not hesitate to contact us if you have any other questions regarding the Jericho project.

Thank you,

Derek Dudek| Community Relations Consultant
NextEra Energy Canada, ULC
390 Bay Street, Suite 1720
Toronto, ON M5H 2Y2
Canada
office: 416.364.9714
mobile: 519.318.0237
derek.dudek@nexteraenergy.com

From: Dudek, Derek
To: [redacted]
Subject: Jericho - inquiry
Date: Friday, May 03, 2013 8:46:00 AM

Hello,
Thank you for your inquiry regarding our Jericho Wind Energy Centre Project. Your letter outlines a number of concerns and specific questions regarding Turbine [redacted] and [redacted] in our project. To confirm you are located at [redacted] and your house is identified as receptor [redacted] for our study purposes. The distance of the nearest turbine to your residence is 847.7m ([redacted])

Regarding the property line setbacks, the Parcel Boundary Setback Reduction Analysis Report dated November 2012 was submitted to the Province in accordance with regulation, which identifies the potential impacts and mitigation measures to address any such concerns. This Study indicates a setback of 69.7 metres from [redacted] to your rear property line (Note: [redacted] is located 119.3 metres away from your rear lot line and was not included in the analysis from your lands at [redacted]. This Report can be found in Appendix D to the Design and Operations Report on our website. Any potential impacts in this instance are addressed through standard mitigation measures such as design certification of the turbine, routine maintenance, and extreme weather shutdown mechanisms and protocols.

Regarding stray voltage, it should be noted that there is nothing unique about the electricity moving through the proposed underground distribution lines or transmission lines as compared to any other such networks found in Canada. Within Ontario, power provider transmission lines of varying sizes are common within our environment and those lines are built in accordance with the Distribution System Code, the Transmission System Code (both managed by the Ontario Energy Board), the Canadian Standards Association, the Ontario Electricity Act and the Electrical Safety Authority to ensure public safety. By following these stringent requirements, we feel that the safety and welfare of livestock are considered and must be addressed by electrical distributors and generators. Stray voltage has traditionally occurred as a result of improperly designed on-site electrical systems, or within the existing electrical distribution system. Our proposed electrical system is in no way connected to the local electrical distribution system.

With respect to your specific questions we offer the following responses:

Who will be held responsible if my business suffers and how will I be compensated?
The Project is being developed in accordance with Ontario regulations and we would not anticipate any impacts to dairy operations as outlined above. It has not been our experience that wind turbine operations have any negative impact on livestock or crops.

How will I be compensated for any damage to my trees or property by ice throw or other disaster?
If damage occurs on a neighboring property, that person(s) could make a claim against us or use appropriate means under Ontario law to recover any damages.

Who will be held responsible for my restricted land use and how am I to be compensated?
There would be no restrictions on land use as a result of development of the project.

Who will be liable for the safety of my family and I?
We take great pride in the safe operation of our wind turbines. We are required to develop the Project in accordance with Ontario regulations which have been developed to provide for the protection of public health and safety.

What about shadow flicker?

Regarding shadow flicker, because it is diffuse and limited to predictable, brief time periods just before sundown or after sunup, it is an aesthetic rather than a safety issue. Yet, because some residents are still concerned, if Jericho receives a verified complaint about shadow flicker at any home involved in the project, Jericho are committed to utilizing the best source to mitigate the problem, including but not limited to, planting trees in the line of sight or by installing window treatments or awnings.

Please do not hesitate to contact us if you have any other questions regarding the Jericho project.

Thank you,

Derek Dudek| Community Relations Consultant
NextEra Energy Canada, ULC
390 Bay Street, Suite 1720
Toronto, ON M5H 2Y2
Canada
office: 416.364.9714
mobile: 519.318.0237
derek.dudek@nexteraenergy.com

From: Dudek, Derek
To: [redacted]
Subject: RE: Jericho - inquiry
Date: Monday, July 15, 2013 10:35:00 AM

Hello [redacted]

Your concerns from the public meeting have been forwarded to the MOE as part of our Renewable Energy Approval application.

As additional information and to clarify some matters please consider the following information to hopefully alleviate some of your concerns:

- No variance is required for Turbine [redacted], which is located approximately 65 metres from the rear of your property. Turbines are permitted to be located a minimum of blade length +10m (60m) from a property line where an assessment of land uses on approximately the first 20 metres of the neighbouring property looks at potential issues and mitigation measures. No specific mitigation measures were recommended beyond standard operating procedures for the turbines.
- Regarding stray voltage we appreciate your concern as an operator of a dairy farm. Stray voltage is generally caused by on-farm sources (ie. Faulty wiring), and sometimes by off-farm sources on the local hydro distribution system according to Hydro One. Jericho is a transmission level project that in no way is connected to the local hydro distribution system. As such, you should not experience any changes to your operation as a result of our project. The Jericho project will be connected to the 500kV existing transmission line approximately 22 km from your property.

Thank you for your inquiry and please don't hesitate to contact me with any other questions.

Derek Dudek| Community Relations Consultant
NextEra Energy Canada, ULC
390 Bay Street, Suite 1720
Toronto, ON M5H 2Y2
Canada
office: 416.364.9714
mobile: 519.318.0237
derek.dudek@nexteraenergy.com

From: [redacted]
Sent: Monday, July 08, 2013 8:51 PM
To: Dudek, Derek
Subject: Re: Jericho - inquiry

hello Derek Dudek,

I would like it on file again that we have a problem with the turbines on our 'back'

neighbor's property [redacted]
I had filled out a form on the info night in Thedford stating my concern about these turbines
and also complaining about one of them particularly about the distance of it towards our property line!
What about the minor variance?
We don't want anything to do with any possible negative effects that may occur,
we operate a dairy farm and as this is our sole income
you may understand our concerns.
We already have our farm checked for stray voltage and will so again just before any work starts towards the turbines.
You may understand that noise is not our biggest worry here!
Sincerely,
[redacted]

Our lawyer will also receive a copy of this letter/E-mail

From: Dudek, Derek
Sent: Monday, February 11, 2013 12:39 PM
To: [redacted]
Subject: Jericho - inquiry

Hello [redacted]
It is my understanding that you had requested the distance from your house to the closest turbines at the open houses last week for our Jericho project. It is my understanding that your house is located on [redacted] just north of [redacted], to the east of turbines [redacted] and [redacted]. Your receptor ID in our noise study report is [redacted]. The distance from your house to the closest turbines is:

- Turbine [redacted]
- Turbine
- Turbine
- Turbine
- Turbine

Thank you, and please don't hesitate to contact me if you have any other questions.

Derek Dudek| Community Relations Consultant
NextEra Energy Canada, ULC
390 Bay Street, Suite 1720
Toronto, ON M5H 2Y2
Canada
office: 416.364.9714
mobile: 519.318.0237
derek.dudek@nexteraenergy.com

From: Dudek, Derek
To: [redacted]
Subject: RE: Jericho - inquiry - Turbine #[redacted] - Jericho Wind Project
Date: Thursday, August 15, 2013 4:36:00 PM

Hello [redacted]
I can get you the map tomorrow. I'm having computer trouble right now though.

Derek
519.318.0237

From: [redacted]
Sent: Thursday, August 15, 2013 3:59 PM
To: Dudek, Derek
Cc: kristina.rudzki@ontario.ca; info@ombudsman.on.ca; [redacted]
Subject: Re: Jericho - inquiry - Turbine #[redacted] - Jericho Wind Project

Derek,
Further to your e-mail below, dated April 25, 2013, neither myself nor my neighbours affected by the placement of turbine #[redacted] have received the new map placement as promised. Both neighbours strongly disagree with the measurements provided by you in a previous e-mail.

We, once again, request that NextEra meet with these affected people to confirm and demonstrate the actual distances for this turbine are indeed in accordance with the legislation set out in the Environmental Protection Act.

Please advise when this will occur.

Sincerely,
[redacted]

On 4/25/2013 8:33 AM, Dudek, Derek wrote:

> Hello [redacted]
> We expect to have the final versions of the reports within the next several weeks. As soon as that information is available, we'll post it to our website and concurrently send you and your neighbours the map that's been requested. After you receive the map, if you'd like to meet with us to discuss it further please contact us to schedule a date and time.
>
> Thank you,
>
> **Derek Dudek| Community Relations Consultant**
> NextEra Energy Canada, ULC
> 390 Bay Street, Suite 1720
> Toronto, ON M5H 2Y2

Canada
office: 416.364.9714
mobile: 519.318.0237
derek.dudek@nexteraenergy.com

From: [redacted]
Sent: Sunday, April 21, 2013 8:58 AM
To: SharedMailbox, JERICHO-WIND; moe.serviceintegration@ontario.ca; doris.dumais@ontario.ca; agatha.garciawright@ontario.ca; info@ombudsman.on.ca; monte@montemcnaughton.com; jferguson@lambtonshores.ca
Subject: Turbine #[redacted] - Jericho Wind Project

This is to again advise the Ministry of the Environment, and the Ombudsman that the new map for turbine [redacted] is still not available on the proponents website, despite assurances in February. It is unacceptable and intentionally misleading that the proponent continues to post public information they know to be incorrect, and that the government overseers, entrusted by residents, continue to let this occur.

Myself, along with the landowners affected by the placement of turbine [redacted], [redacted] and [redacted], do not have confidence that the NextEra measurements are accurate. These measurements include the distance between turbine [redacted] and the [redacted] (59.5 metres as shown in the available maps or 60.8 metres as stated by Mr. Dudek, NextEra); and the 550 metres from the turbine and the residences of the [redacted] and [redacted]

NextEra - on behalf of these neighbours, I request that NextEra meet with these affected people to confirm and demonstrate the actual distances for this turbine are indeed in accordance with the legislation set out in the Environmental Protection Act.

I look forward to your response.

[redacted]

[redacted]

-------- Original Message --------
Subject: Fwd: Fwd: RE: Jericho Wind Project - turbine #[redacted]
Date: Mon, 04 Mar 2013 18:36:54 -0500

From: [redacted]
To:narren.santos@ontario.ca
CC:doris.dumais@ontario.ca

FYI - the amended map is still not available on the NextEra website.
[redacted]

-------- Original Message --------
Subject: Fwd: RE: Jericho Wind Project - turbine #[redacted]
Date: Tue, 19 Feb 2013 18:55:11 -0500
From: [redacted]
To:doris.dumais@ontario.ca, info@ombudsman.on.ca, minister.moe@ontario.ca, monte@montemcnaughton.com, jferguson@lambtonshores.ca

Dear Ms. Dumais,
As you can see by the attached e-mails, there is critical information on the Jericho Project that is currently unavailable to the public and the municipalities, although NextEra wrapped up their final meetings earlier in February. I spoke with Mr. Dudek on February 9, 2013 when he mentioned that NextEra was still working on several reports, specifically those involving tundra swans, soil stability and archeological studies.

Section 16 of the Environmental Act clearly states that drafts of all documentation that will be 'submitted as part of the application for the issue of a renewable energy approval' must be made available to the public 60 days before the final public meeting is held.

In accordance with the Ministry's own legislation, I request that once all information from NextEra on the Jericho Project has been made available to the public that the 60 day review period begin again, followed by the final public information meeting.

Sincerely,
[redacted]

[redacted]

[redacted]

-------- Original Message --------
Subject:RE: Jericho Wind Project - turbine #[redacted]
Date: Tue, 19 Feb 2013 14:11:28 +0000

From: Dudek, Derek <Derek.Dudek@nexteraenergy.com>
To: [redacted]

Hello [redacted]
I will check and see when the reports are being posted to the website.

Derek
519.318.0237

From: [redacted]
Sent: Sunday, February 17, 2013 6:58 PM
To: Dudek, Derek; doris.dumais@ontario.ca; minister.moe@ontario.ca; info@ombudsman.on.ca; jferguson@lambtonshores.ca; monte@montemcnaughton.com
Subject: Re: Jericho Wind Project - turbine #[redacted]

I have just checked the maps available on the NextEra website and turbine #[redacted] still shows the distance as less than 60 metres. When will the changes to these maps be updated and made available to the public?

It is very difficult for the community to review and comment on the Jericho Project when the documentation changes so frequently but NextEra fails to update their documentation accordingly.

Sincerely,
[redacted]

On 2/15/2013 8:36 AM, Dudek, Derek wrote:

> Hello [redacted]
> Thank you for your inquiry into this matter. Since the draft report was prepared for public review, the distance from Turbine #[redacted] to the southerly property line has been confirmed to be 60.8 metres based on field verification. This information has been updated in the final report. We will respond to the property owners to this effect.
>
> Thanks,
>
> **Derek Dudek| Community Relations Consultant**
> NextEra Energy Canada, ULC
> 390 Bay Street, Suite 1720
> Toronto, ON M5H 2Y2
> Canada
> office: 416.364.9714
> mobile: 519.318.0237

derek.dudek@nexteraenergy.com

From: [redacted]
Sent: Tuesday, February 12, 2013 8:16 PM
To: Dudek, Derek; SharedMailbox, JERICHO-WIND; moe.serviceintegration@ontario.ca; minister.moe@ontario.ca; monte@montemcnaughton.com; doris.dumais@ontario.ca; info@ombudsman.on.ca; jferguson@lambtonshores.ca
Subject: Jericho Wind Project - turbine #[redacted]

I am writing to you on behalf of [redacted] who are the non-participating neighbours to the south of turbine [redacted] on [redacted], in the Jericho Wind Project. [redacted] do not have access to e-mail or the internet and have asked that I correspond on their behalf.

This turbine has been placed less than 60 metres (the length of the blades, plus 10 metres) from their property line. The NextEra assessment documentation states that an "agreement will be in place and assessment conducted - no setback required."

[redacted] do not have an agreement with NextEra, nor are they willing to entertain such an arrangement. As such, the placement of turbine [redacted] is in violation of Section 53 of the Environmental Act, which states that without an agreement, the wind developer must stay:

a) a minimum equivalent to the height of the wind turbine, excluding the length of any blades (80 metres); or
b) a minimum distance equal to the length of any blades plus 10 metres (60 metres).

[redacted] are notifying you so that this turbine will be moved the appropriate distance from their property boundary. Additionally, this family has been negatively affected by the project information available to the public indicating they are participating in this NextEra project when this is not the case, causing them a great deal of distress within the community.

Should you wish to contact this family directly, they may be reached at [redacted] All written responses may be directed to their home address at:

[redacted]

[redacted]

[redacted] on behalf of [redacted]

NEXTera ENERGY CANADA

September 30, 2013

[redacted]

Dear [redacted]

The purpose of this letter is to address an email from your neighbor [redacted] on your behalf. The email from [redacted] requested information on the setback from turbine #[redacted] from your property on [redacted] I've attached two extracted pages from Appendix D of the Design and Operations Report for ease of emailing. Both pages show the distance updated to 60.8 metres in accordance with regulation.

Please see as illustrated on the attached map. The field siting will be in accordance with the mapping.

Please do not hesitate to contact me if you have any additional questions regarding the project.

Thank you,

Derek Dudek
Community Relations

Attachments

NextEra Energy Canada, ULC

390 Bay Street, Suite 1720 | Toronto, Ontario M5H 2Y2 | 416 364 9714

From: Dudek, Derek
To: [redacted]
Subject: RE: Jericho - inquiry
Date: Monday, September 30, 2013 2:44:00 PM

Hello [redacted],
The changes to the project have resulted in the removal of one of the turbines north of your residence, namely [redacted] the easterly of the two turbines.
[redacted] is located approximately 575m to your dwelling.

Thank you and please don't hesitate to contact me if you have any other questions.

Derek Dudek| Community Relations Consultant
NextEra Energy Canada, ULC
390 Bay Street, Suite 1720
Toronto, ON M5H 2Y2
Canada
office: 416.364.9714
mobile: 519.318.0237
derek.dudek@nexteraenergy.com

From: [redacted]
Sent: Thursday, September 19, 2013 9:27 PM
To: Dudek, Derek
Subject: Fw: Jericho - inquiry

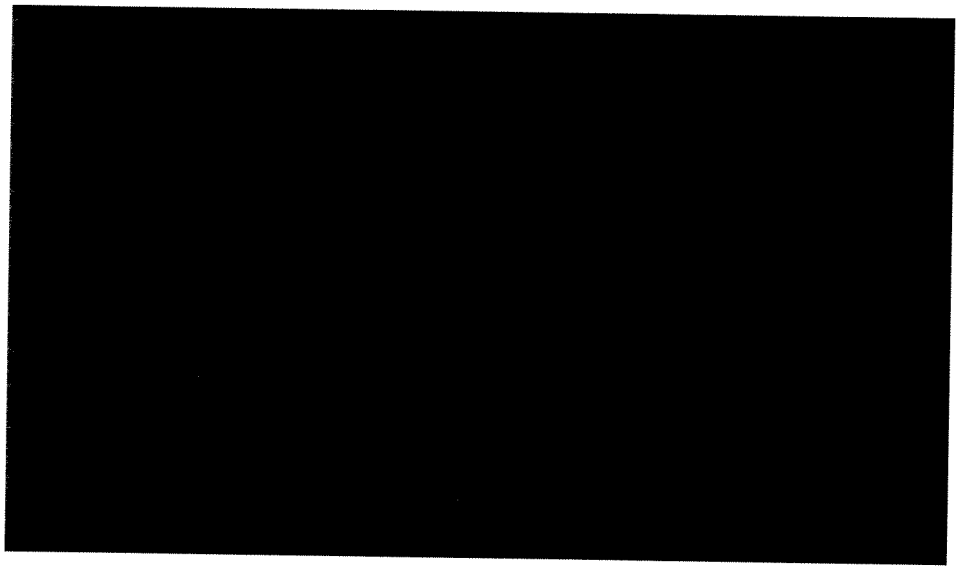
HI Derek,
I received the Notice Of Change to a Proposal map of the Jericho Project in the mail today.
I have a couple of questions about the changes that I hope you will be able to answer for me.
The first question is what exactly will the proposal [redacted] modification mean in relationship to the turbine located behind my property.
I would also like to know exactly which turbine that was proposed to be located behind my property has been removed from the project.
I look forward to your reply
sincerely
[redacted]

----- Original Message -----
From: Dudek, Derek
To: [redacted]
Sent: Tuesday, February 19, 2013 2:07 PM
Subject: Jericho - inquiry

Hello [redacted]

It is my understanding that you attended one of the Jericho open houses last week and had the following questions:

- Map showing the distance between house and the nearest 2 turbines
  See attached.
- Predicted noise level at residence
  As per the Noise Impact Summary Table as found in Appendix B – Noise Assessment Report in the Design and Operations Report the calculated sound level at your residence is 39.5 – 39.9 dBA at selected wind speeds.
- The estimated number of hours your house may be exposed to shadow flicker over the course of a year.
  Based on preliminary modelling done for the open houses, your residence is not shown to have any impacts related to shadow flicker. See image below that was available at the open house.



Please don't hesitate to contact me if you have any other questions.

Thanks,

Derek Dudek| Community Relations Consultant
NextEra Energy Canada, ULC
390 Bay Street, Suite 1720
Toronto, ON M5H 2Y2
Canada
office: 416.364.9714
mobile: 519.318.0237
derek.dudek@nexteraenergy.com

From: [redacted]
To: Dudek, Derek
Subject: RE: Jericho - inquiry
Date: Tuesday, October 01, 2013 7:36:52 AM

Thanks Derek

From: Derek.Dudek@nexteraenergy.com
To: [redacted]
Subject: Jericho - inquiry
Date: Mon, 30 Sep 2013 13:43:36 +0000

Hello [redacted]
Good to talk to you last week. The distances you requested from our proposed Turbine [redacted] are as follows:
380m to closest lot corner (rear s/e corner)
550m to approximately the front 1/3 of the lot (As noted on our call we are required to pick an appropriate location on all vacant lots (front centre about 40m back from street) and model our turbine locations as if a dwelling actually existed there). There are many areas on the lot that are beyond 550 metres as is being requested by the Municipality.
I'd also note that there are no Provincial rules about allowing you to build closer than 550m to a turbine. Indeed many of our participating landowners will have locations much closer than 550 metres. As such, this must be a local by-law that they have established for some reason.

[redacted]

[redacted]

Thank you and all the best. If you need any more information, let me know.

Derek Dudek| Community Relations Consultant
NextEra Energy Canada, ULC
390 Bay Street, Suite 1720
Toronto, ON M5H 2Y2
Canada

ADDENDUM to the ABORIGINAL (FIRST NATION AND MÉTIS) CONSULTATION REPORT

FOR:

PROPOSED JERICHO WIND ENERGY CENTRE

Jericho Wind, Inc.

(a wholly owned subsidiary of NextEra Energy Canada, ULC)

Report Updated as of October 2013

Table of Contents

Appendices

Context

Jericho Wind, Inc. (Jericho), a wholly owned subsidiary of NextEra Energy Canada, ULC, (NextEra) is proposing to construct a wind energy project in the Municipality of Lambton Shores and the Township of Warwick, in Lambton County, Ontario and in the Municipality of North Middlesex, in Middlesex County, Ontario (see Figure 2-1 – Project Location). With a total nameplate capacity of up to 150 MW, the Jericho Wind Energy Project (the Project) is categorized as a Class 4 wind facility under Ontario Regulation 359/09 (O. Reg. 359/09). Although Jericho is seeking a Renewable Energy Approval (REA) for up to 99 turbine locations, approximately 92 turbines are proposed to be constructed for the Project.

Jericho is proposing modifications to the Project since the submission of the REA application in February, 2013. These proposed Project modifications are categorized as follows:

- Construction disturbance area modified to reduce or eliminate impacts to archaeological resources;
- Infrastructure or construction disturbance area added or changed to optimize project design/ constructability;
- Turbine and associated infrastructure removed.

In support of these modifications, Jericho prepared and circulated for public review a set of Revision Reports that provide updates to the reports included in the February, 2013 REA application. The following sections outline the engagement/consultation activities undertaken and the input received regarding the Project since the submission of the REA application on February 15, 2013.

Jericho has undertaken a thorough program of engagement/consultation with Aboriginal communities for the Project. The results of the program indicate there will be no impacts to Aboriginal or treaty rights or other residual environmental impacts that may be of concern to Aboriginal communities if the Project is approved and implemented with the mitigation outlined in the associated REA reports.

Director's List of Aboriginal Communities to be engaged and consulted:

A Director's List of Aboriginal communities to be consulted for the Jericho Project was requested on August 10, 2010 and received on April 8, 2011 (see Table 1). The list included seven Aboriginal governments (i.e. communities); five for potential rights, and two for potential interests in environmental effects. One of the communities on the Director's List (Delaware Nation Moravian of the Thames) has provided a written confirmation of no requirement for further consultation about the Project.

Table 1 - Director's List of Aboriginal Communities

Director's List	Notes
Aamjiwnaang First Nation Chippewas of Sarnia Sarnia 45	Identified as may have constitutionally protected Aboriginal or treaty rights. Referred to in this report as "Aamjiwnaang First Nation"
Chippewas of Kettle and Stony Point FN Kettle Point 44	Identified as may have constitutionally protected Aboriginal or treaty rights. Referred to in this report as "Kettle and Stony Point First Nation".
Chippewas of the Thames First Nation Chippewas of the Thames 42	Identified as may have constitutionally protected Aboriginal or treaty rights. Referred to in this report as "Chippewas of the Thames First Nation".
Delaware Nation Moravian of the Thames Moravian 47	Identified as may have interests in potential negative environmental effects. Referred to in this report as Moravian of the Thames Delaware First Nation.
Munsee-Delaware First Nation Munsee 1	Identified as may have interests in potential negative environmental effects. Referred to in this report as "Munsee-Delaware First Nation".
Oneida Nation of the Thames First Nation Oneida 41	Identified as may have constitutionally protected Aboriginal or treaty rights. Referred to in this report as "Oneida of the Thames First Nation".

Table 1 - Director's List of Aboriginal Communities	
Director's List	**Notes**
Bkejwanong Territory Walpole Island First Nation Walpole Island 46	Identified as may have constitutionally protected Aboriginal or treaty rights. Referred to in this report as "Walpole Island First Nation".

Additional Communities Engaged by NextEra:

Additional Aboriginal governments also expressed interests in the Project. As a result, the communities in Table 2 were included in Jericho's consultation activities.

Table 2 - Additional Communities Engaged by NextEra	
Additional Communities Consulted	**Rationale**
Haudenosaunee Confederacy Chiefs Council (HCCC)	HCCC assert a treaty right to harvest within the 1701 Nanfan Treaty area (see Map 2.2.1), including both Crown and private lands. Jericho engaged with HCCC, through its delegated staff secretariat, the Haudenosaunee Development Institute ("HDI") about potential impacts to the natural environment, which may affect harvest activities.
Oneida Council of Chiefs	Oneida Council of Chiefs is one of the traditional councils within the Haudenosaunee Confederacy Council. Oneida Council of Chiefs participates through the HDI process, and was engaged by Jericho as part of HDI's evaluation of the Project.
Six Nations of the Grand River Elected Council (SNEC)	SNEC have issued a 2011 Consultation and Accommodation Policy, which asserts SNEC's responsibility to protect the air, land and water within the 1701 Nanfan Treaty area (see Map 2.2.1). Jericho engaged with SNEC to consult about potential impacts to the natural environment.
Historic Saugeen Métis (HSM)	While not identified as a community to be consulted on the April 8, 2011 Director's List, HSM assert a traditional territory that includes the Jericho project location and were included in all consultation activities.

Consultation with the Director's List of Communities as of February 15, 2013

Consultation and engagement with the above-named communities has been ongoing since the submission of the REA application on February 15, 2013, in accordance with NextEra's engagement/consultation policy which is applicable to its affiliated companies (including Jericho) and depending on the level of interest expressed by each community. Specific engagement/consultation initiatives undertaken with each community are described in detail in the following sections. Appendix B contains formal correspondence received from the communities.

Chippewas of Aamjiwnaang

The Chippewas of Aamjiwnaang were active members of the Joint Assessment Committee (JAC) along with the communities of Walpole Island First Nation (WIFN) and Kettle and Stony Point First Nation (KSPFN). The JAC examined and commented on the interests and concerns of their communities with respect to wind energy industry practices, government policies, environmental regulations and the Jericho (as well as, Adelaide, Bluewater, Bornish and Goshen) wind energy project. The work of the Joint Assessment Committee culminated in a report referred to as the JAC Report. While the technical assessment portion of the JAC Report focuses on three projects, the "Issues Report" (part two) covers all 5 projects including Jericho. A copy of the final JAC Report is attached as Appendix A. The development of this report involved numerous meetings and continuous engagement/consultation with the First Nation participants.

Subsequent to the completion of the JAC Report, a meeting was held with Sharilyn Johnston, the community's Environment Coordinator on June 14, 2013 to discuss the community's desire to monitor archaeological work on selected sites located within the five projects assessed in the JAC Report. In addition, the community indicated that they would like to undertake additional training of archaeological monitors. NextEra, on behalf of certain of its affiliated project companies including Jericho, agreed to consider providing capacity funding. As a result of these discussions, archaeological monitors from Aamjiwnaang have been working within the Jericho Project site and other NextEra project sites over the summer of 2013. Capacity Funding and Archaeological Monitoring agreements are being reviewed by the legal counsels of both parties at this time. A meeting to finalize the agreements is scheduled for October 29, 2013.

In early July, at the behest of Mike George, the newly appointed Chief Administrative Officer of Aamjiwnaang, NextEra met on July 10, 2013 with Tom Maness, the Economic Development Officer of the community and Carole Delion, the Manager of its industrial park (Chippewa Industrial Development Ltd.) to discuss the community's interest in supplying manufactured parts to certain of NextEra's wind and solar facilities. The community representatives agreed to supply Jericho and certain other NextEra affiliated companies with a list of the parts which are currently manufactured by enterprises located in the industrial park. In addition, the community expressed an interest in developing a partnership with experienced developers of wind and/or solar energy. Follow-up meetings have been held in abeyance pending clarification of the Provincial Government's further renewable energy procurement plans.

A summary of correspondence with the Chippewas of Aamjiwnaang is included in Table 3 below.

Table 3 – Chippewas of Aamjiwnaang Correspondence Summary

Date	Contacts Involved	Subject Summary
2013-06-14	• Brian Hay, Jericho • Sharilyn Johnston, Chippewas of Aamjiwnaang	Jericho met with Chippewas of Aamjiwnaang to discuss archaeological monitoring.
2013-06-28	• Brian Hay, Jericho • Michael George, Chippewas of Aamjiwnaang	Jericho contacted Chippewas of Aamjiwnaang to set up a meeting.
2013-07-04	• Brian Hay, Jericho • Carole Delion, Chippewas of Aamjiwnaang	Chippewas of Aamjiwnaang responded to Jericho's request for a meeting from June 28, 2013. A meeting was set for early July.
2013-07-10	• Brian Hay, Jericho • Tom Maness, Chippewas of Aamjiwnaang • Carole Delion, Chippewas of Aamjiwnaang	Jericho met to discuss Chippewas of Aamjiwnaang's business interests.
2013-10-03 to 2013-10-10	• Brian Hay, Jericho • Sharilyn Johnston, Chippewas of Aamjiwnaang	Jericho and Chippewas of Aamjiwnaang discussed monitoring agreements and activities.

Chippewas of Kettle and Stony Point

As discussed above, the Chippewas of Kettle and Stony Point (KSPFN) actively participated in the development of the JAC Report. The development of this report involved numerous

meetings and correspondence with the First Nation participants as indicated in Table 4.

With capacity funding provided by Jericho and certain other NextEra affiliated companies, the communities retained the services of Brandy George, a licensed archaeologist in Ontario and member of the Kettle and Stony Point First Nation, to monitor the initial archaeological work at the Jericho Project site. Brandy George's observations were integrated into the JAC Report by Ben Porchuk, the independently retained author. The JAC Report underwent a review by the members of the Joint Assessment Committee with NextEra representatives in attendance to address any issues and questions on February 12, 2013.

While a meeting date was being confirmed with the KSPFN Council, spring archaeological field work began on Jericho and on certain other NextEra projects in the region. The Council of Kettle and Stony Point expressed concerns regarding the proposed location of two turbines on the Jericho Project in the vicinity of 'areas of special traditional interest' and requested the suspension of future archaeological work. In response to these concerns, Jericho suspended archaeological work at the site and reconfigured the layout to try to address these concerns as best as it could. At that time, Chief and Council requested that Brandy George continue to monitor the ongoing archaeological work on behalf of the community, to which Jericho agreed.

Subsequent to the completion of the JAC Report in May, 2013 and after the commencement of the spring archaeological work, a meeting was requested by the Chief and Council to provide an update on NextEra projects (including Jericho) in the First Nation's traditional territory and to address matters raised in the JAC Report. A PowerPoint presentation was prepared for the Council (see Appendix B). The meeting was held on June 12, 2013 in the Council Chambers of the community. Representative meeting attendees were as follows:

- Cassandra Bowers – Project Manager, Jericho
- Nicole Geneau – Director, Bluewater and Goshen
- Ben Greenhouse – Director, Adelaide and Bornish
- Tom Bird – Project Manager, Environmental Services
- Brian Hay – Director, Aboriginal Relations
- Arthur Figura – Project Archaeologist, Archaeobotanist, STANTEC
- Dr. Loren Knopper – Senior Scientist, Intrinsik Environmental Sciences
- Dr. Jessica MacKay Ward – Ecologist, AECOM Canada Ltd.

Upon arrival, the group was informed that the Chief was unable to attend; however six Councillors were in attendance. Rather than presenting the requested project update the acting

Chair of the Council opened the meeting with critical comments about the existing wind turbines in close proximity to their reserve, (a non-NextEra project developed under RESOP). This was followed by other members of the Council voicing their concerns about wind energy in general. The representative attendees responded to the comments made by the Councillors and attempted to respectfully answer questions and correct certain misinformation and errors of fact. Copies of the presentation were left with the Councillors for future reference.

On July 9, 2013, the Chief and Council wrote a letter to the Minister of the Environment giving notification of their Band Council Resolution #2667 regarding wind energy development within their traditional lands.

On July 16, 2013, Sue Bressette, Communication Relations Officer advised that the Chief was willing to meet with a representative from Jericho on August 9, 2013. At that meeting, the Chief expressed his community's concerns about wind. Jericho agreed to continue funding the work of Brandy George and to consider capacity funding for on-going archaeological monitoring, as well as, for additional monitor training. Discussion with respect a formal Capacity Funding agreement has been ongoing (see Table 4). Jericho also agreed to meet with the entire community to discuss their concerns and interests in wind and solar development. Such meeting has not yet been scheduled or taken place. Jericho continues to work with the KPSFN to confirm a meeting date.

On October 22, 2013, Sue Bressette attended the Jericho Public Meeting in Thedford, Ontario and was briefed on the changes to the project, including 'the area of special traditional interest'. Although a resolution opposing wind development in general was passed in June 2013 by the Band Council, Sue Bressette stated that she had been told by the Chief on October 21, 2013 to move ahead and work with Jericho and certain other NextEra affiliated companies with respect to the development of a formal Capacity Funding Agreement and, subsequently, a formal Community Benefits Agreement.

A summary of correspondence with the Chippewas of Kettle and Stony Point is included in Table 4 below.

Table 4 – Chippewas of Kettle and Stony Point Correspondence Summary

Date	Contacts Involved	Subject Summary
2013-05-22	• Brian Hay, Jericho • Sue Bressette, Chippewas of Kettle and Stony Point	Jericho set up a date in mid-June to meet with the Chief and Council.

Table 4 – Chippewas of Kettle and Stony Point Correspondence Summary		
Date	**Contacts Involved**	**Subject Summary**
2013-05-24	• Brandy George, Chippewas of Kettle and Stony Point • Brian Hay, Jericho	Chippewas of Kettle and Stony Point requested that archaeological work be put on hold until the June meeting.
2013-05-25	• Brian Hay, Jericho • Sue Bressette, Chippewas of Kettle and Stony Point • Brandy George, Chippewas of Kettle and Stony Point	Jericho provided the Project status, a brief overview of the consultation and approval process, and an explanation of the Community Benefits Agreement.
2013-06-12	• Cassandra Bowers, Jericho • Nicole Geneau, NextEra • Ben Greenhouse, NextEra • Tom Bird, Jericho • Brian Hay, Jericho • Arthur Figura, Stantec • Dr. Loren Knopper, Intrinsik Environmental Sciences • Dr. Jessica MacKay Ward, AECOM Canada Ltd. • Chippewas of Kettle and Stony Point Council members	Jericho met with the Chippewas of Kettle and Stony Point to provide an update on the Jericho project and other NextEra projects.
2013-07-02	• Brian Hay, Jericho • Cassandra Bowers, Jericho • Sue Bressette, Chippewas of Kettle and Stony Point	Jericho asked whether the Chippewas of Kettle and Stony Point planned on conducting additional archaeological monitor training.
2013-07-09	• Chief Thomas Bressette, Chippewas of Kettle and Stony Point • NextEra	Chippewas of Kettle and Stony Point copied NextEra on the First Nation's Band Council Resolution No. 2667 regarding official opposition to wind turbines.
2013-07-31	• Brian Hay, Jericho • Sue Bressette, Chippewas of Kettle and Stony Point • Chief Thomas Bressette, Chippewas of Kettle and Stony Point	Jericho contacted the Chippewas of Kettle and Stony Point to set up an in-person meeting with Chief Thomas Bressette, Council Members and Staff. The Chippewas of Kettle and Stony Point confirmed a meeting for August 9, 2013.
2013-08-01	• Sue Bressette, Chippewas of Kettle and Stony Point • Cassandra Bowers, Jericho • Brian Hay, Jericho • Ross Groffman, Jericho • Nicole Geneau, NextEra • Ben Greenhouse, NextEra	Chippewas of Kettle and Stony Point sent a letter to Jericho regarding the location of turbines in proximity to the reserve.

Table 4 – Chippewas of Kettle and Stony Point Correspondence Summary		
Date	**Contacts Involved**	**Subject Summary**
2013-08-09	• Brian Hay, Jericho • Chief Tom Bressette, Chippewas of Kettle and Stony Point	Jericho met with Chief Thomas Bressette.
2013-08-12 to 2013-08-16	• Brian Hay, Jericho • Sue Bressette, Chippewas of Kettle and Stony Point	Jericho followed up on the August 9, 2013 meeting and discussed the monitoring agreement.
2013-08-21	• Brian Hay, Jericho • Sue Bressette, Chippewas of Kettle and Stony Point	Jericho requested the contact information and qualifications of the monitors.
2013-08-22	• Sue Bressette, Chippewas of Kettle and Stony Point • Brian Hay, Jericho	Chippewas of Kettle and Stony Point provided Jericho with a Consultation and Accommodation Protocol, and a Cultural Protocol.
2013-09-11 to 2013-09-30	• Brian Hay, Jericho • Sue Bressette, Chippewas of Kettle and Stony Point	Jericho contacted the Chippewas of Kettle and Stony Point to set up a meeting with the Chief.
2013-09-30	• Brian Hay, Jericho • Sue Bressette, Chippewas of Kettle and Stony Point	Jericho provided copies of the notices for the Jericho Public Meetings on October 21, 22, and 23, 2013.
2013-10-23	• Brian Hay, Jericho • Sue Bressette, Chippewas of Kettle and Stony Point	Jericho and the Chippewas of Kettle and Stony Point discussed formalizing a new monitors agreement.
2013-10-24	• Sue Bressette, Chippewas of Kettle and Stony Point • Brian Hay, Jericho	The Chippewas of Kettle and Stony Point expressed their concern of and opposition to the proposed Jericho Wind Energy Centre. The Chippewas of Kettle and Stony Point also provided a copy of a letter that was sent to Minister Bradley regarding their concerns with the Project.

Chippewas of the Thames

The Chippewas of the Thames have enjoyed extensive interaction with Jericho during the spring and summer of 2013, subsequent to the appointments of Rolanda Elijah, as Lands, Resources and Consultation Director; Greg Plain as Economic Development Officer and Ed Gilbert as Energy Advisor in the first quarter of 2013. The first conversation (by phone) with Rolanda Elijah was on April 10, 2013. The first meeting with Rolanda Elijah was held on May 15, 2013 and followed up by correspondence expressing their desire for funding in support of archaeological

monitors and a community archaeological master plan which would include mapping of archaeological sites from Jericho and other projects. A meeting between Rolanda Elijah and Brian Hay to complete a draft Capacity Funding Agreement is scheduled for October 29, 2013.

On August 13, 2013a meeting took place among Greg Plain, Ed Gilbert, Al Wiley, NextEra's VP of Canadian Wind Development and Brian Hay. During this meeting, both Greg Plain and Ed Gilbert expressed the interest of the community to participate in renewable energy development. Arrangements were confirmed for Ed Gilbert and members of the community to visit one of NextEra's solar parks (near Windsor) to familiarize themselves with the scale and scope of a commercial scale solar facility; please refer to Table 5 for a summary of relevant correspondence. NextEra also invited the Chippewas of the Thames to visit one of NextEra's operating wind projects for a tour. No date has been set at this time.

A summary of correspondence with the Chippewas of the Thames is included in Table 5 below.

Table 5 – Chippewas of the Thames Correspondence

Date	Contacts Involved	Subject Summary
2013-04-10	• Brian Hay, Jericho • Rolanda Elijah, Chippewas of the Thames	Jericho and Chippewas of the Thames had a phone conversation regarding the project.
2013-04-15	• Brian Hay, Jericho • Chief Joe Miskokomon, Chippewas of the Thames	Jericho contacted a Chippewas of the Thames to arrange a meeting for April 26 or 29 to provide an update on NextEra's wind development projects.
2013-05-15	• Brian Hay, Jericho • Rolanda Elijah, Chippewas of the Thames	Jericho and Chippewas of the Thames met to discuss the project.
2013-06-10	• Chad Clark, Jericho • Ed Gilbert, Chippewas of the Thames • Michael Blackmore, Jericho • Brian Hay, Jericho	Chippewas of the Thames contacted Jericho to schedule a tour.
2013-07-24	• Rolanda Elijah, Chippewas of the Thames • Brian Hay, Jericho	Chippewas of the Thames contacted Jericho regarding a Capacity Funding Agreement.
2013-07-25	• Brian Hay, Jericho • Ed Gilbert, Chippewas of the Thames	Jericho contacted Chippewas of the Thames to schedule a meeting for August.

Table 5 – Chippewas of the Thames Correspondence		
Date	**Contacts Involved**	**Subject Summary**
2013-07-30 - 2013-07-31	• Ronalda Elijah, Chippewas of the Thames • Brian Hay, Jericho	Chippewas of the Thames contacted Jericho regarding getting a letter of agreement signed for the archaeological monitors, and to discuss the Capacity Funding Agreement.
2013-08-14	• Ed Gilbert, Chippewas of the Thames • Greg Plain, Chippewas of the Thames Brian Hay, Jericho • Al Wiley, Jericho	Jericho and Chippewas of the Thames met to discuss potential opportunities to work together.
2013-08-20	• Ed Gilbert, Chippewas of the Thames • Brian Hay, Jericho	Jericho and Chippewas of the Thames corresponded regarding the possibility of preparing a Memorandum of Understanding for future opportunities.
2013-09-16	• Brian Hay, Jericho • Ronalda Elijah, Chippewas of the Thames	Jericho contacted Chippewas of the Thames to arrange a time to discuss capacity funding for archaeology.
2013-09-30	• Ronalda Elijah, Chippewas of the Thames • Brian Hay, Jericho	Chippewas of the Thames and Jericho corresponded regarding the Capacity Funding Agreement and the Chippewas' archeology master plan.

Moravian of the Thames/Delaware First Nation

Moravian of the Thames/Delaware First Nation have expressed no interest in Jericho or any other NextEra-affiliated projects as reported in the February 15, 2013 REA submission. NextEra continues to contact the Moravian of the Thames on behalf of Jericho and certain other NextEra affiliated project companies to ensure that they have the opportunity to engage with the company, please refer to Table 6 below for a summary of relevant email correspondence.

Table 6 – Moravian of the Thames/Delaware First Nation Correspondence		
Date	**Contacts Involved**	**Subject Summary**
2013-06-17	• Brian Hay, Jericho • Greg Peters, Moravian of the Thames/Delaware First Nation	Jericho contacted Moravian of the Thames/Delaware First Nation to arrange a meeting for early July to provide an update on NextEra's projects

Munsee–Delaware First Nation

Munsee–Delaware First Nation recently experienced a change in leadership. Jericho has yet to meet with the newly appointed Acting Chief although a meeting has been requested on several occasions. As the summary of correspondence in Table 7 illustrates, there was little response by the previous Chief (and Council) to such communications. Nonetheless, in a meeting with the previous Chief in his office on April 12, 2013, Jericho and other certain NextEra project companies were asked to support the construction of a traditional Longhouse (a 'Lanape'). Jericho agreed to take a 'matching funds' approach to the request; however, this intent has not yet been directly communicated due to the leadership issue in the community.

Table 7 – Munsee-Delaware First Nation Correspondence

Date	Contacts Involved	Subject Summary
2013-04-12	• Brian Hay, Jericho • Chief Patrick Waddilove, Munsee-Delaware First Nation	Jericho and Munsee-Delaware met to discuss support for construction of a Lanape for the community.
2013-07-02	• Brian Hay, Jericho • Chief Patrick Waddilove, Munsee-Delaware First Nation	Jericho contacted Munsee-Delaware regarding the construction of a Lanape for the community.
2013-07-04	• Kimberly Snake, Southern First Nations Secretariat • Brian Hay, Jericho • Ryan Barberstock, Munsee-Delaware First Nation • Chief Rose Snake, Munsee-Delaware First Nation • Norman Thomas, Southern First Nations Secretariat	Munsee-Delaware inquired about the potential of NextEra matching funds for a project Munsee-Delaware is initiating.
2013-07-04	• Brian Hay, Jericho • Ryan Barberstock, Munsee-Delaware First Nation • Chief Rose Snake, Munsee-Delaware First Nation	Jericho proposed contributing funds to the Munsee-Delaware First Nation for the construction of a Lanape.
2013-07-10	• Brian Hay, Jericho • Rose Snake, Munsee-Delaware First Nation	Jericho contacted Munsee-Delaware regarding a meeting to discuss contributions to the construction of a Lanape.

Oneida Nation of the Thames

Jericho staff met with the Randall Phillips, the Oneida Nation of the Thames Director of Economic Development, on August 23, 2012, to discuss capacity funding for training. A subsequent meeting with the Elected Chief, Joel Abram, on August 30, 2012, confirmed their interest in such an agreement. However, Director Phillips took an extended medical leave in the fall of 2012 which has continued through 2013. Jericho continues to follow up with the acting Director of Economic Development to set up a meeting regarding these matters. Please refer to Table 8 for a summary of relevant correspondence.

Table 8 – Oneida of the Thames First Nation Correspondence

Date	Contacts Involved	Subject Summary
2013-04-14 – 2013-04-26	• Brian Hay, Jericho • Randall Phillips, Oneida Nation of the Thames	Jericho contacted Oneida of the Thames to arrange a meeting to discuss the Jericho project, and it was confirmed that Deana Doxtator was the new contact.
2013-04-30	• Brian Hay, Jericho • Deana Doxtator, Oneida Nation of the Thames	Jericho contacted Oneida of the Thames to arrange a meeting to discuss capacity funding and archaeological monitors with respect to some of NextEra's projects, including Jericho.
2013-05-28	• Brian Hay, Jericho • Chief Joel Abram, Oneida Nation of the Thames • Deana Doxtator, Oneida Nation of the Thames	Jericho contacted Oneida of the Thames to arrange the meeting.
2013-06-03	• Brian Hay, Jericho • Deana Doxtator, Oneida Nation of the Thames	Oneida of the Thames and Jericho corresponded regarding setting up the meeting.
2013-06-17	• Brian Hay, Jericho • Deana Doxtator, Oneida Nation of the Thames	Jericho contacted Oneida of the Thames to arrange the meeting.
2013-06-28	• Brian Hay, Jericho • Deana Doxtator, Oneida Nation of the Thames	Jericho discussed the possibility of holding the meeting with Oneida of the Thames.
2013-07-12	• Brian Hay, Jericho • Deana Doxtator, Oneida Nation of the Thames	Jericho contacted Oneida of the Thames to arrange the meeting.

Table 8 – Oneida of the Thames First Nation Correspondence		
Date	**Contacts Involved**	**Subject Summary**
2013-07-26	• Brian Hay, Jericho • Deana Doxtator, Oneida Nation of the Thames	Jericho contacted Oneida of the Thames to arrange the meeting.
2013-09-30	• Randall Phillips, Oneida Nation of the Thames • Brian Hay, Jericho	Jericho contacted Oneida of the Thames to arrange the meeting.

Walpole Island First Nation

Walpole Island First Nation (WIFN) was one of the three First Nations who participated in the Joint Assessment Committee (JAC) referenced above. The development of the JAC Report involved numerous meetings and correspondence with the First Nation participants as indicated in the summary of correspondence in Table 9 below.

Subsequent to the completion of the JAC Report, Jericho personnel met with Jared Macbeth and Dr. Dean Jacobs, Director of the Walpole Island Heritage Centre, on June 10, 2013. The purpose of the meeting was to discuss capacity funding for archaeological monitors for the projects NextEra is developing in the traditional territory of WIFN. A Monitoring Agreement has been signed and WIFN archaeological monitors have been working on the Jericho Project site over the summer season. A meeting to finalize a Capacity Funding Agreement is planned for October 31, 2013 with legal counsel for both parties. As well, the Director of the Heritage Centre, Dr. Dean Jacobs, volunteered to sit on NextEra's Community Liaison Committees for Jericho.

Table 9 – Walpole Island First Nation Correspondence Summary		
Date	**Contacts Involved**	**Subject Summary**
2013-05-27 – 2013-06-05	• Jared Macbeth, Walpole Island First Nation • Brian Hay, Jericho • Dr. Dean Jacobs, Walpole Island First Nation • Cassandra Bowers, Jericho	Walpole Island and Jericho corresponded regarding a meeting to discuss the Capacity Funding Agreement and Monitors agreement.
2013-06-10	• Jared Macbeth, Walpole Island First Nation • Brian Hay, Jericho • Dr. Dean Jacobs, Walpole Island First Nation	Walpole Island and Jericho met to discuss capacity funding for archaeological monitors for projects including the Jericho project.

Table 9 – Walpole Island First Nation Correspondence Summary		
Date	**Contacts Involved**	**Subject Summary**
2013-08-19	• Dr. Dean Jacobs, Walpole Island First Nation • Brian Hay, Jericho	Walpole Island provided comments on the draft Capacity Funding Agreement to Jericho.
2013-08-21 – 2013-08-26	• Brian Hay, Jericho • Dr. Dean Jacobs, Walpole Island First Nation	Jericho and Walpole Island discussed the qualifications of archaeological monitors.
2013-09-18	• Dr. Dean Jacobs, Walpole Island First Nation • Brian Hay, Jericho	Walpole Island requested an update regarding the approval of archaeological monitors.
2013-10-09	• Dr. Dean Jacobs, Walpole Island First Nation • Brian Hay, Jericho	Walpole Island provided an updated list of archaeological monitors and their qualifications.
2013-10-15	• Jared Macbeth, Walpole Island First Nation • Dr. Dean Jacobs, Walpole Island First Nation • Brian Hay, Jericho • Roger Townshend	Walpole Island and Jericho corresponded regarding setting up of meeting to discuss the draft Capacity Funding Agreement.

Engagement/Consultation with Additional Communities as of February 15, 2013

Haudenosaunee Confederacy Chiefs Council (Six Nations Confederacy Council and Oneida Council of Chiefs)

Haudenosaunee Confederacy Chiefs Council (Six Nations Confederacy Council and Oneida Council of Chiefs) (HCCC) conducted extensive engagement and negotiations during the period culminating in eight “Land Use Agreements”, one for each of NextEra’s wind energy projects being developed within the boundaries of the Nanfan Treaty area. The details of these agreements are confidential and are therefore not included in this report.

Six Nations of the Grand River Elected Council

Six Nations of the Grand River Elected Council and its staff has been actively engaged with Jericho in the Nanfan Treaty area since the submission of the February 15, 2013 REA application. A Letter Agreement was reached with the Council on March 1, 2013 as the basis for a 20 year Community Benefits Agreement . With support in the form of a $60,000.00 Capacity Funding Agreement , the Six Nations Elected Council conducted an extensive community communication and consultation program with the Six Nations community including two town halls, two open houses and a radio interview supported by paid advertising in both the Turtle Island News and the Teka News. The Six Nations Elected Council approved the agreement on behalf of the community with a Band Council Resolution on June 19, 2013. This resolution recognizes and accepts the development of the Summerhaven Wind Energy Centre specifically, and the seven other NextEra projects, including Jericho, in the Nanfan Treaty territory. The details of these agreements are confidential in nature and are being confirmed in the form of a Community Benefits Agreement A summary of correspondence with the Six Nations of the Grand River related to a Community Benefit Agreement is included in Table 10 below.

Table 10 – Six Nations of the Grand River Correspondence Summary

Date	Contacts Involved	Subject Summary
2013-09-06	• Brian Hay – Jericho • Matt Jamieson - Six Nations of the Grand River Elected Council	Jericho inquired about the status of the Community Benefit Agreement.

Table 10 – Six Nations of the Grand River Correspondence Summary		
Date	**Contacts Involved**	**Subject Summary**
2013-09-19	• Brian Hay – Jericho • Matt Jamieson - Six Nations of the Grand River Elected Council	Six Nations of the Grand River Elected Council indicated the Community Benefit Agreement was on the agenda for the upcoming meeting.
2013-10-11	• Brian Hay – Jericho • Matt Jamieson - Six Nations of the Grand River Elected Council	Jericho inquired about the status of the Community Benefit Agreement. Six Nations of the Grand River Elected Council indicated they would provide comments.

Historic Saugeen Métis

Historic Saugeen Métis agreed in July of 2013, after protracted discussions through counsel, to a substantial capacity funding agreement to support their interest in four of the wind energy centers being developed by certain NextEra affiliated project companies including Jericho. A working group is being established. It is expected that there will be at least four meetings of the group over the next 12 months to review their interests. A summary of correspondence with the Historic Saugeen Métis is included in Table 11 below.

Table 11 – Historic Saugeen Métis Correspondence Summary		
Date	**Contacts Involved**	**Subject Summary**
2013-07-31	• Brian Hay, Jericho • Patsy McArthur, Historic Saugeen Métis	Jericho provided the Capacity Funding Agreement to Historic Saugeen Métis.
2013-08-19	• Brian Hay, Jericho • Patsy McArthur, Historic Saugeen Métis	Historic Saugeen Métis confirmed that the signed Capacity Funding Agreement was being couriered to Jericho.

Notice of Posting to the Environmental Registry

A Notice of Posting to the Environmental Registry was published in the Turtle Island News (July 24, 2013), Forest Standard (July 24, 2013), Lakeshore Advance (July 24, 2013), and the Sarnia Observer (July 26, 2013). The Notice was distributed in response to the Ministry of Environment (MOE) accepting the application for an REA by Jericho. The MOE screened the submission according to the requirements set out in the O.Reg. 359/09 and the application was deemed complete. The Notice initiated the 45-day comment period on the Environmental Registry and

advised stakeholders of how comments could be submitted to the Director. A copy of this Notice and cover letters was distributed to the Aboriginal communities listed above on August 1, 2013 and is included in **Appendix C1**.

Additional Public Meetings – Township of Warwick, Municipalities of North Middlesex and Lambton Shores

The Additional Public Meetings were held on October 21, 22 and 23, 2013 at Centennial Hall (Township of Warwick), the Ailsa Craig Community Centre (Municipality of North Middlesex) and the Legacy Recreation Centre (Municipality of Lambton Shores), respectively, from 5:00 pm to 8:00 pm. The general purpose of the meetings was to present the modifications to the Project layout and associated effects and mitigation measures.

The meeting Notice was distributed to every assessed owner of land within 550 metres of the Project Location and every assessed owner of land abutting a parcel of land on which the Project is located in addition to the MOE, Transport Canada, NAV Canada, Enbridge, the Municipalities of Lambton Shores and North Middlesex, the Township of Warwick and Lambton and Middlesex Counties and interested Aboriginal Communities. Furthermore, the Notice was published in the Turtle Island News (September 18, 2013 and October 16, 2013), Exeter Times Advocate (September 18, 2013 and October 16, 2013), Forest Standard (September 19, 2013 and October 17, 2013), Lakeshore Advance (September 18, 2013 and October 16, 2013), and the Sarnia Observer (September 18, 2013 and October 16, 2013). Finally, the Notice was posted on the Project's website on September 30, 2013. A copy of this Notice and cover letters was distributed to the Aboriginal communities listed above on September 18, 2013 and is included in **Appendix C2**.

Appendix A

Joint Assessment Committee Report

Combined Report

Formerly Issues Report & 3rd Party Review of Draft REAs
for Adelaide, Bluewater and Bornish Wind Energy Centres

Part 1:

3rd Party Review of Adelaide, Bluewater, and Bornish Wind Energy Centres

By Ben Porchuk

LANDSCAPE NATIVE
Revitalized Landscapes. Revitalized Peoples

Consultant for The Joint Assessment Committee[1]

Above: Wind Turbines Adjacent to Kettle and Stony Point First Nation

Table of Contents for Part 1:

3rd Party Review of Adelaide, Bluewater and Bornish Wind Energy Centres

Overview

This Combined Report is a third party review, prepared for the Joint Assessment Committee by Ben Porchuk, of certain renewable energy approval application documents relating to Adelaide, Bluewater and Bornish Wind Energy Centre projects. As discussed further in the Background and in Section 4 below, this report is intended to inform the Joint Assessment Committee in its ongoing consultation with the projects above. Although not required by O. Reg. 359/09, this Combined Report highlights important First Nations perspectives on the projects which the Joint Assessment Committee may wish to consider in providing feedback to the project proponents.

Background on the Restructuring of the Two Reports into the Combined Report:

Feb. 14, 2013

As a result of the discussion and decisions at the meeting of the First Nations Joint Assessment Committee, NextEra staff, Next Era's consultant Bob Waldon and First Nation's consultant Ben Porchuk, the decision was made to restructure the two reports, "*The Issues Report*" and the *"The Draft Renewable Energy Approval (REA) for the Adelaide, Bluewater and Bornish Wind Energy Centres - Third Party Review."* The suggestion to restructure the reports was a natural conclusion based on the fact that the majority of the meeting did not address the meeting agenda - the meeting discussion focused on Aboriginal perspectives, namely the importance of Aboriginal spirituality and the lack thereof in the process thus far. While some new content has been added, the bulk of the revision effort is in restructuring in the following way:

The former reports in short form were the "*Issues Report*" and the "*Third Party Review of Draft REA*."

These reports are now restructured into three parts:

Part 1: **3rd Party Review of Draft REAs for Adelaide, Bluewater and Bornish Wind Centres**

Third party review and confirmation of NextEra's documents submitted to the government for approval: The Draft Renewable Energy Application (REA).

- This report is accessible and useful for community members who can be assured that the review was an objective third party review
- This part can be used as a quick reference for numbers, locations and protocols to be used by NextEra

Part 2: Aboriginal Perspectives, Rights and Spiritual Aspects

Aboriginal perspective on the potential impact to Aboriginal & Treaty Rights, including Spiritual Considerations

- Related both to the REA reports themselves and the broader perspectives on wind
- Core of working document for a group like 'this' to dig into the issues and say, what do we really do about this?

Part 3: Topical Commentary: Broad Industry Issues, Likely to Remain Unresolved

- To include property values, human health impacts, and other similar issues

The Beginning of the Process

On May 15th, 2012 Walpole Island on behalf of the Joint Assessment Committee (that also includes Aamjiwnaang and Kettle and Stony Point First Nations) signed a letter agreement with NextEra Energy Canada regarding the review of several issues for the following five wind energy centres: Adelaide, Bluewater, Bornish, Goshen, and Jericho. These wind energy centres are located within the Traditional Territory of the Joint Assessment Committee member First Nations. The purpose of the Issues Report is to address the following question (in quotations as it is a direct quote from the letter agreement):

> *What information is available that should be considered in finalizing the Project Companies' Renewable Energy Approval reports ("REA Reports") and planning for the Projects, and in particular, what information is available about any potential adverse impacts that the Projects may have on constitutionally protected aboriginal or treaty rights and any measures for mitigating those adverse impacts?*

After a few meetings with various representatives from the members of the J.A.C. and a few consultants, it became clear that a few issues were at the top of the list, in terms of the introductions of new wind farms and the potential impacts they may have. The impacts include:

i) The ability of nature to further self-sustain (within existing natural areas and between them)
ii) How First Nations community members could help in these processes
iii) Impacts on migrating songbirds, raptors and the involvement of First Nations community members in bird banding, radar studies or other efforts to track trends and mitigate impacts
iv) Potential impacts on pollinators and what might be done about these impacts
v) Other impacts like setbacks and their impact on human health

1. Why a DRAFT REA? (Renewable Energy Approval)

The wholly owned subsidiaries of Next Era Energy Canada, ULC, completed three Renewable Energy Applications for Adelaide, Bluewater and Bornish Wind Energy Centres in accordance with the following regulation under the Environmental Protection Act:

ONTARIO REGULATION 359/09

made under the

ENVIRONMENTAL PROTECTION ACT

Made: September 8, 2009
Filed: September 23, 2009
Published on e-Laws: September 25, 2009
Printed in *The Ontario Gazette*: October 10, 2009

RENEWABLE ENERGY APPROVALS UNDER PART V.0.1 OF THE ACT

Source: http://www.e-laws.gov.on.ca/html/source/regs/english/2009/elaws_src_regs_r09359_e.htm

The purpose of the above 'Part V.0.1 of the Environmental Protection Act' is as follows:

> *"This regulation offers an approach to regulating renewable energy generation facilities that is based on transparency and provides clear provincial rules for ensuring that the environment and human health are protected."*

2. Consulting with Aboriginal Peoples

The following steps are necessary for consulting Native communities with respect proposed wind energy centres (Applicant's Aboriginal Consultation Process under O. Reg. 359/09):

1. Prepare draft Project Description Report (PDR)
2. Obtain Aboriginal Consultation List
3. Provide Notices
4. Distribute draft PDR to communities
5. Hold 1st public meeting
6. Integrate comments
7. Circulate report summaries
8. Discuss and work with communities; integrate comments
9. Provide draft project documents to communities
10. Discuss and work with communities; integrate comments
11. Hold final public meeting
12. Integrate comments
13. Prepare REA application
14. Submit REA application and inform communities

Source: http://www.downloads.ene.gov.on.ca/envision/env_reg/er/documents/2011/011-3698%20En.pdf

3. NextEra Energy Canada's Response Draft REAs

The following reports were completed for each of the three above stated wind energy centres and if present at http://www.nexteraenergycanada.com/ will be reviewed in this third party review:

1. Project Description Report
2. Plain Language Report (or summaries report)
6. Heritage Assessment Report
7. Construction Plan Report
8. Consultation Report
9. Decommissioning Plan Report
10. Design Operations Report
11. Natural Heritage Assessment Report
12. Noise Study Report
13. Site Plan Report
14. Wind Turbine Specification Report
15. Water Body and Water Assessment Report

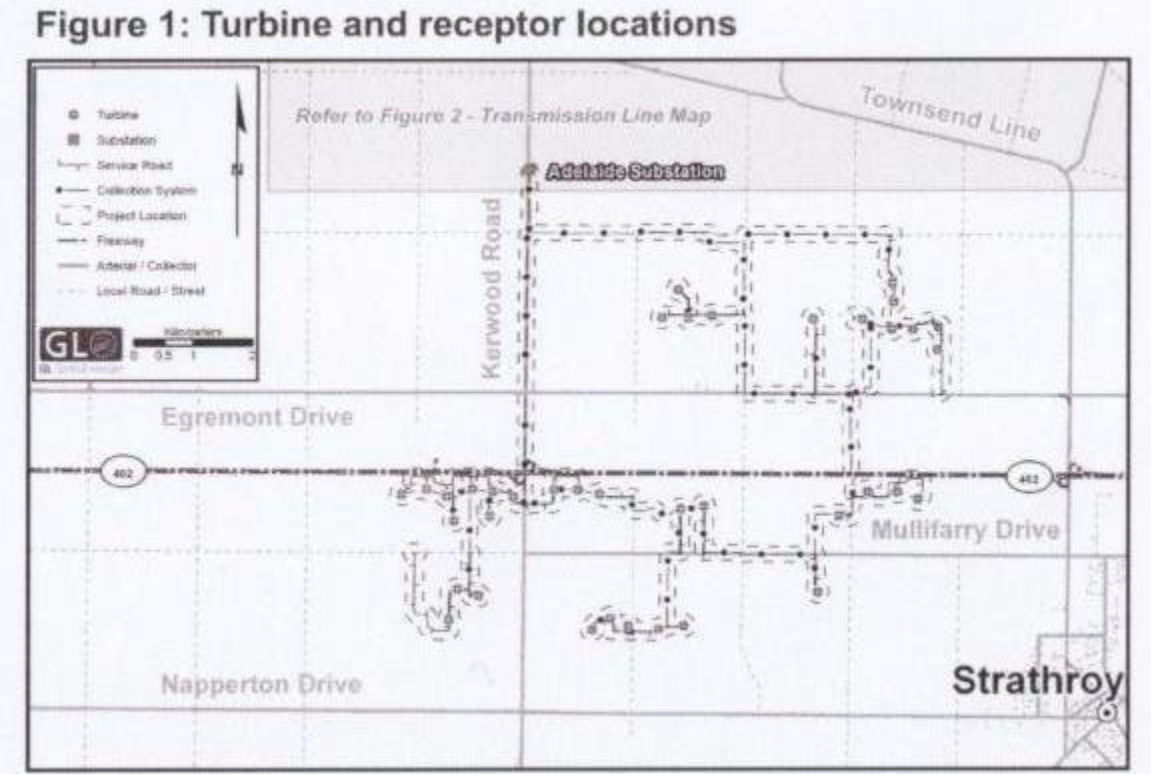
4. Scope of the Review

"The scope of this third-party review shall be to review the REA Reports to inform the Joint Assessment Committee in its ongoing consultation activities in connection with the project by:

> i) Helping ensure questions or issues of concern identified by your community have been addressed in the reports
>
> ii) Identifying any questions or issues not addressed in the reports for further discussion;
>
> iii) Identifying any potential adverse impacts of the project on aboriginal or treaty rights; any proposed measures for mitigating potential impacts; any potential negative effects on the environment that would be of concern to your community; and, proposed steps to avoid or mitigate them."

1: ADELAIDE WIND ENERGY CENTRE

1



1.1 Project Description Report - Adelaide Wind Energy Centre

Garrad Hassan wrote the REA reports and managed the environmental fieldwork and assessments. They are consultants of Ottawa, dubbed "the world's largest renewable energy consultancy," (http://www.gl-garradhassan.com/en/aboutus.php). Their services include technical and engineering, products, course training for onshore and offshore wind, wave, tidal and solar sectors. The issue date of this report was first in October 2011 and the final version was submitted 23 April 2012.

A quick synopsis of this report is the description, as indicated by the title:

- Ownership: This project is proposed by Kerwood Wind, Inc. - a subsidiary of NextEra Energy Canada (parent company has 8,500 operating wind turbines across N.A.). The name of this project is 'Adelaide Wind Energy Centre (AWEC).' The land upon which the wind turbines sit will be leased from local landowners (farmers in most cases) and rights of ways will be used in some cases for collection and transmission lines.

- Location: This project is located in the Townships of Adelaide-Metcalfe and North Middlesex. The wind farm components are found south of Townsend Line, west of Centre Road, north of Napperton Drive and east of Sexton Road. The southeastern most portion of the AWEC wind is located ca. 6 km northwest of Strathroy, Ontario and the highway 402 bisects this wind energy centre.

- Approvals: Environmental Protection Act, and Ontario Regulations 359/09 and 521/10; local building permits required, as well as those from St. Clair Region and Ausable Bayfield Conservation Authorities; the project also requires permits under the Endangered Species Act (ESA), upon completions of an Approval and Permitting Requirements Document (APRD).

- Facility Components: AWEC is proposed to consist of 37, 1.62 MW turbines with the nameplate capacity of a maximum 59.9 MW. The total Wind Energy Centre Study Area is ca. 6,515 ha. This facility is classified as a Class 4 Wind Facility meaning that: i) the location of the wind turbines are: "at a location where no part of a wind turbine is located in direct contact with surface water other than in a wetland"; ii) Name plate capacity of the facility (expressed in kW) is: "greater than or equal to 50"; and Greatest sound power level (expressed in dBA) is: "greater than 102." Five classes of wind turbines exist (see Ontario Regulation 359/09 made under the 'Environmental Protection Act").

  All Other components include:
  - Single wind turbine; 1.62 MW, three bladed with 100m diameter rotor connected to main hub, all mounted on 80m tubular steel tower, containing an internal ladder for maintenance; all of this is constructed on a 200 m^2 concrete and steel rebar foundation; the minimum rotation speed is 9.75 rpm and maximum is 16.2 rpm.
  - Collector system; underground buried cable and access roads.
  - Transmission lines; 115 kV line to be built from project substation to the switchyard is proposed to be built within the existing right of ways along Kerwood Road.
  - Access roads; on site roads (11m wide) to each turbine are planned and will be reduced to 6m wide during operational phase.
  - Substation; 34.5kV electricity will travel underground from the wind turbines where it will converge at the transformer substation where the electricity will be 'stepped up' to 115 kV for transmission to the switchyard via the above-ground transmission line. The switchyard will be located near Bornish Wind Energy Centre substation and will be ca. 2 - 3 ha in size.

- Operations and maintenance building; 30 x 15 m; constructed on privately owned lands to accommodate staff and staff vehicles.

- Activities: to occur in three phases: i) Site Preparation and Construction, ii) Operations, and iii) Decommissioning.
    - i) Site Prep and Construction includes; surveying and geotechnical study activities; construction of access roads; equipment including trucks, graders, bulldozers, cranes are brought to the site; materials such as gravel, steel culverts, oils, gasoline and grease are brought in; some materials will then be removed, and disposed of, including granular base; construction of a temporary storage area will be completed for storage of construction material; crane pads and lay-down areas required for turbine assembly; turbine foundation areas (3m deep, 20 x 20m); wind turbine assembly and installation; electrical collection system (cables, pad mounted transformers, collection lines, transmission lines; substations and switchyard; operations building; clean up and reclamation strategy (occurs throughout the construction phase and after completion).

    - ii) Operations includes; full-time technical and admin staff to maintain the facility as well as wind turbine technicians, and a site supervisor; wind turbines will be operating when wind speed is within the operating range and of course when there are no malfunctions; wind turbines are connected to Operations Centre with a communication line - individual wind turbine life operations expectancy is 30 years; planned turbine maintenance is at six month intervals; unplanned turbine maintenance will be carried out as needed on site by a single technician in a few hours (unless more detailed work is required); electrical system maintenance will occur periodically including assessment for above-ground infrastructure and protective relay maintenance and vegetation control will be required around the transmission line to prevent damage.

    - iii) Decommissioning: the project is planned to last at least 25 years - this document outlines specific procedures for dismantling and this could happen in the following scenarios:
        - During construction - procedures for dismantling would reflect upon the state of construction;
        - After operation - at the end of the service life, the steps below would apply;
        - Procedures for dismantling:
            - Creation of work areas of a minimum 122m x 122m - cleared, leveled and made assessable;
            - Creation of crane pads of sizes 15m x 35m;
            - Use of cranes to remove blades, hubs, and tower segments;
            - The use of trucks for the removal of turbines, towers, and assoc. equip.
            - The top 1 m of turbine foundations will be removed and replaced with clean fill and topsoil;
            - Roads and culverts will be removed unless landowner requested to keep them in place;

    - Underground electrical lines will be cut, ends buried to 1 m below grade, and left in place; overhead lines and poles to be removed and the holes will be filled in;
    - Substation and operations buildings will be dismantled and decommissioned in a manner appropriate and in accordance with the standards of the day
  - The land will be restored; claims that no impacts to surface or groundwater quality; land will be returned to previous agricultural conditions.

- **Environmental Effects and Monitoring Plan**; several tables of potential effects during i) construction and ii) operation, are laid out in accordance with Canadian Environmental Assessment Agency:
    - Level of Concern; high, medium, low, minimal; and paired with these concerns are:
    - Residual Effect Significance; significant, significant (yes repeated), non-significant and non-significant;

  Depending on the outcome of the effects assessment, follow-up monitoring could be proposed. In every single case, the potential effects (residual impacts) were deemed 'non-significant'. Below is a list of the potential effects:
    - Cultural Heritage
    - Natural Heritage
    - Water Bodies
    - Emissions to Air, Including Odour and Dust
    - Noise
    - Local and Provincial Interests, Land, Use and Infrastructure
    - Areas Protected Under Provincial Plans and Policies
    - Public Health and Safety
    - Other Resources

  Natural heritage (and expressed community concerns); as indicated by the sister document to this, the *Issues Report*, the standards for natural heritage protection in Ontario Regulation 359/09 for developing wind energy centres are not sufficient from the First Nations point of view. Details will be elaborated further below in the respective detailed reports that are involved with various aspects of natural heritage. Further, it is these critiques will be submitted to the government as concerns for these renewable energy applications.

  What has not yet been addressed in the below reviews or in the *Issues Report* is the impact of the construction, operations, and decommissioning on natural heritage features such as **B)** medicinal plants and **C)** hunting opportunities. Given that some First Nations community members do collect plants within a relatively zone of some of these proposed wind turbines, some plants could be destroyed in the construction process. While the above calls for the

mitigation of these impacts, replacing any destroyed clumps of native medicinal plants with a variety of native species may not be suitable to those who are used to collecting such plants in these areas. Secondly, rights extend to First Nations individuals to hunt across the landscape of these proposed wind development farms. Opportunities to favoured hunting sites may now be restricted given the erection of specific wind turbines on site. While this may not be a common occurrence, given the large number of wind turbines being proposed, such a scenario may be more common than anticipated. There are no regulations specific to turbines or wind facilities. Discharge of firearms is a municipal matter and regulated by townships. There are no relevant Provincial regulations. (From editor's comments).

1.2 Plain Language Summary Report - Adelaide

This report is actually called "Project Summaries." Below is a summary and synopsis of this report and the conclusions drawn by the authors. Since this is a basic plain language or summary report, comments from the First Nations (JAC) perspective are reserved for the area after the respective specific reports later on in this document.

Archeology Report Plan Summary - Stage one is a desktop survey and only one pre-contact Aboriginal site was found in a 10 x 15m lithic scatter with no diagnostic artifacts and it is therefore un-dateable. Stage two included pedestrian surveys (five monitors) in ploughed agricultural fields and in right of ways. A total of 29 archeological sites were identified; of these, 17 were pre-contact Aboriginal sites and 12 historic Euro-Canadian sites. Thirteen of the 29 sites have been recommended for Stage 3 assessment and 6 of the 13 have been completed. One of these has been recommended for a Stage 4 Archeological Assessment.

Decommissioning Plan Report Summary (and expressed community concerns) - this describes all the activities that will take place during decommissioning and reiterates that the project owner will restore the land and manage excess water or waste. All areas to be restored to original condition with native soils and seeding (though it seems the deep concrete pad remains). Some future implications could include impacts on drilled wells, possible future settlements. The concern is the sheer amount of concrete and the potential for any leaching. However, concrete is cement that is manufactured from limestone and clay; any leaching would only release natural chemicals and likely take a long time as the erosion of the concrete mass would take a long time given that is completely surrounded by soil. Further, the financial expense and environmental expense of mechanically breaking down the concrete and transporting it off site to another 'resting site', while trucking in soil to backfill the resulting hole would be prohibitive.

Heritage Assessment Report Summary - no heritage properties or buildings were identified in this study.

Natural Heritage Assessment Report Summary - purpose was to identify ecologically significant natural features within 120m of the proposed project location. This includes records review and site investigations. In total, 5 wetland; 42 woodlands; 2 valley lands, and 26 Candidate Significant Wildlife Habitats, as well as generalized candidate significant wildlife habitats. Environmental Impact Study: for each natural heritage feature identified as significant, potential effects were assessed, and mitigation measures, as well as several monitoring commitments were put forth depending on the nature of the project.

It was stated in the NextEra report that the Project will be constructed and operated without any lasting effects that could harm the wildlife environment:

- "Disturbance or mortality to wildlife (e.g. birds and bats) from collisions with turbines. To avoid or mitigate these effects, operational mitigation techniques will be implemented if impacts are observed to be above provincial thresholds. Monitoring will consist of three year post-construction mortality surveys for birds and bats which will be submitted to the MNR."

Noise Assessment Report Study - the purpose of this study is to ensure that Regulation 359/09 isn't violated. This states that all non-participatory Points of Reception must be no closer than 550m from wind turbines and transformer substations. Further, this report also is in place to ensure that sounds aren't greater than 40 (dBA). No impacts greater than 40 dBA were recorded.

Water Assessment and Water body Report Summary - the purpose of this study is to identify water bodies within 120m of the proposed Project location. This is done by a records review, site investigation, description of environmental effects and potential effects from construction/decommissioning. A total of 19 water bodies were identified and this included 28 sites within these features that occurred within 120m of the AWEC. While three major potential effects are identified, including erosion and sedimentation, degradation of fish habitat from access roads crossing water courses, and soil compaction and water run-off, given the proposed mitigation measures and prevention efforts, they summarized the following:

- "Water contamination is possible, although unlikely, due to accidental spills associated with maintenance activities. A spill response plan will be developed and an emergency spill kit will be kept on site. In addition, the Ministry of the Environment and the local municipalities will be notified of any spills."

Construction Plan Report Summary - This report proposes a six month plan beginning in late summer 2013. The phases included include: i) surveying and geotechnical studies, ii) land clearing and construction of access roads, iii) construction of laydown areas, iv) construction of turbine sites and crane pads, v) construction of turbine foundations, vi) wind turbine assembly and installation, vii) construction of electrical system (including the pad mounted transformers and underground collection lines), viii) construction of transformer substation, ix) construction of electrical transmission lines, x) construction of operation and maintenance building, xi) construction of permanent meteorological towers, xii) clean up and site reclamation. Additionally, the report offers an "Effects Assessment Chart"

designed to identify the effects, provide mitigation measures and conduct monitoring. Some of the effects include potential impacts on cultural heritage, natural heritage resources (like wetlands and forests), surface water and groundwater, emissions to air, noise, local interests, and lands use and infrastructure.

- "The overall conclusion of the Construction Plan Report is that this Project can be constructed and installed without any remaining effects that could harm the environment."

Design and Operations Report Summary - this project follows all the regulations Ontario's 359/09 setback distances of 550m. This report includes the specifications for all of the components of the wind turbine, substation, roads, waste management, maintenance, communications and emergency plans.

Project Description Report Summary - this report is prepared for the early planning process, prepared for the public, municipalities, and Aboriginal communities. This report includes detailed descriptions of the project components, timing, and synopsises of all the stages of construction, operations, waste management, potential environmental effects, noise, local effects, and maintenance schedules, and decommissioning. After applying all mitigation measures that they see fit, Next Era's overall conclusion is that this Project "can be constructed, installed, and operated without any remaining effects that could harm the environment....Post-construction monitoring related to effects on wildlife, including birds and bats, will be undertaken to confirm this conclusion."

1.3 Heritage Summary Report - Adelaide

Extensive review of historical maps, research on the age of buildings was conducted throughout the study area. Dozens of homes, farmsteads, old churches and cemeteries were assessed and while some dated as early as the 1840s, none were noted of cultural significance. A total of 47 were greater than 40 years old and determined to have general cultural value or interest. However, none reviewed were found to have cultural significance that would be impacted by the project.

1.4. Construction Plan Report - Adelaide

A synopsis of this report is provided above in the plain language summaries. Overall, the construction of the wind turbines per se will not have a direct impact on many systems, more so than would a communications tower, or any other farm structure. In fact, above ground power lines have more stray voltage and over a longer area than do wind turbines. That said, the result of construction (e.g. potential and real impacts on human health and environmental well-being) are more significant and are addressed in the other reports (e.g. Natural Heritage, Water body, etc.). Further, ministry and Ontario Regulation guidelines are to blame for many of the health and environmental impacts, not the construction plan that follows these guidelines (this will be added in a commentary on the government guidelines).

First Nations (JAC) Perspectives:

As indicated above, this report may not take into consideration individual clumps of medicinal plants that may be collected by certain First Nation individuals who may have permission to collect on certain lands. Vegetation that is being destroyed as a result of construction should be mitigated by the replacement of a very similar suite of plant species that were present prior to construction. However, ATK as stated by Elders at Kettle and Stony Point First Nations indicates that there is great variation in season to season growth and extent of populations of certain plant medicines (i.e. some plants may be inadvertently destroyed). This is to say that the weather conditions in some years will promote growth of certain plant species, while in other years the same species will remain dormant. This knowledge and ways to circumvent potential destruction of plant medicines ought to be expanded upon in a community benefit agreement.

1.5. Consultation Report - Adelaide

An 'Environmental Screening Report/Impact Statement for Adelaide Wind Farm' was prepared and submitted to the Ministry of the Environment (SW Region, Environmental Assessment & Appeals Branch), the Ministry of Natural Resources (Aylmer District), Environment Canada and the Township of Metcalfe. Other documents were put together for communications and consultation. They include documents supporting two public meetings (November 2011 and July 24, 2012). The second public meeting was rescheduled or 'done over' due to some interference in hall booking procedures (someone who identified themselves as NextEra but was not an employee or contractor called and cancelled the venue). The new date for the following meeting was August 14th at the Adelaide Metcalfe Municipal Hall. As of Sept. 1, 2012, no results from this meeting had been posted on NextEra's web site.

An extensive set of public information was found called 'Information Display Panels'. This information was on display at the two public meetings. Further, visual simulation images were created for the general public to get at least an image of the overall relative appearance of the proposed wind turbines in the exact location on the landscape. This was completed for views at Egremont Dr., Brown Road, Centre Road and Mullifarry Drive and at the intersection of Kerwood Road and Napperton Drive.

1.6. Decommissioning Plan Report - Adelaide

This describes all the activities that will take place during decommissioning and reiterates that the project owner will restore the land and manage excess water or waste. All areas to be restored to original condition with native soils and seeding (though it seems the deep concrete pad remains). Additionally, underground electricity lines will be cut and left in place 1m or 3 feet below the surface and any waste generated is said to be disposed of 'according to the standards of the day.'

1.7. Design and Operations Report - Adelaide

This project follows all the regulations Ontario's 359/09 setback distances of 550m. This report includes the specifications for all of the components of the wind turbine, substation, roads, waste management, maintenance, communications and emergency plans. While this is an important report, it is one that is written to meet guidelines for safety, and to demonstrate standard specifications, etc.

The Design and Operations Report includes sections that are already reviewed independently as standalone reports, including Heritage, Natural Heritage, Water body and Water, Noise Impact, etc.

This report also details the Environmental Impact Study and lists several mitigation commitments. They are grouped into pre-construction monitoring, construction mitigation measures and post construction. Pre-monitoring; raptor migration, bat maternity colony (in accordance with MNR regulations), amphibian monitoring (following well-established Marsh Monitoring Program), site visits for rare plants. Construction mitigation measures are all included in the Construction Plan Report. Post construction monitoring includes three years of monitoring following OMNR guidelines for Birds and Bats. This includes searching the ground of a subset of wind turbines every three days (twice weekly). Acoustic monitoring for bats will be conducted for three years following the 2010 Bats and Bat Habitats guidelines.

First Nations (JAC) Perspectives:

Of all the documentation and public consultation, the materials that stood out the most were those found in the information display panels, entitled "Aboriginal Consultation". All of these educational panels are catered to six proposed wind energy centres - Adelaide, Bluewater, Bornish, East Durham, Goshen and Jericho. While many words are present, this panel 'doesn't say a lot.' Acknowledging that ON Regulation 359/09 has specific requirements regarding Aboriginal consultation, no specifics are offered to describe this aside from stating that consultation may include environmental, archaeological, cultural and spiritual issues. However, individuals were standing in front of each display board at these meetings to answer any specific questions that might have arisen. What is good to see is the openness for 'good planning', seeking to discuss issues with First Nations, openly discussing issues, interests and concerns to find 'workable, mutually acceptable solutions.' ***It is important beyond communicating directly with Chiefs and Councils is to ensure direct communication with community members with much advertising using different media outlets to get participation from a wide range of individuals from each First Nation community.*** Distinct meetings with First Nations Communities are preferred means of communications.

1.8. Natural Heritage Assessment Report - Adelaide

The purpose was to identify ecologically significant natural features within 120m of the proposed project location. This includes records review and site investigations. In total, 5 wetland; 42 woodlands; 2 valley lands, and 26 Candidate Significant Wildlife Habitats, as well as generalized candidate significant wildlife habitats. Environmental Impact Study; for each natural heritage feature identified as significant, potential effects were assessed and mitigation measures, as well as several monitoring commitments were put forth depending on the nature of the project.

This report also detailed the Environmental Impact Study and lists several mitigation commitments. They are grouped into pre-construction monitoring, construction mitigation measures and post construction. Pre-monitoring; raptor migration, bat maternity colony (in accordance with MNR regulations), amphibian monitoring (following well-established Marsh Monitoring Program), site visits for rare plants. Construction mitigation measures are all included in the Construction Plan Report. Post construction monitoring includes three years of monitoring following OMNR guidelines for Birds and Bats. This includes searching the ground of a subset of wind turbines every three days (twice weekly). Acoustic monitoring for bats will be conducted for three years following the 2010 Birds and Bat Habitats guidelines.

1.9. Noise Study Report - Adelaide

The purpose of this study is to ensure that Regulation 359/09 is not violated. This states that all non-participatory 'Points of Reception' (buildings within 'earshot') must be no closer than 550m from wind turbines and transformer substations. Further, this report also is in place to ensure that sounds are not greater than 40 (dBA). No impacts greater than 40 dBA were recorded, though a 5m tall noise barrier is planned to be built around the transformer substation to meet MOE compliance on noise limits.

1.10. Site Plan Report - Adelaide

The site plan is prepared in accordance with section 54.1 of the Ontario Regulation 359/09. One of the main purposes of this plan is to fix the locations for noise reception. Therefore, the site plan depicts the location of the following: buildings, proposed turbines and existing facilities, access roads, electrical collector systems, substations, switchyard and transmissions lines, noise receptors within 2 km of the proposed turbine locations, municipal roads, rights of ways and easements.

1.11. Wind Turbine Specification Report - Adelaide

This report is not listed on the web site but it appears to be in the Operations and Design report under 'Technical Description of the 1.6-100 Wind Turbine and Major Components," document. As far as a third party review goes, there is really nothing to consider critiquing here regarding the model and specifications.

1.12. Water Body and Water Assessment Report - Adelaide

The purpose of this study is to identify water bodies within 120m of the proposed Project location. This is done by a records review, site investigation, description of environmental effects and potential effects from construction/decommissioning. A total of 19 water bodies were identified and this included 28 sites within these features that occurred within 120m of the AWEC. While three major potential effects are identified, including erosion and sedimentation, degradation of fish habitat from access roads crossing water courses, and soil compaction and water run-off, given the proposed mitigation measures and prevention efforts, they summarized the following:

- "Water contamination is possible, although unlikely, due to accidental spills associated with maintenance activities. A spill response plan will be developed and an emergency spill kit will be kept on site. In addition, the Ministry of the Environment and the local municipalities will be notified of any spills."

2: BLUEWATER WIND ENERGY CENTRE

SUMMARY OF CONCERNS NOTED IN BLUEWATER (and relevant respective section below)

A) Air as a Resource
B) Medicinal Plants
c) Hunting Opportunities
D) Large Scale Wind Turbines on an Ancient Landscape
E) Medicinal Plants
F) Consultation
G) Wind Turbine Placements & Birds
H) Pollinators
I) Habitat Landscape Concern
J) Bird and Bat Studies

2.1 Project Description Report

The REA documents were completed by AECOM consultants of Markham, ON. This company has a global scope, providing professional technical and management support services to many sectors, including the environment and energy (http://www.aecom.com/About). The issue date of this report was February 2012.

A quick synopsis of this report indicates:

- Ownership: This project is proposed by Varna Wind, Inc. - a subsidiary of NextEra Energy Canada (parent company has 8,500 operating wind turbines across N.A.). The name of this project is 'Bluewater Wind Energy Centre (BWEC).' The land upon which the wind turbines sit will be leased from local landowners (farmers in most cases) and rights of ways will be used in some cases for collection and transmission lines.
- Location: This project is located in the Municipalities of Bluewater and Huron East in Huron County, Ontario. It is located on private lands east of Highway 21 in the vicinity of the shoreline of Lake Huron.
- Approvals: Environmental Protection Act, and Ontario Regulations 359/09 and 521/10; local building permits required, as well as those from Ausable Bayfield Conservation Authorities; lastly, other permits include the Ministry of Natural Resources.
- Facility Components: AWEC is proposed to consist of up to 41 (a max. of 37 will be constructed), 1.6 MW turbines with the nameplate capacity of a maximum 59.9 MW. The total Wind Energy Centre Study Area is ca. 6,515 ha. This facility is classified as a Class 4 Wind Facility meaning that: i) the location of the wind turbines are: "at a location where no part of a wind turbine is located in direct contact with surface water other than in a wetland"; ii) Name plat capacity of the facility (expressed in kW) is: "greater than or equal to 50"; and Greatest sound power level (expressed in dBA) is: "greater than 102." Five classes of wind turbines exist (see Ontario Regulation 359/09 made under the 'Environmental Protection Act"). A total of approximately 52 km of 34.5 underground electrical collection lines will be laid underground to connect the turbines to the proposed transformer substation; ca. 24km of 115 kV transmission lines will run above ground along Centennial Road and Hensall Road. The project will be located over ca. 2,400 hectares or 5,900 acres.

  All Other components include:

  - Single wind turbine; 1.6 MW, three bladed with 100m diameter rotor connected to main hub, all mounted on 80m tubular steel tower, containing an internal ladder for maintenance; all of this is constructed on a 200 m^2 concrete and steel rebar foundation; the minimum rotation speed is 9.75 rpm and maximum is 16.2 rpm.
  - Collector system; underground buried cable and access roads.
  - Transmission lines; 115 kV line to be built from project substation to the switchyard is proposed to be built within the existing right of ways along Centennial and Hensall Roads.
  - Access roads; on site roads (11m wide) to each turbine are planned and will be reduced to 6m wide during operational phase.
  - Substation; 34.5kV electricity will travel underground from the wind turbines where it will converge at the transformer substation where the electricity will be 'stepped up' to 115 kV for transmission to the switchyard via the above-ground transmission line. The

switchyard will be located near Bornish Wind Energy Centre substation and will be ca. 2 - 3 ha in size.

- Operations and maintenance building; 30 x 15 m; constructed on privately owned lands to accommodate staff and staff vehicles.

- Activities: to occur in three phases: i) Site Preparation and Construction, ii) Operations, and iii) Decommissioning.

  - i) Site Prep and Construction includes; surveying and geotechnical study activities; construction of access roads; equipment including trucks, graders, bulldozers, cranes are brought to the site; materials such as gravel, steel culverts, oils, gasoline and grease are brought in; some materials will then be removed, and disposed of, including granular base; construction of a temporary storage area will be completed for storage of construction material; crane pads and lay-down areas required for turbine assembly; turbine foundation areas (3m deep, 20 x 20m); wind turbine assembly and installation; electrical collection system (cables, pad mounted transformers, collection lines, transmission lines; substations and switchyard; operations building; clean up and reclamation strategy (occurs throughout the construction phase and after completion). Construction expects to involve 35 - 40 people and will take about 4 months.

  - ii) Operations includes; full-time technical and admin staff to maintain the facility as well as wind turbine technicians, and a site supervisor; wind turbines will be operating when wind speed is within the operating range and of course when there are no malfunctions; wind turbines are connected to Operations Centre with a communication line - individual wind turbine life operations expectancy is 30 years; planned turbine maintenance is at six month intervals; unplanned turbine maintenance will be carried out as needed on site by a single technician in a few hours (unless more detailed work is required); electrical system maintenance will occur periodically including assessment for above-ground infrastructure and protective relay maintenance and vegetation control will be required around the transmission line to prevent damage.

  - iii) Decommissioning: the project is planned to last at least 25 years - this document outlines specific procedures for dismantling and this could happen in the following scenarios:
    - During construction - procedures for dismantling would reflect upon the state of construction;
    - After operation - at the end of the service life, the steps below would apply;
    - Procedures for dismantling:
      - Creation of work areas of a minimum 122m x 122m - cleared, leveled and made assessable;
      - Creation of crane pads of sizes 15m x 35m;

- Use of cranes to remove blades, hubs, and tower segments;
- The use of trucks for the removal of turbines, towers, and assoc. equip.
- The top 1 m of turbine foundations will be removed and replaced with clean fill and topsoil;
- Roads and culverts will be removed unless landowner requested to keep them in place;
- Underground electrical lines will be cut, ends buried to 1 m below grade, and left in place; overhead lines and poles to be removed and the holes will be filled in;
- Substation and operations buildings will be dismantled and decommissioned in a manner appropriate and in accordance with the standards of the day

  - The land will be restored; claims that no impacts to surface or groundwater quality; land will be returned to previous agricultural conditions.

- **Environmental Effects and Monitoring Plan**; several pages of potential effects during i) construction and ii) operation, are laid out in accordance with Canadian Environmental Assessment Agency:
  - Level of Concern; high, medium, low, minimal; and paired with these concerns are:
  - Residual Effect Significance; significant, significant (yes repeated), non-significant and non-significant;

  Depending on the outcome of the effects assessment, follow-up monitoring could be proposed. Following the bullet point below is the likelihood of impact occurrence (every single one in the document is addressed by "…and limited magnitude of these effects due to the application of mitigation measures.") *There is no list of mitigation measures, however, based on discussions with NextEra staff and consultants, it is now understood that there will be a list of mitigation measures provided.*

  - Cultural Heritage - 'low likelihood', though displacement of 4 archeological resources identified.
  - Natural Heritage (during construction and decommissioning):
    - Erosion, sedimentation, turbidity...increased inputs of nutrients and contaminants to wetlands, woodlands, and other significant features
    - Removal/disturbance of topsoil
    - Disturbance or loss of wildlife habitat
    - Damage to vegetation
    - Soil or water contamination by oils, gasoline, etc.
    - Changes in surface water drainage patterns
    - ALL OF THE ABOVE: "Low or no likelihood of occurrence and limited magnitude of these effects due to the application of mitigation measures.'
  - Natural Heritage (during operation):

  - Disturbance and or mortality to wildlife (birds, bats, etc.) from operation of turbines or roads
  - Soil or water contamination
  - Changes in surface water drainage patterns
  - ALL OF THE ABOVE: "Low or no likelihood of occurrence and limited magnitude of these effects due to the application of mitigation measures.'
- Surface Water and Groundwater -
  - Degradation of fish habitat for water crossings at water body locations: "This effect will be minimized through the application of mitigation measures; however, there remains a moderate likelihood of occurrence and moderate magnitude of effect due to the number of water crossings."
  - Fractures in substrate releasing pressurized drilling fluids into watercourse and causing potential change to groundwater flow patterns at the following collection line crossings for water body locations: "There is a low likelihood of occurrence of this effect due to the application of mitigation measures; however, should the effect occur, the magnitude could be high as benthic invertebrates, aquatic plants, fish and their eggs could be smothered by the fine particles if bentonite **was** discharged to waterways**," (in small amounts only as required to repair any such leaks).**
- Geology and Groundwater
  - Sink holes during foundation construction
  - Reduction in quality of groundwater
  - Respectively (to above two points): "There is no likelihood of occurrence of this effect due to the application of mitigation measures," and "There is a low likelihood of occurrence and negligible magnitude of this effect due to the application of mitigation measures."
- Emissions to Air, Including Odour and Dust - 'high likelihood' for emissions from construction but extremely short term in relative comparison to life of project; 'low likelihood' for other impacts.
- Noise - 'high likelihood' but short term from trucks during construction; 'high likelihood' from aerodynamic noise generated…'but limited do to adherence to 40 dBA threshold.'
- Local and Provincial Interests, Land, Use and Infrastructure - 'high likelihood of occurrence' for minor reduction in usable agricultural fields and other minor impacts but this is a relatively small overall impact in comparison to the study area...stray voltage to livestock during construction and decommissioning phase of the project is minimal and of 'low likelihood of occurrence.'
- Public Health and Safety: "Effects on public health and safety have been described in previous sections, including Emissions to Air, Noise, and Local Interests, Land Use and Infrastructure."

- Areas Protected Under Provincial Plans and Policies - "The Project is not proposed in any protected or plan areas. As such, there are no potential effects on these areas as a result of the Project."

2.2 Plain Language Summary Report - Bluewater

This report is actually called "Report Summaries," which is different than that for Adelaide which is entitled, "Project Summaries."

Construction Plan Report Summary

This report proposes a six month plan beginning in May and ending in October 0f 2013. The construction phases included include: i) surveying and geotechnical studies, ii) land clearing and construction of access roads, iii) construction of laydown areas, iv) construction of turbine sites and crane pads, v) construction of turbine foundations, vi) wind turbine assembly and installation, vii) construction of electrical system (including the pad mounted transformers and underground collection lines), viii) construction of transformer substation, ix) construction of electrical transmission lines, x) construction of operation and maintenance building, xi) construction of permanent meteorological towers, xii) clean up and site reclamation. An "Effects Assessment Chart" designed to identify the effects, provide mitigation measures and conduct monitoring is inserted. The potential impacts are on cultural heritage, natural heritage resources (like wetlands and forests), surface water and groundwater, emissions to air, noise, local interests, and lands use and infrastructure.

- "The overall conclusion of the Construction Plan Report is that this Project can be constructed and installed without any remaining effects that could harm the environment."
- Community concern for the above: construction monitors should be a **neutral third party reviewer** with some environmental experience. For example, many dust suppressants are damaging to the environment and can be mistaken with other forms.

Decommissioning Plan Report Summary - This summary describes all the activities that will take place during decommissioning and reiterates that the project owner will restore the land and manage excess water or waste. All areas to be restored to original condition with native soils and seeding (though it seems the deep concrete pad remains). This includes removing and dismantling i) turbines, ii) overhead lines and poles, and iii) Transformer substation. All areas are stated to be put back to their 'original condition' with native soils and seeding.

Design and Operations Report Summary - This project follows all the regulations Ontario's 359/09 setback distances of 550m. This report includes the specifications for all of the components of the wind turbine, substation, roads, waste management, maintenance, communications and emergency plans. The specs of the facilities are also laid out, including 37 wind turbines, 80m tall and with 50m blades; access roads are 11m wide, and many other aspects of the specifications are laid out in this report. An

Emergency response and communication plan will be filed with the Ministry of the Environment. The same flow chart for environmental effects is also included.

Heritage Assessment Report Summary - no heritage properties or buildings were identified in this study.

> "The report identified 76 structures (45 houses and 31 barns) as more than 40 years old within the Project Location – these structure have general historical interest and they contribute to the character of the area. However, when the structures were evaluated using criteria under the Ontario Heritage Act, none of them were determined to be "built heritage resources of value or interest".

Natural Heritage Assessment Report Summary - purpose was to identify ecologically significant natural features within 120m of the proposed project location to assess for any potential impacts. This included records review and site investigations. In total, 9 wetland; 31 woodlands; 1 valley land, and 22 Candidate Significant Wildlife Habitats, as well as generalized candidate significant wildlife habitats. Environmental Impact Study; for each natural heritage feature identified as significant, potential effects were assessed and mitigation measures, as well as several monitoring commitments were put forth depending on the nature of this specific project.

It was suggested that the Project will be constructed and operated without any significant lasting effects that could harm the environment:

- "Disturbance or mortality to wildlife (e.g. birds and bats) from collisions with turbines. To avoid or mitigate these effects, operational mitigation techniques will be implemented if impacts are observed to be above provincial thresholds. Monitoring will consist of three year post-construction mortality surveys for birds and bats which will be submitted to the MNR."
- Further, "The overall conclusion of the Natural Heritage Assessment Report is that this Project can be constructed and operated without any significant remaining effects that could harm the environment. Post-construction monitoring related to effects on wildlife, including birds and bats, will be undertaken to confirm this conclusion."

Noise Assessment Report Summary - the purpose of this study is to ensure that Regulation 359/09 is not violated. This states that all non-participatory 'Points of Reception' (buildings within 'earshot') must be no closer than 550m from wind turbines and transformer substations. Further, this report also is in place to ensure that sounds are not greater than 40 (dBA). No impacts greater than 40 dBA were recorded, though a 5m tall noise barrier is planned to be built around the transformer substation to meet MOE compliance on noise limits.

Project Description Report Summary - this report is prepared for the early planning process, and is planned for preparing for the public, municipalities, and Aboriginal communities. This report includes detailed descriptions of the project components, timing, and synopsises of all the stages of construction,

operations, waste management, potential environmental effects, noise, local effects, and maintenance schedules, and decommissioning.

> "After applying the mitigation measures presented in the Construction Plan and Design and Operations Reports, the overall conclusion is that this Project can be constructed, installed and operated without any remaining effects that could harm the environment. Post-construction monitoring related to effects on wildlife, including birds and bats, will be undertaken to confirm this conclusion."

Water Assessment and Water body Report Summary - The purpose of this study is to identify water bodies within 120m of the proposed Project location. This is done by a records review, site investigation, description of environmental effects and potential effects from construction/decommissioning. A total of 69 water bodies were identified and this included 44 sites within these features that occurred within 120m of the AWEC. Three major potential effects are identified, including erosion and sedimentation, degradation of fish habitat from access roads crossing water courses, and soil compaction and water run-off. Their proposed mitigation measures and prevention efforts lead them to the following conclusion:

> "The overall conclusion of the Water Assessment and Water Body Report is that this Project can be constructed and operated without any remaining effects that could harm the environment."

Wind Turbine Specification Report Summary - this has been previously summarized and doesn't amount to more than information on the particular turbine to be employed. The turbines are General Electric 1.6 MW. It is 80m tall with blades ca. 50m in length. Turbines are stopped by rotating the blades out of the wind so they no longer function like a 'sail' to trap wind and spin.

2.3 Heritage Summary Report - Bluewater

Extensive review of historical maps, research on the age of buildings was conducted throughout the study area. Dozens of homes, farmsteads, old churches and cemeteries were assessed and while some dated as early as the 1840s, none were noted of cultural significance and this area was settled later than the other two proposed wind energy centres. While many of the dwellings were considered first class, most of the farmland here was considered third class (due to the presence of many wetlands). A total of 76 were greater than 40 years old and determined to have general cultural value or interest, but only 47 of these are located within the project. However, none reviewed were found to have cultural significance that would be impacted by the project.

Community concerns: As noted above, what was not taken into consideration here is the fact that these modern wind turbines of an immense scale are now abutted to rural buildings creating a very different look to the landscape which in many cases reduces the value of the existing buildings in this rural community. Furthermore, while these buildings are not deemed culturally significant, the fact that many have existed in this area for so long without over-sized towering wind turbines. The relatively new structures such as silos, large barns, and industrial development buildings have 'peppered' the landscape

increasingly over that past 200 years. However, super tall, human constructed obstructions with moving parts placed in large groupings across the Traditional territory is a highly significant and rapid alteration to the landscape and this doesn't mesh well with the historical architecture and design of the existing rural communities.

2.4. Construction Plan Report - Bluewater

As stated in the above review, a synopsis of this report is provided above in the plain language summaries.

Community concerns: Any rural development that brings in massive machinery and massive parts will have an impact on the roads and in the countryside. The impact on roads, temporary traffic challenges, etc. Will make some significant changes in the short-term, given the high concentration of wind turbines going up in specific areas. Overall, however, the construction of the wind turbines per se will not have a direct impact on many systems, more so than would a communications tower, or any other farm structure. In fact, above ground power lines have more stray voltage and over a longer area than do wind turbines. That said, the result of construction (e.g. potential and real impacts on human health and environmental well-being) are more significant and are addressed in the other reports. Further, it is the shortcomings of the ministry and Ontario Regulation guidelines for many of the health and environmental impacts, not the construction plan that follows these guidelines.

2.5. Consultation Report - Bluewater

For this proposed wind energy centre, the same informational panels were presented by NextEra. These display boards are designed to inform the public while promoting the benefits of wind energy and the strength and integrity of the company.

Community concerns: While wind energy has many benefits including some economic, and some environmental, the speed with which the industry has developed in addition to the government's aggressiveness with respect to expanding the renewable energy, has raised the ire of many observers, especially those living in rural areas. In these communities, some opposition has spawned independent research and fueled speculation. This interest in many areas has intensified to the point of scrutiny by various action groups, individual citizens, and some politicians in opposition to the ruling liberals. This scrutiny is occurring largely because large scale wind energy is relatively new, creates a dramatic change to the landscape, and seems to evoke an element of both wonder and fear. As such, all aspects of the industry, including environmental impacts, human health, financial viability, have been and continue to be scrutinized by individuals and groups armed with the internet, telephone and ideas of what their communities ought to support and look like. While it isn't the job of NextEra and other power companies to identify areas that need to be improved, the information boards depict only positive attributes of wind farm development. The industry does have some 'down sides' or areas where

improvement is needed. Acknowledgement of how some of these short-comings may be addressed might be a way to actually gain further community support.

2.6. Decommissioning Plan Report - Bluewater

Including both the construction and at the end of the operation phase, this report describes all the activities that will take place during decommissioning and reiterates that the project owner will restore the land and manage excess water or waste. All areas to be restored to original condition with native soils and seeding (though it seems the deep concrete pad remains). Additionally, underground electricity lines will be cut and left in place 1m or 3 feet below the surface and any waste generated is said to be disposed of 'according to the standards of the day.' This plan has been prepared in accordance with the regulatory requirements of subject to Part V.0.1 of the *Environmental Protection Act* (EPA) of Ontario Regulation 359/09.

2.7. Design and Operations Report - Bluewater

This project follows all the regulations Ontario's 359/09 setback distances of 550m. This report includes the specifications for all of the components of the wind turbine, substation, roads, waste management, maintenance, communications and emergency plans. While this is an important report, it is one that is written to meet guidelines for safety, and to demonstrate standard specifications, etc.

The Design and Operations Report includes sections that are already reviewed independently as standalone reports, including Heritage, Natural Heritage, Water body and Water, Noise Impact, etc.

2.8. Natural Heritage Assessment Report - Bluewater

As noted above in the review on Adelaide, the purpose was to identify ecologically significant natural features within 120m of the proposed project location to assess for any potential impacts. This included records review and site investigations. In total, 9 wetland; 40 woodlands; 1 valley land, and 27 Candidate Significant Wildlife Habitats, as well as generalized candidate significant wildlife habitats. Environmental Impact Study; for each natural heritage feature identified as significant, potential effects were assessed and mitigation measures, as well as several monitoring commitments were put forth depending on the nature of this specific project.

This report also details the Environmental Impact Study and lists several mitigation commitments. They are grouped into pre-construction monitoring, construction mitigation measures and post construction. Pre-monitoring; raptor migration, bat maternity colony (in accordance with MNR regulations), amphibian monitoring (following well-established Marsh Monitoring Program), site visits for rare plants. Construction mitigation measures are all included in the Construction Plan Report. Post construction monitoring includes three years of monitoring following OMNR guidelines for Birds and Bats. This includes searching the ground of a subset of wind turbines every three days (twice weekly). Acoustic monitoring for bats will be conducted for three years following the 2010 Bats and Bat Habitats guidelines.

2.9. Noise Study Report - Bluewater

The purpose of this study is to ensure that Regulation 359/09 is not violated. This states that all non-participatory 'Points of Reception' (buildings within 'earshot') must be no closer than 550m from wind turbines and transformer substations. Further, this report also is in place to ensure that sounds are not greater than 40 (dBA). No impacts greater than 40 dBA were recorded, though a 5m tall noise barrier is planned to be built around the transformer substation to meet MOE compliance on noise limits.
A couple of residents were actually close to the upper sound threshold:

> "The closest distance between a wind turbine and a Point of Reception for this project is 631 m, found between turbine 4 and R_332 and 615 m found between turbine 2 and VLR_331. The closest distance between a Point of Reception and the substation transformer is 289 m, found between Point of Reception R_408 and the transformer. The highest calculated noised levels were found at R_119 and VLR_73 with a sound pressure level of 39.6 dB (A) and 39.3 dB (A) respectively." Pg. 10, REA Application - Noise Impact Assessment. Doc. 1009-CAMO-R-04.

Given that these recordings did not exceed 40 dBA, they are within the ministry's guidelines as acceptable.

2.10. Site Plan Report - Bluewater

The site plan is prepared in accordance with section 54.1 of the Ontario Regulation 359/09. One of the main purposes of this plan is to fix the locations for noise reception. Therefore, the site plan depicts the location of the following: buildings, proposed turbines and existing facilities, access roads, electrical collector systems, substations, switchyard and transmissions lines, noise receptors within 2 km of the proposed turbine locations, municipal roads, rights of ways and easements.

2.11. Wind Turbine Specification Report - Bluewater

This report is not listed on the web site but it appears to be in the Operations and Design report under 'Technical Description of the 1.6-100 Wind Turbine and Major Components," document. As far as a third party review goes, there is really nothing to consider critiquing here regarding the model and specifications.

2.12. Water Body and Water Assessment Report - Bluewater

The purpose of this study is to identify water bodies within 120m of the proposed Project location. This is done by a records review, site investigation, description of environmental effects and potential effects from construction/decommissioning. A total of 69 water bodies were identified and this included 44 sites within these features that occurred within 120m of the AWEC. Three major potential effects are

identified, including erosion and sedimentation, degradation of fish habitat from access roads crossing water courses, and soil compaction and water run-off.

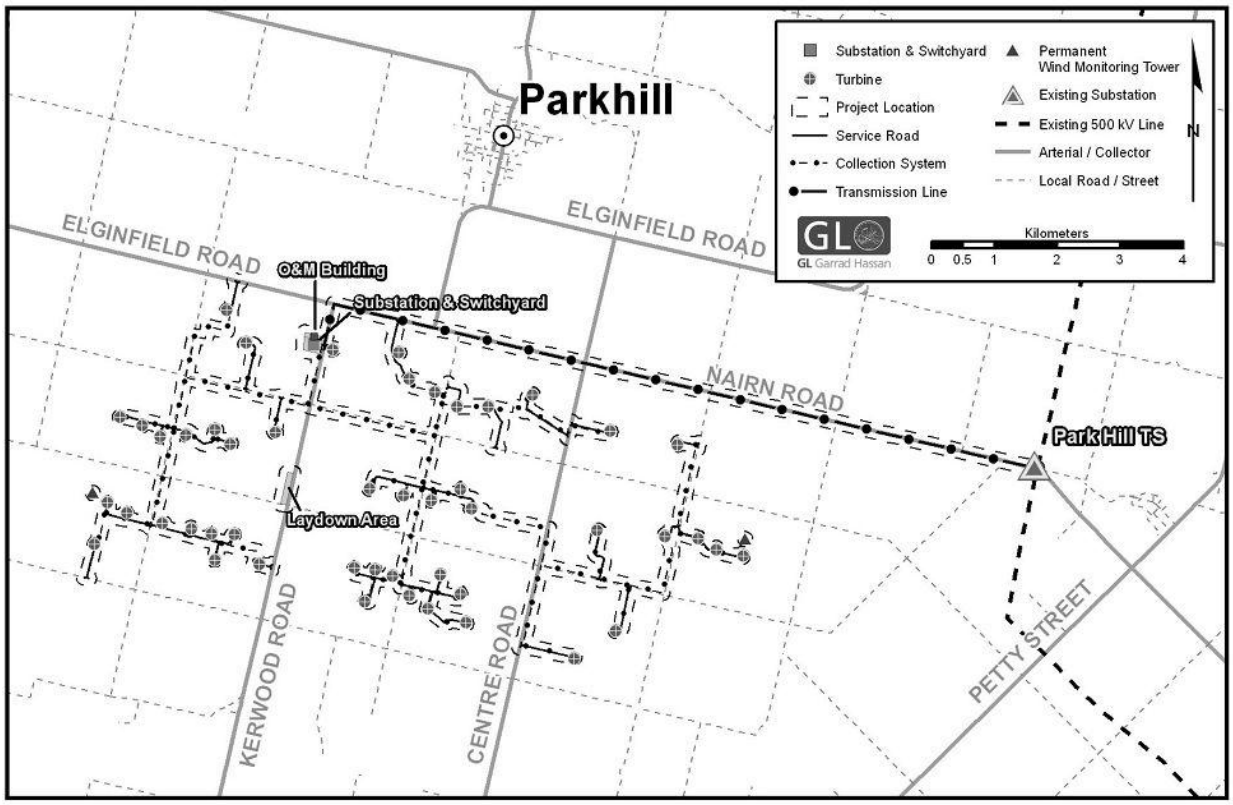
> "Active construction monitoring will be required at all locations where water bodies are present. Pre-construction monitoring is recommended to ensure all BMP's are properly installed and located appropriately. Post-construction monitoring will also be required to ensure that proper restoration, stabilization, and overall quality of runoff is returned to pre-construction conditions as well as to satisfy regulatory permitting and/or authorizations. The following are the general proposed monitoring activities related to construction in or near surface water features:
>
> - On-site conditions such as erosion and sediment control (ESC), spills, flooding etc.;
> - Monitor weather conditions;
> - Ensure all timing windows are adhered to;
> - Water quality; and
> - Fish habitat.
> - Monitoring activities specific to construction related groundwater dewatering include the following:
> - Water quality (groundwater and surface water);
> - Stream baseflow;
> - Receiving stream temperature; and
> - Stream erosion and sedimentation.
>
> The potential negative environmental effects associated with water takings during Construction and Decommissioning Phases of the Project are described in Section 5.2. In order to monitor these effects, discharge water will be sampled each day that water is discharged and analyzed for total suspended solids (TSS). In the event that sampling results show that TSS in the discharge water exceeds 25 mg/L, the construction contractor will implement appropriate contingency measures, such as utilizing a settling tank, geosock or similar device, to mitigate these impacts."

Their proposed mitigation measures and prevention efforts lead them to the following conclusion:

> "The overall conclusion of the Water Assessment and Water Body Report is that this Project can be constructed and operated without any remaining effects that could harm the environment."

All of the above precautions do meet the Ministry standards.

3: BORNISH WIND ENERGY CENTRE



SUMMARY OF CONCERNS NOTED IN ADELAIDE (and relevant respective section below)

A) Air as a Resource
B) Medicinal Plants
c) Hunting Opportunities
D) Large Scale Wind Turbines on an Ancient Landscape
E) Medicinal Plants
F) Consultation
G) Wind Turbine Placements & Birds
H) Pollinators
I) Habitat Landscape Concern
J) Bird and Bat Studies

3.1 Project Description Report

The draft REA documents were prepared by Garrad Hassan consultants of Ottawa, dubbed: the world's largest renewable energy consultancy," (http://www.gl-garradhassan.com/en/aboutus.php). Their services include technical and engineering, products, course training for onshore and offshore wind, wave, tidal and solar sectors. The issue date of this report was first in October 2011 and the final version was submitted 2 April 2012.

A quick synopsis of this report is the sheer description, as indicated by the title:

- Ownership: This project is proposed by Bornish Wind LP - a wholly-owned subsidiary of NextEra Energy Canada (parent company has 8,500 operating wind turbines across N.A.). The name of this project is 'Bornish Wind Energy Centre (BWEC).' The land upon which the wind turbines sit will be leased from local landowners (farmers in most cases) and rights of ways will be used in some cases for laneways and transmission lines.
- Location: This project is located in the Municipality of North Middlesex. The wind farm components are located south of Elginfield Road, east of Pete Sebe Road, north of Elmtree Drive and west of Fort Rose Road.
- Approvals: Environmental Protection Act, and Ontario Regulations 359/09 and 521/10; local building permits required, as well as those from Ausable Bayfield Conservation Authorities; the project also requires permits under the Endangered Species Act (ESA), upon completions of an Approval and Permitting Requirements Document (APRD).
- Facility Components: BWEC is proposed to consist of 45, 1.62 MW turbines with the nameplate capacity of a maximum 72.9 MW. The total Wind Energy Centre Study Area is ca. 5,177 ha. This facility is classified as a Class 4 Wind Facility meaning that: i) the location of the wind turbines are: "at a location where no part of a wind turbine is located in direct contact with surface water other than in a wetland"; ii) Name plate capacity of the facility (expressed in kW) is: "greater than or equal to 50"; and Greatest sound power level (expressed in dBA) is: "greater than 102." Five classes of wind turbines exist (see Ontario Regulation 359/09 made under the 'Environmental Protection Act").

  All Other components include:

  - Single wind turbine; 1.62 MW, three bladed with 100m diameter rotor connected to main hub, all mounted on 80m tubular steel tower, containing an internal ladder for maintenance; all of this is constructed on a 200 m^2 concrete and steel rebar foundation; the minimum rotation speed is 9.75 rpm and maximum is 16.2 rpm.
  - Collector system; underground buried cable and access roads.
  - Transmission lines; 115 kV line to be built from project substation to the switchyard.
  - Access roads; on site roads (11m wide) to each turbine are planned and will be reduced to 6m wide during operational phase.
  - Substation; 34.5kV electricity will travel underground from the wind turbines where it will converge at the transformer substation where the electricity will be 'stepped up' to

115 kV for transmission to the switchyard via the above-ground transmission line. The switchyard will be located near Bornish Wind Energy Centre substation and will be ca. 2 - 3 ha in size.

- Operations and maintenance building; 30 x 15 m; constructed on privately owned lands to accommodate staff and staff vehicles.

- Activities: to occur in three phases: i) Site Preparation and Construction, ii) Operations, and iii) Decommissioning.

  - i) Site Prep and Construction includes; surveying and geotechnical study activities; construction of access roads; equipment including trucks, graders, bulldozers, cranes are brought to the site; materials such as gravel, steel culverts, oils, gasoline and grease are brought in; some materials will then be removed, and disposed of, including granular base; construction of a temporary storage area will be completed for storage of construction material; crane pads and lay-down areas required for turbine assembly; turbine foundation areas (3m deep, 20 x 20m); wind turbine assembly and installation; electrical collection system (cables, pad mounted transformers, collection lines, transmission lines; substations and switchyard; operations building; clean up and reclamation strategy (occurs throughout the construction phase and after completion).

  - ii) Operations includes; full-time technical and admin staff to maintain the facility as well as wind turbine technicians, and a site supervisor; wind turbines will be operating when wind speed is within the operating range and of course when there are no malfunctions; wind turbines are connected to Operations Centre with a communication line - individual wind turbine life operations expectancy is 30 years; planned turbine maintenance is at six month intervals; unplanned turbine maintenance will be carried out as needed on site by a single technician in a few hours (unless more detailed work is required); electrical system maintenance will occur periodically including assessment for above-ground infrastructure and protective relay maintenance and vegetation control will be required around the transmission line to prevent damage.

  - iii) Decommissioning: the project is planned to last at least 25 years - this document outlines specific procedures for dismantling and this could happen in the following scenarios:
    - During construction - procedures for dismantling would reflect upon the state of construction;
    - After operation - at the end of the service life, the steps below would apply;
    - Procedures for dismantling:
      - Creation of work areas of a minimum 122m x 122m - cleared, leveled and made assessable;
      - Creation of crane pads of sizes 15m x 35m;

- Use of cranes to remove blades, hubs, and tower segments;
- The use of trucks for the removal of turbines, towers, and assoc. equip.
- The top 1 m of turbine foundations will be removed and replaced with clean fill and topsoil;
- Roads and culverts will be removed unless landowner requested to keep them in place;
- Underground electrical lines will be cut, ends buried to 1 m below grade, and left in place; overhead lines and poles to be removed and the holes will be filled in;
- Substation and operations buildings will be dismantled and decommissioned in a manner appropriate and in accordance with the standards of the day

  - The land will be restored; claims that no impacts to surface or groundwater quality; land will be returned to previous agricultural conditions.

- **Environmental Effects and Monitoring Plan**; several tables of potential effects during i) construction and ii) operation, are laid out in accordance with Canadian Environmental Assessment Agency:
  - Level of Concern; high, medium, low, minimal; and paired with these concerns are:
  - Residual Effect Significance; significant, significant (yes repeated), non-significant and non-significant;

  Depending on the outcome of the effects assessment, follow-up monitoring could be proposed. In every single case, the potential effects (residual impacts) were deemed 'non-significant when evaluating the following:
  - Cultural Heritage
  - Natural Heritage
  - Water Bodies;
  - Emissions to Air, Including Odour and Dust
  - Noise
  - Local and Provincial Interests, Land, Use and Infrastructure
  - Areas Protected Under Provincial Plans and Policies
  - Public Health and Safety
  - Other Resources

3.2 Plain Language Summary Report - Bornish

This report is actually called "Report Summaries," which is different than that for Adelaide which is entitled, "Project Summaries."

Construction Plan Report Summary - This report proposes a six month plan beginning in fall of 2013. The construction phases included include: i) surveying and geotechnical studies, ii) land clearing and construction of access roads, iii) construction of laydown areas, iv) construction of turbine sites and crane pads, v) construction of turbine foundations, vi) wind turbine assembly and installation, vii) construction of electrical system (including the pad mounted transformers and underground collection lines), viii) construction of transformer substation, ix) construction of electrical transmission lines, x) construction of operation and maintenance building, xi) construction of permanent meteorological towers, xii) clean up and site reclamation. An "Effects Assessment Chart" designed to identify the effects, provide mitigation measures and conduct monitoring is inserted. The potential impacts are on cultural heritage, natural heritage resources (like wetlands and forests), surface water and groundwater, emissions to air, noise, local interests, and lands use and infrastructure.

- "The overall conclusion of the Construction Plan Report is that this Project can be constructed and installed without any remaining effects that could harm the environment."
- *Community concern:* As stated above, in the reviews of the first two proposed wind energy centres, construction monitors should be a **neutral third party reviewer** with some environmental experience. For example, many dust suppressants are damaging to the environment and can be mistaken with other forms.

Decommissioning Plan Report Summary - This report summary is the same as the two above for Adelaide and Bluewater. The summary describes all the activities that will take place during decommissioning and reiterates that the project owner will restore the land and manage excess water or waste. All areas to be restored to original condition with native soils and seeding (though it seems the deep concrete pad remains). This includes removing and dismantling i) turbines, ii) overhead lines and poles, and iii) Transformer substation. All areas are stated to be put back to their 'original condition' with native soils and seeding.

Design and Operations Report Summary - This project follows all the regulations Ontario's 359/09 setback distances of 550m. This report includes the specifications for all of the components of the wind turbine, substation, roads, waste management, maintenance, communications and emergency plans. The specs of the facilities are also laid out, including 37 wind turbines, 80m tall and with 50m blades; access roads are 11m wide, and many other aspects of the specifications are laid out in this report. An Emergency response and communication plan will be filed with the Ministry of the Environment. The same flow chart for environmental effects is also included.

Heritage Assessment Report Summary - no heritage properties or buildings were identified in this study.

Natural Heritage Assessment Report Summary - purpose was to identify ecologically significant natural features within 120m of the proposed project location to assess for any potential impacts. This included records review and site investigations. In total, 10 wetland; 35 woodlands; 2 valley land, and 14 Candidate Significant Wildlife Habitats, as well as generalized candidate significant wildlife habitats (13). Environmental Impact Study; for each natural heritage feature identified as significant, potential effects were assessed and mitigation measures, as well as several monitoring commitments were put forth depending on the nature of this specific project. The numbers above were reduced to 10, 30, 2, 11, and 13 respectively, all required to be addressed in a subsequent Environmental Impact Study.

Similar to the first two wind energy centres reviewed above, it was suggested that the Project will be constructed and operated without any lasting effects that could harm the environment:

- "Disturbance or mortality to wildlife (e.g. birds and bats) from collisions with turbines. To avoid or mitigate these effects, operational mitigation techniques will be implemented if impacts are observed to be above provincial thresholds. Monitoring will consist of three year post-construction mortality surveys for birds and bats which will be submitted to the MNR."
- Further, "The overall conclusion of the Natural Heritage Assessment Report is that this Project can be constructed and operated without any remaining effects that could harm the environment. Post-construction monitoring related to effects on wildlife, including birds and bats, will be undertaken to confirm this conclusion."

Noise Assessment Report Summary - the purpose of this study is to ensure that Regulation 359/09 is not violated. This states that all non-participatory 'Points of Reception' (buildings within 'earshot') must be no closer than 550m from wind turbines and transformer substations. This study looked at points of reception found within 2000m of the main power transformer station. Further, this report also is in place to ensure that sounds are not greater than 40 (dBA). No impacts greater than 40 dBA were recorded.

Project Description Report Summary - this report is prepared for the early planning process, and is planned for preparing for the public, municipalities, and Aboriginal communities. This report includes detailed descriptions of the project components, timing, and synopsises of all the stages of construction, operations, waste management, potential environmental effects, noise, local effects, and maintenance schedules, and decommissioning.

> "After applying the mitigation measures presented in the Construction Plan and Design and Operations Reports, the overall conclusion is that this Project can be constructed, installed and operated without any remaining effects that could harm the environment. Post-construction monitoring related to effects on wildlife, including birds and bats, will be undertaken to confirm this conclusion."

Water Assessment and Water body Report Summary - The purpose of this study is to identify water bodies within 120m of the proposed Project location. This is done by a records review, site investigation, description of environmental effects and potential effects from construction/decommissioning. A total of 69 water bodies were identified and this included 47 potential sites within these features that occurred within 120m of the AWEC. This number was reduced to 17 water body features within the project area and a total of 21 sites within these features were identified as occurring with 120m of a project component. Three major potential effects are identified, including erosion and sedimentation, degradation of fish habitat from access roads crossing water courses, and soil compaction and water run-off.

Their proposed mitigation measures and prevention efforts lead them to the following conclusion:

> "The overall conclusion of the Water Assessment and Water Body Report is that this Project can be constructed and operated without any remaining effects that could harm the environment."

Wind Turbine Specification Report Summary - this has been previously summarized and doesn't amount to more than information on the particular turbine to be employed. The turbines are General Electric 1.62 mW. It is 80m tall with blades ca. 50m in length. Turbines are stopped by rotating the blades out of the wind so they no longer function like a 'sail' to trap wind and spin. Depending on review from Transport Canada, some of the wind turbines may require lighting for aviation safety.

3.3 Heritage Summary Report - Bornish

As indicated in the summary reports, no buildings, structures, monuments of any kind are located on any of the proposed development areas. Obviously, none were identified of any cultural heritage, as determined by the checklist system of the Ministry of Tourism, Culture and Sport.

3.4. Construction Plan Report - Bornish

The above reviews on Adelaide and Bluewater provide a synopsis of this report is provided above in the plain language summaries.

Community Concerns: While it is a given that any rural development that brings in massive machinery and massive parts will have an impact on the roads and in the countryside, these effects and other challenges such as temporary traffic jams, will only make some significant changes in the short-term. This will be particularly true, given the high concentration of wind turbines going up in specific areas.

Overall, however, the construction of the wind turbines per se will not have a direct impact on many systems, more so than would a communications tower, or any other farm structure. In fact, above ground power lines have more stray voltage and over a longer area than do wind turbines. That said, the

result of construction (e.g. potential and real impacts on human health and environmental well-being) are more significant and are addressed in the other reports. Further, ministry and Ontario Regulation guidelines are to blame for many of the health and environmental impacts, not the construction plan that follows these guidelines.

3.5. Consultation Report - Bornish

As for the above to proposed wind farms, the same informational panels were presented by NextEra.

Community Concerns: The following is excerpted from above: "These display boards are designed to inform the public while promoting the benefits of wind energy and the strength and integrity of the company. While wind energy has many benefits including some economic, and some environmental, the speed with which the industry has developed in addition to the government's aggressiveness with respect to expanding the renewable energy, has raised the ire of many observers, especially those living in rural areas. In these communities, some opposition has spawned independent research and fueled speculation. This interest in many areas has intensified to the point of scrutiny by various action groups, individual citizens, and some politicians in opposition to the ruling liberals. This scrutiny is occurring largely because large scale wind energy is relatively new, creates a dramatic change to the landscape, and seems to evoke an element of both wonder and fear. As such, all aspects of the industry, including environmental impacts, human health, financial viability, have been and continue to be scrutinized by individuals and groups armed with the internet, telephone and ideas of what their communities ought to support and look like. While it isn't the job of NextEra and other power companies to identify areas that need to be improved, the information boards depict only positive attributes of wind farm development. The industry does have some 'down sides' or areas where improvement is needed. Acknowledgement of how some of these short-comings may be addressed might be a way to actually gain further community support.

3.6. Decommissioning Plan Report - Bornish

It is unlikely that decommissioning will occur during the construction phase, but that scenario is even covered by this report as is obviously the termination of the operations phase. This report describes all the activities that will take place during decommissioning. It is clear that the project owner (and not the landowner) will restore the land and manage excess water or waste. All areas to be restored to original condition with native soils and seeding (though it seems the deep concrete pad remains). Additionally, underground electricity lines will be cut and left in place 1m or 3 feet below the surface and any waste generated is said to be disposed of 'according to the standards of the day.' This plan has been prepared in accordance with the regulatory requirements of subject to Part V.0.1 of the *Environmental Protection Act* (EPA) of Ontario Regulation 359/09, the Renewable Energy Approval).

3.7. Design and Operations Report - Bornish

This project follows all the regulations Ontario's 359/09 setback distances of 550m. This report includes the specifications for all of the components of the wind turbine, substation, roads, waste management,

maintenance, communications and emergency plans. While this is an important report, it is one that is written to meet guidelines for safety, and to demonstrate standard specifications, etc.

The Design and Operations Report includes sections that are already reviewed independently as standalone reports, including Heritage, Natural Heritage, Water body and Water, Noise Impact, etc.

3.8. Natural Heritage Assessment Report - Bornish

As noted above in the reviews above on Adelaide and Bluewater, the purpose was to identify ecologically significant natural features within 120m of the proposed project location to assess for any potential impacts. This included extensive records review and site investigations. In total, 10 wetland; 35 woodlands; 2 valley land, and 14 Candidate Significant Wildlife Habitats, as well as generalized candidate significant wildlife habitats (13). Environmental Impact Study; for each natural heritage feature identified as significant, potential effects were assessed and mitigation measures, as well as several monitoring commitments were put forth depending on the nature of this specific project. The numbers above were reduced to 10, 30, 2, 11, and 13 respectively, all required to be addressed in a subsequent Environmental Impact Study.

This report also details the Environmental Impact Study and lists several mitigation commitments. They are grouped into pre-construction monitoring, construction mitigation measures and post construction. Pre-monitoring; raptor migration, bat maternity colony (in accordance with MNR regulations), amphibian monitoring (following well-established Marsh Monitoring Program), site visits for rare plants. Construction mitigation measures are all included in the Construction Plan Report. Post construction monitoring includes three years of monitoring following OMNR guidelines for Birds and Bats. This includes searching the ground of a subset of wind turbines every three days (twice weekly). Acoustic monitoring for bats will be conducted for three years following the 2010 Bats and Bat Habitats guidelines.

3.9. Noise Study Report - Bornish

The purpose of this study is to ensure that Regulation 359/09 is not violated. This states that all non-participatory 'Points of Reception' (buildings within 'earshot') must be no closer than 550m from wind turbines and transformer substations. Further, this report also is in place to ensure that sounds are not greater than 40 (dBA). No impacts greater than 40 dBA were recorded, though a 5m tall noise barrier is planned to be built around the transformer substation to meet MOE compliance on noise limits.
A couple of residents were actually close to the upper sound threshold:

> "The closest distance between a wind turbine and a Point of Reception for this project is 574 m between turbine 4 and Point of Reception 92, and 551 m between turbine 46 and VLR 254.
> The highest calculated noise level was found at VLR210 at 39.99 dB (A) (shown as 40.0 dBA in Table 7-1) and at receptor PoR62 at 39.67 dB (A) (shown as 39.7 dBA in Table 7-1).

> The results show that the Bornish Wind Energy Centre complies with the applicable MOE environmental noise guidelines at all wind speeds modelled (i.e., 6, 7, 8, 9 and 10 m/s)...” Pg. 13, REA Application - Noise Impact Assessment. Doc. 1009-CAMO-R-04.

Given that these recordings did not exceed 40 dBA, they are within the ministry's guidelines as acceptable.

3.10. Site Plan Report - Bornish

The site plan is prepared in accordance with section 54.1 of the Ontario Regulation 359/09. One of the main purposes of this plan is to fix the locations for noise reception. Therefore, the site plan depicts the location of the following: buildings, proposed turbines and existing facilities, access roads, electrical collector systems, substations, switchyard and transmissions lines, noise receptors within 2 km of the proposed turbine locations, municipal roads, rights of ways and easements.

2.11. Wind Turbine Specification Report - Bornish

This report is not listed on the web site but it appears to be in the Operations and Design report under 'Technical Description of the 1.6-100 Wind Turbine and Major Components," document. As far as a third party review goes, there is really nothing to consider critiquing here regarding the model and specifications.

3.12. Water Body and Water Assessment Report - Bornish

The purpose of this study is to identify water bodies within 120m of the proposed Project location. This is done by a records review, site investigation, description of environmental effects and potential effects from construction/decommissioning. A total of 69 water bodies were identified and this included 47 potential sites within these features that occurred within 120m of the AWEC. This number was reduced to 17 water body features within the project area and a total of 21 sites within these features were identified as occurring with 120m of a project component. Three major potential effects are identified, including erosion and sedimentation, degradation of fish habitat from access roads crossing water courses, and soil compaction and water run-off.

Directly from the report, **"...no significant impacts are anticipated on the identified water body features as a result of the development of the Bornish Wind Energy Centre Project." Pg. 55, NRS Inc., Bornish Wind Energy Centre, Water Body Environmental Impact Study."**

SUMMARY OF CONCERNS NOTED

A) Air as a Resource
B) Medicinal Plants
c) Hunting Opportunities
D) Large Scale Wind Turbines on an Ancient Landscape
E) Medicinal Plants
F) Consultation
G) Wind Turbine Placements & Birds
H) Pollinators
I) Habitat Landscape Concern
J) Bird and Bat Studies

Recommendations to Reduce Potential Impacts

A list of all recommendations to reduce potential impacts is listed at the end of the second report.

While this report has focused solely on the proposed project meeting statutory government regulations, it is vital to the Joint Assessment Committee that the recommendations (listed at the bottom of Part 3) be implemented.

Combined Reports

Formerly *Issues Report* &
3rd Party Review of NextEra's Draft REA

Part 2:

Aboriginal Perspectives & Use of Traditional Knowledge:
First Nations Commentary & Recommendations for Improved Wind Farms

By Ben Porchuk

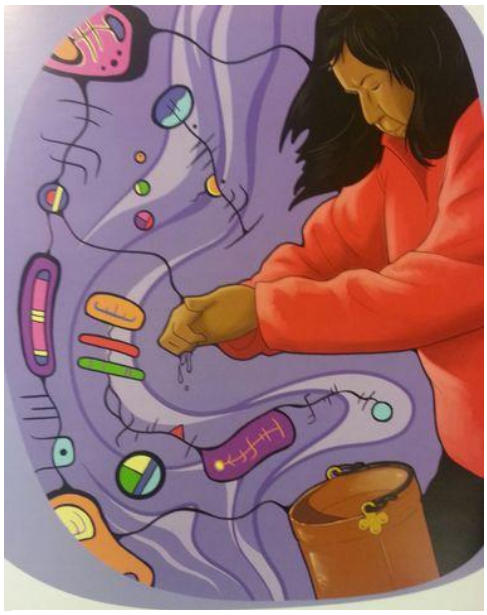
LANDSCAPE NATIVE
Revitalized Landscapes. Revitalized Peoples.

Consultant for The Joint Assessment Committee[1]

Above: Native Bat Design by Willy Gibboney.

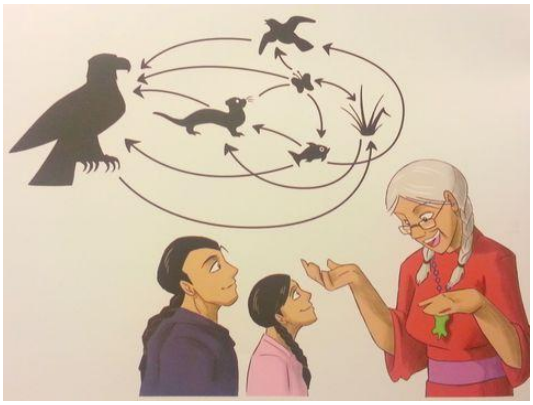
CONTENTS - Part 2

1. Traditional Knowledge Basis of First Nation's View



By Bernice Gordon.

"Every day, every season, every year something takes place that reflects some aspect of our world, our existence, our conduct and our destiny. This is birth, growth, maturation, degeneration, death, regeneration, and transformation. What a man or a woman gleans that adds his or her understanding is revelation. The earth holds nothing back from those who open up their sense. Some glean more for their observation, others less, but each one in proportion to his talents. What one person understands of what he or she hears is not to be belittled, demanded or ridiculed. For is anyone to know for certain that he or she is right and another, wrong? And if such a person were to say that another is wrong, it would be arrogant. Where differences in opinion occurred, men and women said the Creator has given me a different understanding." Honour Earth Mother, by Basil Johnston, published by Kegedonce Press, 2003.



Grandmother Transfer of Traditional Knowledge, by Bernice Gordon.

A major tenet of Native culture is four fold: to foster respect for one's self, the community, Mother Earth and the Creator. Historically, this happened for individuals in Native communities by way of being, by the lifestyle of relying directly upon the earth for sustenance, and by taking time for gratitude through ceremony, celebration, and maintaining strong interpersonal relationships in tight community. This way of living helped these communities respond quickly to change in circumstances, help those in need without speaking need, and fill the gaps in functioning societies that lived, worked and played in a synergistic, seamless and impact free fashion in the great environment. Faster than for most societies, times changed dramatically for First Nations. It is still common today to hear many Native people speak of the wisdom of Seven Generations: that decisions today should be made based on their effect on children seven generations in the future, rather than on what would best satisfy our immediate needs, create short-term profit or impress investors at the close of the next quarter.

It is from the re-growth of the long standing intuitive connection to Mother Earth where we see the strength bulging in First Nation communities today. There are many strong sentiments among First Nation residents expressing their views on protecting the source that sustains them.

2. Perspectives of Draft REA Material

The following are perspectives that arose in response to review of the Draft REA documents review above in Part 1.

Cultural Heritage

The **air** or wind is a significant resource/part of life to/for First Nations. No one owns the wind and for millennia it has been an important mystical feature of everyday life that signified change, warned of potential danger and indicated often when opportunities arose. Relatively new structures such as silos, large barns, and industrial development buildings have 'peppered' the landscape increasingly over that past 200 years. However, super tall, human constructed obstructions with moving parts placed in large groupings across the Traditional territory is a highly significant and rapid alteration to the landscape.

Habitat Concerns

Habitat Landscape Concerns. What is absent from much of the study of individual wetlands, woodlands, valley lands and areas of significant wildlife habitat within the regions proposed for wind farms is the context in which they relate to each other and those found in nearby adjacent landscapes, where other wind energy centres are being proposed. On the greater landscape scale, all of these areas in a region are interdependent (i.e. there is no other source for plant and animal immigration and emigration) and since many of these individual natural areas are relatively small in size (each with some unique species that many of the other locations don't possess), in the medium and long term, efforts to create better habitat linkages are required to safeguard biodiversity, populations of game, as well as resident breeding birds and swaths of Traditional Medicinal plants. The above description is basic landscape ecology and is a well-established, scientifically tested truism of small habitat 'islands' within a matrix of a largely agricultural landscape. This type of long range planning, and conservation is required. Many of these 'habitat islands' are small in size and continue to gradually lose plant and animal species as time passes as the existing 'on site' populations aren't sufficiently large enough to survive in the long term. Without plans to contribute to habitat and species recovery, putting in multiple wind energy centres is a potential limit to creating better habitat linkages (habitat restoration initiatives near wind turbines are not likely to occur as most habitats create turbulence). Without such linkages, expansions of populations of many species are not as possible.

Consecutively "Stacked" Wind Farms

The provincial standards do not take into account the consecutive wind farms adjacent to each other and how this may have impact on migrating bird and bat populations. As indicated in the accompanying Issues Report, consecutive wind farms could pose a real threat to bird and bat

populations and the JAC is concerned and suggests radar studies, bird banding initiatives, as well as precautionary initiatives to reduce mortality of birds and bats (this will be added in a commentary on the government guidelines).

3. Review of The Big Picture Project (Carolinian Canada)

In the late 1990s, the non-profit charitable organization, Carolinian Canada Coalition, undertook a conservation project entitled, 'The Big Picture' in efforts to determine the best way to conserve the most biologically diverse zone of the country known as *Carolinian Canada*, which is defined as:

> *… the southernmost region of Canada and contains more rare and endangered species of plants and animals than any other part of Canada. Over 125 species have been declared at risk and over 400 others are considered rare. Forest cover has been reduced from 80% to 11% and in some places is less than 3%. Wetlands once covered 28% of the land but now are reduced to 5%. Fragmentation of remaining habitats into very small remnants is a further threat. The Carolinian zone occupies only one percent of Canada's land area, but is home to 25% of its people. Not surprising that the Carolinian zone is Ontario's most threatened ecological region, and one of Canada's most threatened.*
>
> Source: Carolinian Canada web site, 2012 (http://www.carolinian.org/ConservationPrograms_BigPicture.htm).

All three J.A.C. members are located within Carolinian Canada (Map 1, below).

The Big Picture Project was designed to get people in various jurisdictions to think outside of their area, to begin to think how to link their natural areas with those in other, nearby regions. Since much of the habitat within the Carolinian Zone has been cleared, further loss, deterioration of existing habitat or the prevention of connectivity between the remaining areas is of concern to the J.A.C. members for the following reasons:

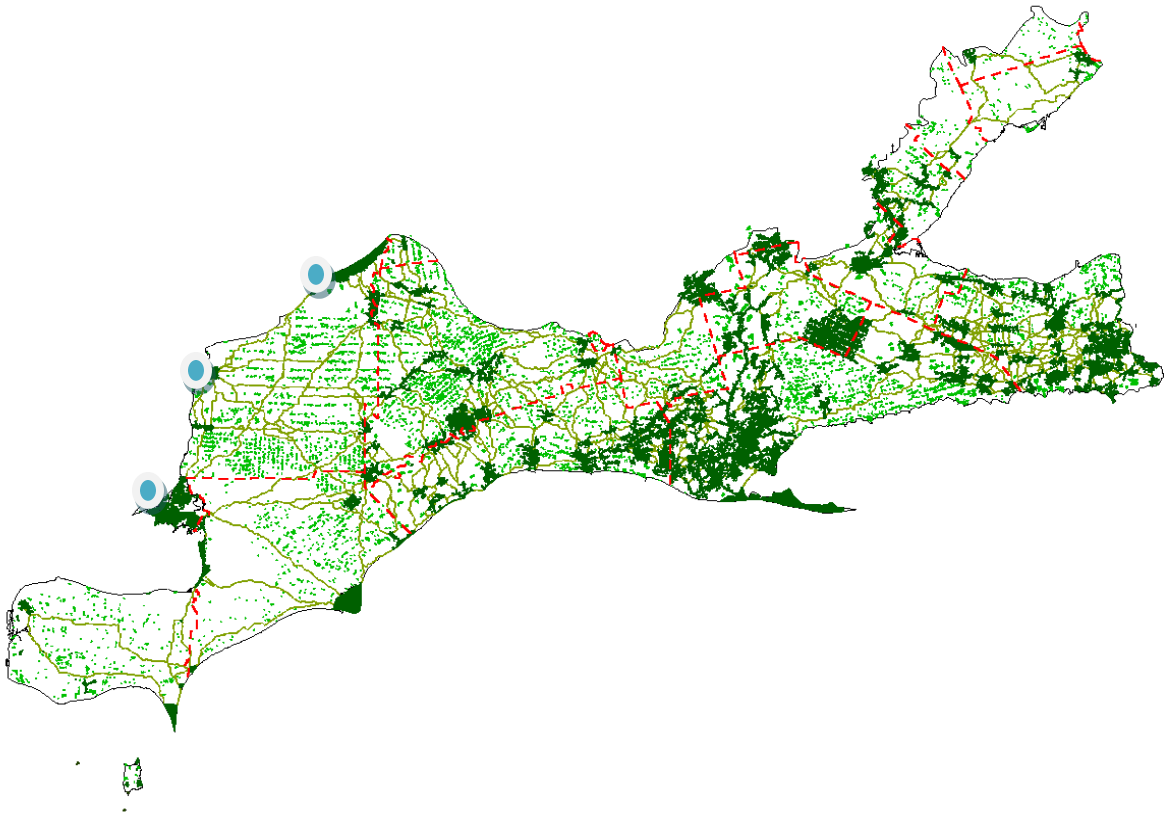
- concerns over loss of biodiversity within current native reserve lands (locally);
- concerns over decline of biodiversity as a whole (regionally);
- loss and further denigration of hunting and gathering habitat on Traditional Territory;
- impacts on specific taxa (e.g. birds, bats, pollinators)

The four points above are specific items or details that relate to a mindset or way of thinking that resulted in poor stewardship (for the past 200 years or so). As a whole, native peoples/culture is still very spiritual when it comes to the consideration of 'natural resources'. First Nations Peoples have at their core a connected way of considering nature. For one, of course, historically, the Anishinaabe and Haudenosaunee nations were the shared caretakers of the Great Lakes area. For thousands of years, this land was considered to be communal - care for the land was like caring for your community, your body, your neighbour. You could say this was 'big picture' thinking.

While the loss of habitat is not solely the fault of any one industry or group of people in the last 200 years, the cumulative mindset, culture and way of being that was brought to North America has destroyed many populations of plants and animals and of course dramatically blocked the innate stewardship method employed by populations of First Nations.

The wind industry and the rapid expansions of wind farms poses one additional impact of undetermined proportions at this point: environmental impacts are still evaluated on a project by project basis and occur in a relatively short period of time. Later in this report, we look at how some of these impacts to birds, bats, and pollinators may be evaluated more thoroughly, with the assistance of First Nations. In further evaluating the Big Picture Project and looking at natural heritage systems in this section, we begin to see some opportunity in how wind energy companies may employ First Nations in habitat restoration.

Map 1. The Big Picture Project Projected through the Carolinian Canada region. The dashed red lines delineate the counties. First Nations represented by blue dots from left to right and north to south are Walpole, Aamjiwnaang, and Kettle and Stony Point First Nations. Source: Carolinian Canada.



Application of the Big Picture Project

In 2002, a report authored by Ron Reid of Bobolink Enterprises was commissioned by Carolinian Canada: Practical Options for Greening Carolinian Canada. This report acknowledges that First Nations communities could play a large part in the recovery process:

> *Incentives for First Nations*
> *Within Carolinian Canada, First Nations control a larger land base than all existing parks and protected areas combined. While some of this land has been converted to agriculture and other uses, significant portions of First Nations lands are ecologically significant, and these often form potential core areas within the Big Picture vision. However, First Nations peoples are understandably sensitive about suggestions on how they should manage their land base, and the future of this legacy of biodiversity will depend on the wisdom of their decisions. At this point, it would seem prudent for conservationists to continue to engage in discussions with individual First Nations about possible future partnerships or other incentives to assist them in conserving or restoring biodiversity on their lands. These discussions could include exploration of ways to support ecotourism or other compatible economic activities that would provide an economic return from protected natural areas.* Source: Reid, 2002 *Practical Options for Greening Carolinian Canada*, Reid, R. 2002. 30 pp.).

Simply put, 'Core Areas', are the largest and more intact of the remaining natural areas. They often function as a 'source' for species of plants and animals that 'supply' individuals to smaller adjacent habitats. The author mentions 'core areas' being found within First Nations lands. While important onto themselves, these core areas are crucial to reconnect with smaller habitat areas to facilitate the flow of plants and animals among all areas.

Natural Heritage Systems

Since the creation of the Big Picture Project, many cities, municipalities and counties have undertaken studies to overview their natural heritage and propose natural heritage systems. A natural heritage system is a network of connected natural areas that work in unison to keep the overall environment functioning. As remaining habitats in the landscape matrix become fewer and disconnected (i.e. by corridors that link on another) the natural system becomes weaker (i.e. It doesn't not provide as many ecosystem services such as floodwater control, carbon sequestering, the provision of oxygen, the maintenance of biodiversity, etc.).

The Big Picture Project provided the framework for viewing what's possible within and between communities in terms of connecting habitats. Natural Heritage System planning was born from The Big Picture. In collaboration with First Nations, the Natural Heritage System planning that has occurred in some municipalities, cities, counties and regions could be 'melded' to create an overall plan to improve habitats with patches and between them.

Recommendations - Big Picture Project/Planning:

- One of the highest priority measures that could be provided from NextEra would be a contribution to habitat restoration; especially within and surrounding core natural areas, including those found in these Native communities. Many sites have been (or are in the process of being) identified that need efforts to bolster ecological diversity and processes, fill in ecological gaps between diverse habitats and recently abandoned fields, as well as restoration in some of the degraded areas, such as the Talfourd Creek at Aamjiwnaang.

- Given the Traditional Territory of the member First Nations communities, it is important to contribute to existing conservation projects ongoing in the Traditional Territory The visionaries behind the Big Picture Project have created Conservation Action Plans (CAPs) for several biodiversity 'Hot Spots' in southwestern Ontario. These include areas of core habitat and suitable connectivity. Much of the administration, planning, collating, stakeholder engagement and landowner contact has been undertaken by Carolinian Canada and their staff; work priorities are clearly defined and ready to go in each of the CAPs (well defined, measurable and tangible outcomes are attainable with adequate resources). Carolinian Canada's CAPs need support in the following areas: GIS mapping to identify priority sites and parcels for conservation and restoration; land acquisition funds (to support local land trusts); development and implementation of long term stewardship plans; site monitoring; activities and materials required to restore degraded sections of recently acquired lands; outreach and education to inform stewardship activities in the priority areas and raise the public profile of the program.

- Participatory initiative support funds; each of the J.A.C. members have stated that there are so many initiatives that they would like to contribute to but attending meetings, spending limited staff hours and resources is prohibitive; funds to support these efforts would lead to more collaborations and in the end lead to greater 'big picture' contributions

- Coordination of regional natural system plans - work in cooperation with Carolinian Canada Coalition (CCC) in a crucial step towards moving into action with a plan (e.g. assist in the habitat connection between Pinery Provincial Park and Kettle and Stony Point First Nation) in creating a Conservation Action Plan to link Walpole Island to Bickford Woods to Aamjiwnaang First Nation).

- Plant material sourced from the member communities should be cultivated for the initial small restoration projects and be planned for larger undertakings. For example, currently there is a business on Walpole Island that provides ecological restoration services and they will be building a native plant nursery. Also,

Aamjiwnaang has completed a feasibility and business plan for opening a Native-run, Native Plant Nursery for the purposes of providing native plants for restoration, landscaping and medicinal (see drying medicines, at left) purposes. Similarly, Kettle and Stony Point continues to be actively involved in the Kettle Point Species at Risk Restoration Project. The project objectives are to seek and implement best practices for habitat restoration for the regeneration of native plant species for the habitat restoration of species at risk present within the community. All of these initiatives could be boosted by an infusion of capital generated from NextEra and companies in other industries interested in contributing to a First Nations community and environmental cause.

4. Mapping

i) Note that Figs. 1 - 3b are attachment maps and not included within the text as they are very large files. Current Natural Areas (Windsor to Tobermory); This map (Fig. 1) illustrate the remaining habitat from Windsor in the south to Tobermory in the North. Natural core areas are mapped.

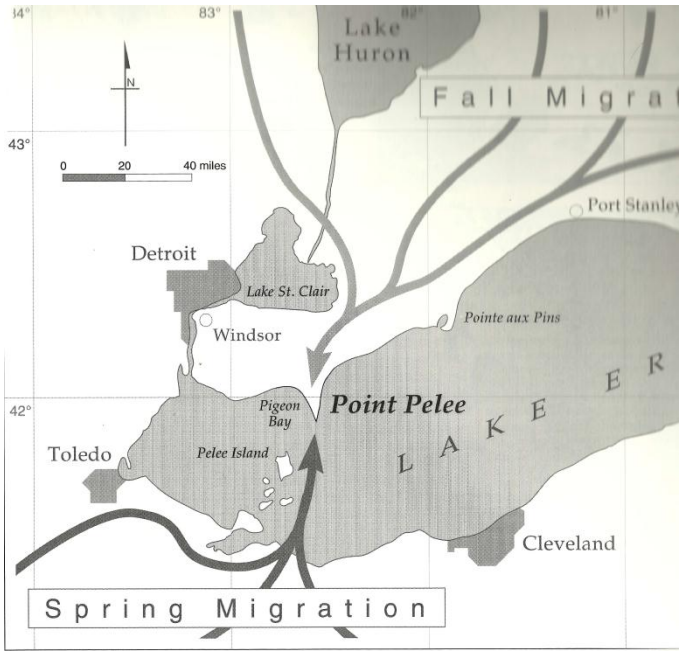
iii) Wind Turbines Plotted (best estimates). This map (Fig. 2) shows an overlay of the wind turbines in the various counties in relation to the First Nations Communities. In total, there are 2,295 records and yet they are somewhat unconfirmed as they have been taken from the sites against wind power. Source: Wind Power Grab Website, 2012. It is granted that many of the opinions on this site are skewed and biased against the wind industry; it remained the only source for us to use to plot alleged existing, proposed and unknown wind turbines. We did match up many of the wind farms (for example the five at focus of this report) and wind turbine locations that we are aware of with dots put forth from this organization. In fact, a recent article on CBC's web site suggested that many others are looking for such a map and it's just not available. Source: CBC Website Article, 2012 *Wind opponents demand Ontario reveal density of turbines - Critics say no map of turbine locations exists but energy minister insists information is out there.*
http://www.cbc.ca/news/credit.htmlhttp://www.cbc.ca/news/canada/windsor/story/2012/08/01/wdr-wind-turbine-map-locations.html. Similar to the way WindPowerGrab.com e) got its wind turbine locations, this CBC article states "Scanning site plans is the only way to root out locations." By having verified several of the wind farms that we (mapping was conducted by Riverstone Environmental in collaboration with Landscape Native) are aware of, we are confident that most of the dots plotted on this map represent existing and proposed wind turbines.

The Canadian Wind Generation Association was contacted for point data, but they could not be of assistance, offering only general central location for operating or proposed wind energy centres (and this only for a portion of wind farms). **Update: August 15, 2012** - a new web site (Source: Ontario Wind Turbines - http://ontario-wind-

turbines.org/owt-maps.html) has just been launched by an Ontario resident. This site lists all of the project boundary areas on Google Earth making it very accessible to view the exact boundaries of every wind farm. The map (right) is copied from this web site's main page. It covers all of Ontario and one can easily see the extent of the wind farm's boundary by double clicking and zooming in.

What is striking about Figure 2 is the sheer number of wind turbines. Next, it is surprising to see them located in positions relatively close to the Lake Huron shoreline, in the strip between Windsor and Chatham, in the area just west of Rondeau Provincial Park and up on the Bruce Peninsula. The concerns that stem from this cursory observation are primarily twofold: 1. bird migration and 2. habitat connectivity.

1. Bird Migration. Along the western side of Lake Erie, songbirds migrate north in the spring and skip across the Lake Erie Archipelago to Point Pelee (see Map 2. Below. Source: Proctor, N.S. and P.J. Lynch, 1993. *Manual of Ornithology.* Yale University Publication). On the eastern side they



fly across the lake to Long Point. From Point Pelee, most songbirds will then fan out to various habitats on their way north to Tobermory and beyond. While some smaller habitat patches are used as 'fueling stations' in the morning, for the most part, these birds will migrate across the open landscape looking for a significant area to stop in the morning. The route generally agreed upon is up the coasts of the Lake Huron. Those birds heading north from Long Point have a greater range of options of either heading straight north, following the lake west and then go north to the Lake Huron coast or go east towards the Hamilton area and then north. Both areas now have thousands wind turbines and while mortality from collisions with wind turbines have not been shown to be a major factor, the right conditions during spring or fall migration could change this (e.g. poor visibility, perfect south wind for migration, attracting huge waves of birds on the move in the wrong place - near dense clusters of wind turbines). The above migration map is one the more refined maps available; more detailed

knowledge on local migration routes is actively needed. More below in 'Birds' is written on mitigating these potential dangers and tracking trends and patterns.

2. Habitat Connectivity. While there are no current plans to join habitats from Windsor to Tobermory, the introduction of several thousand wind turbines requiring relatively open landscapes to prevent wind turbulence does put in place a number of 'restrictions' for any future (min. 25 years) initiatives that might better link habitat core areas. Unless any future restoration efforts to this end in the vicinity of wind turbines only used low-lying habitats such as prairie and open wetlands (i.e. excludes forest), then habitat restoration and corridor initiatives would have to occur in areas far away from wind farms. The photo above illustrates connecting habitats with riparian restoration (a core habitat is located top left and is connected by several other hedgerows).

iii) Figure 3 (3a, and 3b). Possible Corridors (an overview, and zoomed in sections). These corridors go through various counties, through the outskirts of small towns. Google Earth was used in combination with knowledge on specific natural areas to pick the most direct restoration 'lines' to connect core habitats from south to north. In some areas, we did avoid major concentrations of wind turbines (see region by Kettle and Stony Point and Grand Bend) in efforts to make this hypothetical link in the absence of obstructions (see German photo at left; it makes more sense to restore habitat outside of this wind farm). Members of the J.A.C accurately pointed out, however, that the density of wind turbines while high in many areas does look almost impenetrable when viewing on the scale of these maps. In actual fact, on the ground, opportunities do exist between some of the turbine groupings (e.g. the connection between Kettle and Stony Point and Pinery Provincial Park is quite feasible, so much so that CCC has a Conservation Action Plan addressing this region). Therefore, opportunities to create corridors may exist even within some of these wind farms. What is presented in Figs. 3 through 3b is a starting point from which small steps can be taken in terms of restoring lands within or right adjacent to each of the J.A.C. communities.

Ultimately, to obtain full connection among key core areas would require cooperation with multiple jurisdictions, as well as the support from many private companies and landowners. The first steps would be getting a consensus among the counties on bringing all the pieces together in the form of 'stitching' together a greater Natural Systems Plan. Later, buy-in at the level of the landowner, can happen at varying rates.

***Recommendations - Mapping*:**

- Better migration maps - further definition are required for both migratory songbirds and bats; banding efforts (birds) in combination with radar information will enable us to create better maps. NextEra could initiate a cross wind farm study (i.e. with other wind companies) on to obtain better migration maps.

5. Birds

Populations of songbirds have been in decline for nearly 50 years; many species populations have declined by 1% per year and thus have been halved in the past half century. Many species that breed or migrate through southern Ontario are in decline and listed as either special concern, threatened or endangered. Included are: Red-headed Wood Pecker, Prothonotary Warbler, Bobolink, Eastern Meadowlark, Barn Swallow, Acadian Flycatcher, Peregrine Falcon, Least Bittern, and many more.

Causes for decline are clear and well documented:

1. Habitat loss and fragmentation (rarely listed as a source as this is just now accepted as the way it is). This has led to fewer areas in which to feed, breed and continue out the life cycle. Further, birds and their nestlings are now more susceptible to nest parasites and predators, as the natural area has more 'edge' vs. interior.
2. Mortality. This is partly related to the above, but all the threats have an element of interrelatedness. The generally accepted order of top bird killers includes: i) feral cats, ii) buildings/structures (crashes into panes of glass), iii) power line collisions and electrocutions, iv) collisions with vehicles, v) collisions with communication towers, vi) other (including wind turbine kills).
3. Pesticides (agriculture).
4. Disease from faster rates of vector transmission due to 'global village'. Diseases such as West Nile Virus have killed millions of birds over the near decade since it was first transmitted to North America.
5. Threats from introduced species; these species will either destroy their habitat, take away their nest sites or impact their reproductive capabilities.

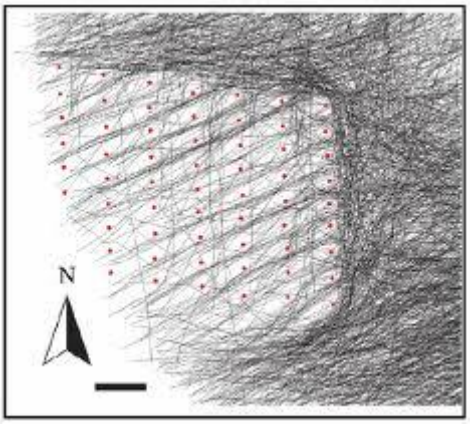
So on the large scale, wind turbines appear to be a small, but largely an unknown contributor to one of the greater impacts causing the decline in many bird species. It is stressed again that the impact of wind turbines is largely unknown in the sense that wind farm proposals are only required to complete studies on a project by project basis, never looking at any potential cumulative effects that may have. Further, it has been well documented that extrinsic sources (those considered 'non-natural, or at least not having occurred to a species for 99.9% of the species existence on the planet) of mortality can have a trickle effect on a population, showing little significant impacts in the short term, but having tremendous deleterious effects in the long term.

Studies on Wind Turbine Impacts On Birds

The general accepted wind energy standard is that a large 2MW wind turbine will kill about 2 birds per year on average. In some cases, such as Wolfe Island, ON, mortality rates are higher and impact certain taxa more than others (e.g. owls, hawks and eagles have been impacted more heavily there). In fact, numbers of bird kill per turbine on Wolfe Island are much higher at about 14 bird killed per wind turbine (Source: Wikipedia Wolfe Island Wind Farm, 2012). The American Bird Conservancy (ABC) estimates that the accurate number of birds killed per wind turbine is 10; projecting the development leading to the standing operation of 100,000 wind turbines by 2030, they predict at that time that 1 million birds will be killed per year (American Bird Conservancy Website, 2012: http://www.abcbirds.org/abcprograms/policy/ collisions/ wind_faq.html.).

In Europe, one study show that the construction phase is hard on bird populations, and then a recovery ensues after the habitat normalizes (Source Pearce-Higgins, J. W., Stephen, L., Douse, A. & Langston, R. H. W. 2012. Towards understanding the population-level effects of wind farms on birds. Journal of Applied Ecology; Issue 49:2). However this study was focused on species that nest in habitat on the ground, in barren habitats - non-agricultural locations. It did not address species that nest in forests or that migrate through the area of the wind farm.

One article (Carrell, S. 2012. Windfarms do not cause long-term damage to bird populations, study finds. The Guardian (http://www.guardian.co.uk/environment/2012/apr/12/windfarms-damage-bird-populations) in the Guardian makes reference to studies that apparently indicated that birds of prey will avoid areas with wind turbines all together, making it more difficult for them to find suitable habitat and areas to forage. However, this study was not cited, nor could it be found with an on-line search. Many bird-supporting web sites decried the notion that birds of prey avoided wind turbines. This is repeated throughout various media outlets.



Another recent study recently looked at migrating waterfowl and found that Eider ducks do indeed change their migration routes to avoid wind turbines. The images at top left and at right - dots are turbines, dark lines are where the birds flew, showing an abundance of turbines (top diagram is a zoomed out overview - lower image is zoomed in). While they only added another 500m to a 1,400 km migration, the authors concluded that if additional wind farms were built in combination with other human-induced factors that pressure the birds, the energetic cost of avoiding wind farms could hamper the population (Masden, E. A., Haydon, D. T., Fox, A. D., Furness, R. W., Bullman, R., and Desholm, M. 2009. *Barriers to Movements: Impacts of Wind Farms on Migrating Birds.* ICES Journal of Marine Science, 66: 746–753.

Waterfowl Concerns

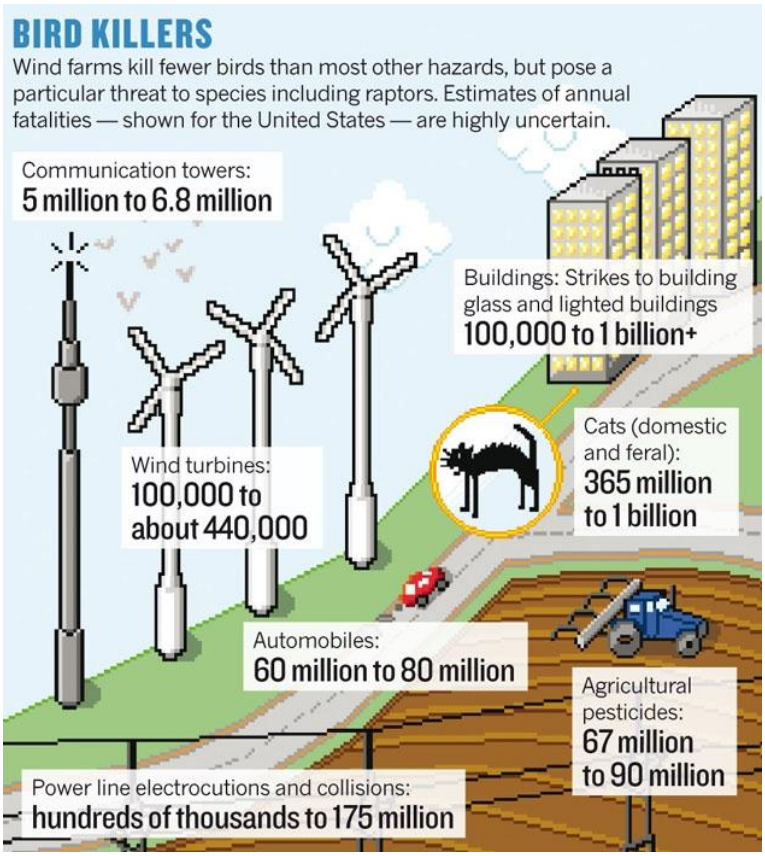
As suggested in the Issues Report, further steps can be taken above and beyond the Ministry of Natural Resources Guidelines for Birds and Bats to ensure minimal mortality and to prevent big losses of birds and bats during peak migration periods. Further, several experts were spoken to in formulating the Issues Report, including Dr. Scott Petrie, Executive Director of the Long Point Bird Observatory. Dr. Petrie is one of the most experienced waterfowl biologists who has looked at the impacts and potential impacts of wind turbines on waterfowl. Dr. Petrie has three main recommendations for placement of wind turbines with respect to significant waterfowl features. Dr. Petrie developed these as he has observed that the 120m setbacks from significant wildlife habitat, as stated in Ontario regulation 359/09 "...is not biologically defensible." As such, the proposed locations of the wind turbines in this proposal should be crossing referenced with Dr. Petrie's three recommendations for placement:

- Do not place wind farms within 1,000m of waterfowl concentration/roosting sites (significant wetland habitat)
- Do not place wind farms on flight corridors between roosting and feeding areas
- Do not place wind farms in agricultural fields traditionally used by large flocks of waterfowl

While the above recommendations would lessen the impact on waterfowl, these extra efforts are not required by the Environment Canada Regulations and as such they will be included in feedback to the government on behalf of the Joint Assessment Committee. For further insight, either in corroboration or in disagreement with the above recommendations, additional waterfowl experts have been contacted (no responses have been received as of the time of writing final revisions). At this point, while there are many waterfowl experts, there are few that know waterfowl and the impacts of wind turbines. It does not appear that any other experts with the credentials of Dr. Petrie exist.

Elders from Kettle Point and Stony Point First Nations indicated that Aboriginal Traditional Knowledge shed s some light on waterfowl behaviour and can provide information helping in wind turbine site selection. For example, near Pinery Provincial Park and Port Franks adjacent to Thedford Marsh, a former wetland system called 'Lake Burwell and Lake Smith' used to exist. These two sites were drained by the 'Canada Company'. Waterfowl have an 'ancient' or 'ancestral' memory of these sites and they return to these fields for staging (eating left over grains, and 'loafing' in areas that were formerly high quality habitat. A search for more knowledge such as this should be conducted.

Curry and Kurlinger (Curry and Kurlinger, Consultants; (http://www.currykerlinger.com/windpower.htm), consultants to the wind power industry on birds and other wildlife, proclaim "To date, impacts on bird populations have not been demonstrated at wind power sites." While this statement is possibly true, it would only be so because long term studies have not been undertaken. Many of the short term studies (illustrated above) do show some short term effects that might lead to some decline, over time. This would be akin to studying any number of the various species of song birds 50 years ago. If someone found that one of these populations declined 1% in one year, it would have been written off as non-significant. Fifty years later we now see this trend has continued to the point where some species populations are half the size they were at the start.



Another study from the late 1990s may also illustrate this point with respect to sound impacts on migrating birds. The study looked at the impact that supersonic sound waves had migrating homing pigeons. While the study was anecdotal (i.e. it was not hypothetical deductive), the evidence was very strong that the birds in fact use 'the sound of the Earth' as a major part of their internal navigation system (Hagstrum, J.T. 2000. *Infrasound and the Navigational Map:* The Journal of Experimental Biology 203, 1103–1111 (2000) - http://jeb.biologists.org/content/203/7/1103.full.pdf)). In short, the sound waves from Air France's Concorde disoriented the birds to the point where the vast majority did not return to their home coops in England.

What is certain as that there is a shortage on information on the scope and scale of impacts of wind turbines on birds. Those against wind turbines claim the monitoring of mortality is sporadic at best, and hidden at worst. Staunch advocates of wind power point to incomplete, non-comprehensive studies to suggest that the impacts are proven to be minimal. The photograph (Birds and Wind Turbine above) can illustrate either of these points (the proper perspective seems to be that the birds are not in danger, and

are actually far away from the blades given knowledge of the species size relative to the actual size of the turbine). The photo, however, was used in an article proclaiming danger towards birds and turbines.

In perspective, while all numbers and specific impacts are uncertain, many other sources kill more birds (Manville, A. 2007. Bird Killers. U.S. Fish and Wildlife Service). Given this overview, there are groups of people working on reducing these mortalities in terms of each of these respective sources. What has also happened in recent years is a shift in what society deems acceptable in terms of the impacts of relatively new technology on wildlife. If power lines were just introduced today, there would be a backlash about all the impacts they inflict upon birds, other wildlife and on humans living within the area of 'electrical line loss,' or 'stray voltage.' Those impacts or risks for the most part are now generally accepted by society. All the potentially real and perceived impacts that wind turbines may have on wildlife and human health are new and rightfully being questioned by many in society, given the absence of complete and long term studies.

What seems to be accepted is that wind turbines/farms ought not to be planned for migration routes. Bird vulnerability is specific to the certain species and seasonal factors. In cases where there are high concentrations of soaring birds (e.g. raptors), detailed observations should be conducted to learn their localized patterns (Barrios, L. and A. Rodriguez. 2004. Behavioural and environmental correlates of soaring-bird mortality at on-shore wind turbines. Article first published online).

Long Point Waterfowl, Executive Director, Dr. Scott Petrie (Petrie, Scott. Personal Communications), spoke about the needs for protecting waterfowl habitat with respect to wind turbine placement in the years when large scale industrial turbines were first introduced into the province. After a number of years of observation of wind farms in Europe and in the early days in Ontario, Dr. Petrie recommends the following:

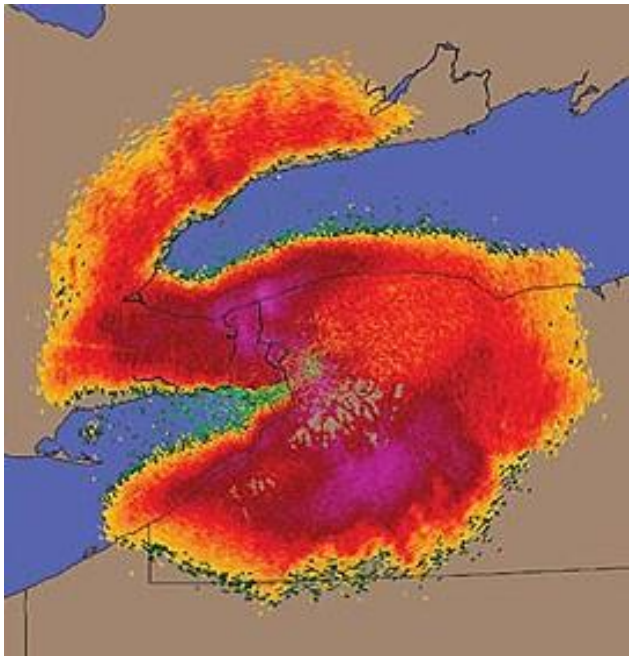
- Do not place wind farms within 1,000m of waterfowl concentration/roosting sites (significant wetland habitat)
- Do not place wind farms on flight corridors between roosting and feeding areas
- Do not place wind farms in agricultural fields traditionally used by large flocks of waterfowl

The above recommendations are used and followed in Denmark. Given the above guidelines, it is not surprising that Dr. Petrie also stated that the 120m setback from significant wildlife habitat that is used as guidelines in environmental assessments and the Green Energy Act is "not biologically defensible."

Dr. Petrie noted that cumulative impacts for onshore and offshore wind energy centres have not been considered. Thus, more studies are required as more wind farms become 'stacked' from north to south, along the migration routes of song birds, in the vicinities where significant populations of raptors reside, and in the areas significant to waterfowl.

Using Radar to Monitor Bird Migration

Since the late 1980s, some scientists turned their attention to radar in terms of tracking bird migration.



Maps have been developed for certain times of the year and specific locations. Changes in migration patterns can be detected, along with the creation of migration models for certain circumstances. These studies could be helpful during nights in the spring and fall when there are big migrations of songbirds.

A large radar undertaking was embarked on in Texas, in 2009. Located near one of the largest wind farms in the world, researchers developed radar systems that could detect oncoming birds from as far away as 4 miles (it takes about 5 minutes to stop the turbines from rotating, according to D. Levitan (Levitan, D. 2011. Radar Systems a Solution to Wind Power's Bird and Bat Problem. http://spectrum.ieee.org/energywise/green-tech/wind/radar-systems-a-solution-to-wind-powers-bi rd-and-bat-problem.). Rotors could be shut down to prevent collisions with birds, especially during migration (Goldenberg, S. 2009. Texas wind farm pioneers radar technology to protect migrating birds; Suzan Goldenberg, US Environment Correspondent; The Guardian.). Shutting down the rotations for 40 - 60 hours per year in this case, during peak migration (at left is a radar image of migrating songbirds during peak spring migration - U.S. Forestry Service, Radar Migration Map.) is apparently sufficient to prevent major kills from happening during this critical period of time. During non-migration periods, apparently, the setting on this machine can either be automatic or manual, meaning that operators may use discretion in oncoming bird groupings.

We also have some radar expert scientists in Canada who study birds using radar, including Dr. Phil Taylor (Taylor, P. Personal Communications, Feb. 10, 2012) at Acadia University in Halifax. Phil has started doing some radar studies in the Bruce Peninsula area, though the findings are still in progress. Many of Phil's former graduate students speak highly of him and one, Carolyn Matkovich (Matkovich, C. Personal Communications. Feb. 11, 2012.), is now the Canadian Director for Detect Radar Systems (located in Montreal), a company that provides radar for remote sensing technologies. Similar to Phil, Carolyn was very approachable and explained the Merlin Avian Radar system to me. These are the units that they supplied at the large Texas Wind Farms alluded to above (http://www.detect-inc.com/avian.html). Now in the business of supplying commercial radar systems, it wasn't long ago that Carolyn completed her Masters of Science for Dr. Taylor studying the migratory movement of songbirds using radar.

Recommendations - Birds

- Hire some First Nations community members to assist in the monitoring of bird mortality around wind turbines. This work has to be completed, and so it makes sense to hire local monitors in this manner.

- Contribute to Native-run bird banding stations (5 to 7 should be set up from Windsor to Tobermory). While radar (see below) is important to scientifically track masses of birds in relation to weather patterns, 'on the ground' bird banding facilities provide key information on individual migrants that can occasionally pass through consecutive banding stations in the same year. These efforts also could galvanize outdoor nature experience for youth, providing opportunities for local and regional public education, while contributing to trends and evidence for bird migration through a region heavily laden with wind turbines. After migration periods in the spring and fall are completed, support for bird banders to conduct point count studies for breeding birds would provide much evidence for safety/impacts of birds during the breeding season. Currently, a small initiative called "Native Territories Avian Research Project"(Powless, R. Native Territories Avian Research Project. 248.788.1116; ntarp1@AOL.com.) does exist in the vicinity of Walpole Island. This group could serve as the 'base' for operations and have several satellite bird banding stations at Kettle and Stony Point, Aamjiwnaang and other areas run by First Nations up to Tobermory. All of this could happen in the following stages:

    - Initially, the existing bird education program at Walpole could be supported further and branch out to establish similar education initiatives at Kettle and Stony Point and Aamjiwnaang

    - Bird banding experience would then need to be accrued by willing, interested and committed individuals; detailed training would need to occur and some of this assistance could be provided by existing banding stations including Long Point Bird Observatory and the Pelee Island Bird Observatory.

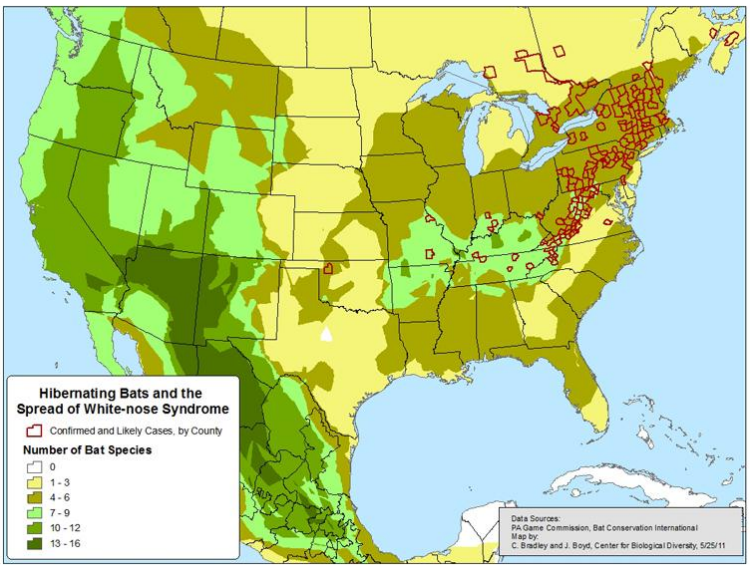
    - The next steps would be to refine the expertise within the three communities and then pick locations for permanent mist nets, purchase equipment and set up staff accommodations, including an office and secure data repository.

- No studies to date have used radar to evaluate the densities and timing events of spring and fall migrations of songbirds along the southern Ontario corridor (Fig. 2 - from Windsor to Tobermory). While this would change slightly from year to year, certain patterns and trends

would be consistent and specific weather patterns could be studied to determine the nature of the 'big waves' of migrant birds and their locations. Given that this geographic stretch does include, by our best estimates, about 3,000 wind turbines and is increasing in numbers, a true cumulative potential impact does exist for songbirds. Suitable to conduct this study would be Dr. Phil Taylor at Acadia, Detect Radar Systems, the Canadian Wildlife Service, the U.S. Forestry Service (looking at the Great Lakes Region as a whole) or a combination of these. Ideally, this study would be funded fully by the wind industry (all the companies operating in the identified region).

- In combination with the above, as the density in wind turbines increases in parts of Ontario, including the eastern coast of Lakes Huron, St. Clair and the St. Clair River, it may become feasible or desired to employ radar to monitor bird approaches, especially during spring and fall migration, similar to what has been undertaken in Texas.

6. Bats



Southern Ontario has five species of bats that are common, with a few other species occasionally showing up. According to Curry and Kerlinger (currykerlinger.com) the number of bats killed at most wind energy centres is small with the exception being some wind farms studied in Minnesota and Wyoming where moderate numbers have been found. Moderate numbers mean likely about 30 bats per wind turbine. Minnesota's habitat in some places is similar to that of Ontario's as is the climate. In fact, bat deaths at wind turbines on Wolfe Island have averaged close to 30 bats per year per turbine. Considering Ontario has now an estimated 6,500 wind turbines in operation, that translates to a yearly average of about 195,000 bats. Given the fact that bats also suffer from habitat loss, and more recently the fungal disease that causes 'white nose syndrome', no one knows if an additional 200,000 dead bats per year is sustainable (See: *Hibernating Bats and the Spread of White-nose Syndrome Distribution Map* above (Bradley, C. And J. Boyd. 2011. *Hibernating Bats and the Spread of White-nose Syndrome Distribution Map*; Courtesy of PA Game Commission International).

The cause of death isn't direct contact, but barotrauma; the blade turbulence kills the bats. It's thought that this happens possibly more frequently when they are migrating at night or foraging near the tree tops forests near wind turbines.

Some new additional technology is being tested and employed by some companies. It involves incorporating a bat detection system that could be installed within the nacelles of individual turbines. The system consists of four ultrasonic microphones that could detect the echolocation calls near the sweep area of the blades. If calls were detected, the system would be designed to slow down or completely stop the blade rotation on the approach of bats in the vicinity (Hamilton, T. 2011. Hamilton: Wind Turbines Don't Have to Kill Bats. Toronto Star Article). While this seems like an ingenious development, it is possible that bat activity in the vicinity might turn the wind turbines off and on for a couple of hours centered around the peak bat activity.

An obvious solution is to ascertain the yearly period of greatest bat activity near wind turbines. Once determined (say a three week period in early summer through September), then one could investigate the time of day they are most active. Most bats are active at dusk - wind turbines could then be shut down for the peak duration of this activity time (e.g. 30 minutes before dusk and 30 minutes after, adjusting to the daily shift of timing of dusk). Since some wind turbines even within the same wind farm are closer to bat foraging habitat (e.g. wooded, meadow, or wetland areas), these turbines might be regulated more, while others (outside of great bat habitat) could be regulated less. This would require further studies. It wouldn't prevent all bat mortality and it still wouldn't address the issues around mortality during bat migration.

In North America, most bats killed at wind turbines are tree bats - Hoary Bats, Red Bats and Silver-haired Bats (Mullen, Veronica. 2010. PhD. Candidate; Bat-time.Blogspot.ca). This pattern is very similar in Europe. In Germany, a country with about 21,000 wind turbines (Wind Turbines in Germany - Wikipedia Entry, 2012http://en.wikipedia.org/wiki/Wind_power_in_Germanyhttp://en.wikipedia.org/wiki/Wind_power_in_Germany), an annual estimate of 200,000 bats are killed (Voigt, C.C., Ana G. Popa-Lisseanu, Ivo Niermann, Stephanie Kramer-Schadt**.** The catchment area of wind farms for European bats: A plea for international regulations**.** *Biological Conservation*, 2012; 153: 80 DOI:10.1016/j.biocon.2012.04.027) an average of only 10 bats per turbine per year).

Recommendations - Bats:

- Hire some First Nations community members to assist in the monitoring of bat mortality around wind turbines. This work has to be completed, and so it makes sense to hire local monitors in this manner.
- Complete observation studies (possibly using radar) to determine peak times of year and daily activity patterns of bats in general study area; custom the findings above for individual wind turbine locations to come up with a formula for each turbine's seasonal shifts in operation

- Employ the newest bat detecting technology in the nacelles of all operational wind turbines
- NextEra Canada should be in contact with the leading bat researcher in Canada, Dr. Brock Fenton (bfenton@uwo.ca) at the University of Western Ontario to possibly study rates of infection of White-Nosed Syndrome and other aspects of bat and bat ecology related to daily behaviour patterns and/or mortality.

7. Insect Pollinators

Insect pollinators Many species of pollinators, including bees, wasps, moths, butterflies, and other insects in recent years have declined for a number of reasons including the loss of habitat, simplification of the landscape (monocultures), intense use of agro-chemicals, climate change, introduced aggressive bees from other parts of the world, habitat loss and parasitic infestations (e.g. mites). No research has been conducted as to whether wind turbines impact insect pollinators, including bees, wasps, bumblebees, moths and butterflies. While certainly some scientific studies could be undertaken, a number of other possible efforts could help decipher if any impact exists. At left is the 'waggle' dance that honey bees conduct in the dark to communicate with one another in terms of where the next nectar resource exists. The low resonance sound emitted from wind turbines may interfere with communication between bees.

Recommendations - Pollinators:

- Habitat restoration using native plants would greatly benefit pollinators and should be undertaken at core areas in corridors.

- First Nations community members could be involved in setting up and undertaking a controlled study with bee hives managed within wind turbine farms and outside of them (see details below next recommendation)

- An open house inviting Elders, scientists and community representatives should be supported to broadcast the opportunities to learn about pollinators and the opportunities for some to become involved in the controlled study and possible apiary/honey production company

If accepted, Kettle and Stony Point could be the base for this operation and it could be set up as a business. If the right interested and dedicated individuals are found, they could be sponsored to go to an intensive 5 day training course in Buckhorn, Ontario. There they would be training and outfitted with everything necessary to begin operation, data keeping, honey extraction, sales and distributing from one of the top experts in the province. The resulting honey could be marketed as a brand called, 'First

Nations Collaborative Honey'. They could also be mentored through the process of the first months to a year by staff at the 'Herb-Honey House' in Buckhorn.

The business can be utilized to complete a study on pollinators within a matrix of wind farms. Four groupings of hives could be set up with six in each at each community. Two groups of six could be put in areas with wind turbines and the other two could be put in two groups of six in areas without wind turbines. The same could be done at Aamjiwnaang and Walpole. All hives would need to be treated the same and their success is determined by the amount of honey produced by the hives/and the health of each colony/hive (number of survivors per year). The frames could be emptied at Kettle and Stony Point First Nation where the extraction and bottling equipment could be kept. All the honey proceeds could then be sold to maintain the business.

Combined Reports

(Parts 1, 2, and 3 - see explanation below)

Formerly *Issues Report* &
3rd Party Review of NextEra's Draft REA

Part 3:

Topical Commentary: Broad Industry Wide Issues Likely to Remain Unresolved & All Recommendations

By Ben Porchuk

LANDSCAPE NATIVE
Revitalized Landscapes, Revitalized Peoples

Consultant for The Joint Assessment Committee[1]

CONTENTS - Part 3

Topical Commentary: Broad Industry Wide Issues, Likely to Remain Unresolved

Real Estate Values Amongst Wind Turbines

What was not taken into consideration here is the fact that these new generation wind turbines of an immense scale are now abutted to rural buildings creating a very different look to the landscape which in many cases reduces the value of the existing buildings in this rural community. Furthermore, while these buildings are not deemed culturally significant, the fact that many have existed in this area for so long without super-sized towering wind turbines that dwarf the surrounding landscape is indeed significant and possibly a cause of concern for rural residents or any First Nations residents (e.g. Kettle and Stony Point First Nations) who live in the shadows of large wind turbines.

Most in the wind industry reject the notion of lower land values. In 2011, Robert Hornung of the Ottawa based Canadian Wind Energy Association (CANWEA) stated, "Multiple studies, and particularly some very comprehensive ones from the United States have consistently shown the presence of wind turbines does not have any statistically significant impact on property values," (as quoted in: *CBC Article by John Nicol: Ontario wind power bringing down property values. CBCNews cbc.ca/news/Canada/story/2011/09/30/Ontario-wind-power-property-values.html].*

However, many people 'on the ground', including residents, real estate agents and appraisers see and experience the effects of the wind industry on property prices differently.

One study looked at the real estate listings and sales figures for the Melancthon-Amaranth area, which is home to Ontario's first and largest industrial wind farm (133 turbines). From 2007 to 2010 those properties adjacent to turbines sold for between 20 and 40% less than those properties that were beyond the sight of any wind turbines. This study was corroborated by London-based Lansink Appraisals and Consulting who's research showed that re-sale values for residential properties in Melancthon and Amaranth townships between 2005 and 2012 dropped an average of 38.8% in the years after the wind turbine facility was announced and built *[Kingston Whig-Standard Article by Elliott Ferguson, 2 Oct. 2012: Wind turbine report points to drop in property values. www.thewhig.come/2012/10/03wind-turbine-report-points-to-drop-in-property-values.html].*

The above mentioned CBC article also cites many individual real estate agents and property owners, without the backing of formal studies, who claim that property values are definitely impacted by the presence of large wind turbines. The CBC article also gives examples of where power companies have bought out home owners in exchange for avoiding costly court cases. These companies later sold these properties at much reduced prices while getting agreements from the new owners that they can expect to live with some impacts including "heat, sound, vibration, shadow flickering of light, noise (including grey noise) or any other adverse effect or combination thereof resulting directly or indirectly from the operation," *[CBC Article by John Nicol: Ontario wind power bringing down property values. CBCNews cbc.ca/news/Canada/story/2011/09/30/Ontario-wind-power-property-values.html]*. All of the above

cited side-effects or potential side effects are what are believed to be the reasons that some houses in the vicinity of wind farms experience a reduction in market value.

It needs to be clearly stated that there are differing views on the impacts of wind farms/individual turbines on property prices. Complicating the matter is that there are likely some people who use the 'loss of property value *card*' as an unfair argument against wind turbines without sufficient evidence. On the other hand, there are many anecdotes, and smaller scale studies that reputedly suggest that local property prices are in fact negatively impacted by the presence of wind turbines. There are also some studies commissioned by the wind industry that claim that on a more regional scale, property prices aren't significantly different within the shadows of wind turbines or in their absence. None of these studies were secured or reviewed in time for this report. I did review claims that stated 'no significant differences,' with respect to property values. What is true is that statistics can be used to show significance or non-significance depending on the level of variance tested (e.g. a p-value of 0.001 to a p-value of 0.05). Thus, without examining raw data or reporting the raw difference the statement 'statistical significance or non-significance' is not very helpful in ascertaining a difference or not. What this means is that an mean difference of say $15,000 on a suite of properties in the range of $350,000 might not be 'statistically significantly different' based on the statistical test employed. While the statistical analysis says 'no significant difference', in reality the property(ies) is/are $15,000 less.

Crown Lands

Further discussion is required on the policies relating to Crown Lands. Concerns have arisen about the possibility of opening up crown lands for the erection of wind turbines. In particular, crown lands are located in the vicinity of Kettle and Stony Point First Nation. Given the large number of wind turbines adjacent to this community, concerns are that development of nearby crown lands would further surround this site with large wind turbines. Wind turbines can be ordered to be shut down if they are not meeting the standards. People should know that these options are possible.

Wind Energy Centres in Proximity to Member Communities

Of the three JAC communities, Kettle and Stony Point First Nations are within the greatest proximity of wind turbines (located just north of the following wind energy centres; Cedar Point, Raven's Wood and Jericho). Some of the homes are closer to wind turbines than the current 550m setbacks as they were installed before the government lengthened the setbacks from 400m. Many residents from this community have experienced some health symptoms from this close proximity and the sense among many residents is that they are 'nearly surrounded by wind turbines.'

Aamjiwnaang First Nation will be about 12km away from the closest wind energy centres, 'Churchill' and 'Petrolia.' While Walpole Island will be a part of a wind energy centre that is bordering the island, no homes will be within 1 km of the proposed development location.

Human Health Concerns

Recently (July 2012) it was announced that Health Canada is going to conduct a $1.8 million study to be released in 2014 dealing with wind turbines and human health. Health Canada revealed that 2000 houses and their occupants will be examined from 8 to 12 different wind farms across Canada. Among other attributes, noise will be measured inside and outside of homes from under 500 m to up to 5km away from functioning wind turbines. A thirty day comment period on the study methodology was open for public comment between July 10 to Aug . 8. 2012. Comments on the study can be provided to: Principal Investigator, David S. Michaud, PhD; wind.turbine.health.study@hc-sc.gc.ca .

While many people have applauded this announcement, there is some concern that the study will take two years with some fairly significant health questions being examined.

Part of the public outcry regarding human health impacts are the setback distances, that, from all accounts, have an arbitrary distance of 550m from human inhabitation. In many of the U.S. states, the setback is only 1,000 feet or about 330m, but in some locations in the U.S. the setbacks are much greater, as they are in many other places in the world. For example, long setbacks exist in Denmark (670m), Holland (1,000m), and Germany (1,600m). Many parts of the world are calling for 1 to 2 km setbacks to ensure (i.e. to assured of being as safe as possible) public health and safety.

In Canada, councillors in the District of Argyle in Nova Scotia recently voted to increase the setbacks to 1,000m. In Ontario, Plympton-Wyoming council is pushing for industrial wind turbines setbacks to be a minimum 2km away from homes.

Sources that are interesting to examine are the recommendations from the wind turbine manufacturers themselves. The world leading manufacturer (Danish) in wind turbines had recommends the following in their *Vesta V90 2007 Mechanical Operating and Maintenance Manual*: "Do not stay within a radius of 400 meters from the turbine unless it is necessary…Make sure that children do not stay by or play near the turbine." **T**he largest domestic turbine manufacturer, General Electric, has refused to locate towers that do not meet their own minimum standards (1.5 times hub height + rotor diameter) for ice throw, or about 430m for a 120m wind turbine with a 100m rotor).

And the large wind turbine manufacturer RETEXO (German) recommended setbacks of 2 km from its turbine hub, citing both safety and noise considerations (Fleming, T. 2012. *Wind Ordinance Debate: The 1,000-foot Set-Back Standard (Are environmentalists under regulating themselves?* By Tony Fleming, Master Resource; A free-market Energy Blog.).

Renewable Energy Industry in Ontario: Auditor General's Report – Dec. 2011

In the fall of 2011, the Auditor General of Ontario released a report that included a review of the *Electricity Sector - Renewable Energy Initiatives*. The following is a summary of what the Auditor General had to say in the annual 2011 report (Auditor General Report. December 2011. http://www.auditor.on.ca/en/reports_en/en11_/303en11.pdf - Chapter 3, Sect. 3.03.) . It is included here to give perspective as to why there is the sudden proliferation of wind farms and solar arrays across the rural landscape of Ontario, including many locations within the Traditional Territory of First Nations (Photo: a rare shot showing the wind turbulence created by wind turbines). Many people are questioning the economics behind the wind industry and the environmental claims that renewable energies are much 'cleaner'.

In summary, the report acknowledges the government's agenda – *to generate significantly more energy from renewable resources, to replace coal-sourced energy*. In the process, they were hoping to achieve 50,000 green jobs in the process. This was all laid out in the 2009 *Green Energy and Green Economy Act.*

These initiatives were successful in rapidly increasing the amount of wind and solar power. However, these two renewable energies will add additional costs to the rate payers electricity bills. Wind and solar power are not as reliable (because of weather dependency) and require backup from other energy supply methods such as gas-fired generation. The government knew this, but made the cost trade-off for the hoped creation of green jobs and the projected health and environmental benefits of renewable energy.

Ontario is on track to shut down its 7,500 plus MW coal-fired generation plants by 2014. They are replacing coal with refurbished nuclear power plants, gas-fired generation, with the remainder coming from renewables. The goal for renewable energies is 10,700 MW by 2018.

The Green Energy and Green Economy Act legislated the authority of the Minister of Energy to expedite the development of renewable energy: no business-case evaluation plan or cost-benefit analysis was completed, as the ministerial directions were quite specific about what was to be done. Such an cost-benefit analysis

evaluation would have assessed the prospective economic and environmental effects of such a huge ($1B) investment in renewable energy on:

- Future electricity prices
- Direct and indirect job creations or losses
- Greenhouse gas emissions

The Ontario Power Authority (OPA) was designated as the province's energy planner; set to submit long-term plans to the Ontario Energy Board (OEB) for approval (Photo: Ontario Legislature Building). The OPA spent $10.7M on a plan. The government suspended the OEB's review of the plan. Under its new ministerial powers, the Ministry released its own Long-Term Energy Plan (at another significant cost to create).

The existing competitive bidding program for renewable energy company suppliers was the *Renewable Energy Standard Offer Program (RESOP).* It was very successful, but the Minister directed the OPA to end the RESOP and replace it with the Feed In Tariff (FIT) program. FIT provided renewable energy contractors with significantly more attractive contract prices than RESOP. This resulted in an additional $4.4 B in costs (payments for electricity) over the 20-year term of the contract compared to what would have been paid in the former RESOP. The argument made for paying the extra billions was that FIT would expedite the government's renewable energy program and promote Ontario's domestic industry.

It was discovered that several other jurisdictions set lower FIT prices than Ontario and had mechanisms to limit the total costs that the governments would pay. The OPA made recommendations to lower Ontario's pricing structure, to save billions of dollars. The OPA suggested a specific reduction of 9% of the FIT prices. This would likely have saved $2.6B over the 20 years of the contract. The government disagreed in favour of maintaining investor confidence vis-à-vis price stability, at least for the initial two years of implementing FIT. A similar miscalculation occurred in the microFIT program (for the ground mounted solar panels that are common on farms today) in 2010. Had the government acted initially on the reduced rates recommended by the OPA, an estimated $950 M would have been saved over the duration of the contract.

In response to the Auditor General's preliminary fieldwork report, a $437 M incentive payment to a consortium of Korean companies (this on top of the all ready very favourable FIT prices) was cut to $110 M. This consortium also gained priority access to Ontario's

electricity transmission system – a system that has very limited access to renewable energy projects. Once again, no economic analysis or business case was completed to determine the cost-effectiveness of the consortium. Also once again – neither the OEB nor the OPA was consulted about the agreement.

Demand for growth for electricity is expected to remain stagnant for some time (stale economy, conservation is being adopted in a more widespread manner) and as more renewable energy is added to the system (the surplus), ratepayers may have to pay the renewable energy providers under the FIT program anywhere between $150 to $225 million per year *not to generate electricity*. In the meantime, the surplus electricity will be sold to other markets for less than what it costs to produce it. This seems hard to comprehend, but it appears to be the result of a series of decisions made under the new authority of the minister without planning.

The government's goal of creating 50,000 green jobs fell quite short – only about 30,000 were created and 75% of these were construction jobs expected to last only 1 to three years. It was estimated that for each job created, two to four jobs are often lost in other sectors of the economy.

The auditor general also noted that there is a severe bottleneck at the moment: "Ontario's electricity transmission and distribution systems already operate at or near capacity. A higher-than-anticipated number of renewable energy projects under the FIT program are awaiting connection to the distribution grid. As of April 1, 2011, about 10,400 MW, representing more than 3,000 FIT applications, cannot be accommodated into the existing power grid," Pg. 91 of the report.

Lastly, since wind and solar energy provide intermittent energy, they require backup power during peak electricity demand times from coal or gas fired CO^2 emitting generators to maintain steady, reliable output. Thus, the OPA estimates that 10,000 MW of electricity from wind would require an additional 47% of non-wind power produced by natural gas fired generation plants. Therefore, the question of wind turbines being a green source of electricity remains to be seen.

Reviews of earlier drafts by the Joint Action Committee turned up a critique of the auditor general's report (2012, March. Hamilton, Malcolm W. *A Critique of the Auditor General's Report on Renewable Energy Policies - Fact-Checks, Corrections, Clarifications and Context*.) Disclosing his closeness to the wind industry, government, etc. (retired wind developer, supporter of the provincial and federal liberals), Hamilton suggests the Office of the Auditor General did 'shoddy work', including poor economic analyses, lacked a general understanding of the 'high level objectives of the program' and didn't recognize that increasing the ministerial powers was one of the only means for the government to "break from the status quo thinking in the province's electricity sector." The general desire and hope of this "audit of the audit" was to prompt the Auditor General to conduct its own review of its analytical skills, potential biases and the apparent lack of peer-review.

ALL RECOMMENDATIONS

Key General Recommendations

- Meet with MOE and MNR to continue to examine the issues around setbacks and their current distances and impacts/potential impacts on nearby residents and or wildlife, examining all possibilities to eliminate or minimize impacts.

- Decisions regarding land use or modification should be undertaken with the insights of Aboriginal Traditional Knowledge by means of consultation with First Nations community members and their participation in monitoring and advice on proceeding (e.g. how act respectfully to a pair of nesting Bald Eagles in the vicinity of a wind farm, etc.).

- A model similar to the Joint Assessment Committee or a similar working group (e.g. liaison committee) should be in place to advise on issues that arise with the construction, operation, monitoring and maintenance of wind turbines and the greater wind energy centres; this group is also important to maintain a positive working relationship with NextEra

1. Big Picture Project Recommendation

- One of the highest priority measures that could be provided from NextEra would be a contribution to habitat restoration; especially within and surrounding core natural areas, including those found in these Native communities. Many sites have been (or are in the process of being) identified that need efforts to bolster ecological diversity and processes, fill in ecological gaps between diverse habitats and recently abandoned fields, as well as restoration in some of the degraded areas, such as the Talfourd Creek at Aamjiwnaang.

- Given the Traditional Territory of the member First Nations communities, it is important to contribute to existing conservation projects ongoing in the Traditional Territory. The visionaries behind the Big Picture Project have created Conservation Action Plans (CAPs) for several biodiversity 'Hot Spots' in southwestern Ontario. These include areas of core habitat and suitable connectivity. Much of the administration, planning, collating, stakeholder engagement and landowner contact has been undertaken by Carolinian Canada and their staff; work priorities are clearly defined and ready to go in each of the CAPs (well defined, measurable and tangible outcomes are attainable with adequate resources). Carolinian Canada's CAPs need support in the following areas: GIS mapping to identify priority sites and parcels for conservation and restoration; land acquisition funds (to support local land trusts); development and implementation of long term stewardship plans; site monitoring; activities and materials required to restore degraded sections of recently acquired lands; outreach and education to inform stewardship activities in the priority areas and raise the public profile of the program.

- Participatory initiative support funds; each of the J.A.C. members have stated that there are so many initiatives that they would like to contribute to but attending meetings, spending limited staff hours and resources is prohibitive; funds to support these efforts would lead to more collaborations and in the end lead to greater 'big picture' contributions

- Coordination of regional natural system plans - work in cooperation with Carolinian Canada Coalition (CCC) in a crucial step towards moving into action with a plan (e.g. assist in the habitat connection between Pinery Provincial Park and Kettle and Stony Point First Nation) in creating a Conservation Action Plan to link Walpole Island to Bickford Woods to Aamjiwnaang First Nation).

- Plant material sourced from the member communities should be cultivated for the initial small restoration projects and be planned for larger undertakings. For example, currently there is a business on Walpole Island that provides ecological restoration services and they will be building a native plant nursery. Also, Aamjiwnaang has completed a feasibility and business plan for opening a Native-run, Native Plant Nursery for the purposes of providing native plants for restoration, landscaping and medicinal (see drying medicines, at left) purposes. Similarly, Kettle and Stony Point continues to be actively involved in the Kettle Point Species at Risk Restoration Project. The project objectives are to seek and implement best practices for habitat restoration for the regeneration of native plant species for the habitat restoration of species at risk present within the community. All of these initiatives could be boosted by an infusion of capital generated from NextEra and companies in other industries interested in contributing to a First Nations community and environmental cause.

2. Recommendations – Mapping

- Better migration maps - further definition are required for both migratory songbirds and bats; banding efforts (birds) in combination with radar information will enable us to create better maps. NextEra could initiate a cross wind farm study (i.e. with other wind companies) on to obtain better migration maps.

3. Recommendations – Birds

- Hire some First Nations community members to assist in the monitoring of bird mortality around wind turbines. This work has to be completed, and so it makes sense to hire local monitors in this manner.

- Contribute to Native-run bird banding stations (5 to 7 should be set up from Windsor to Tobermory). While radar (see below) is important to scientifically track masses of birds in relation to weather patterns, 'on the ground' bird banding facilities provide key information on individual migrants that can occasionally pass through consecutive banding stations in the same

year. These efforts also could galvanize outdoor nature experience for youth, providing opportunities for local and regional public education, while contributing to trends and evidence for bird migration through a region heavily laden with wind turbines. After migration periods in the spring and fall are completed, support for bird banders to conduct point count studies for breeding birds would provide much evidence for safety/impacts of birds during the breeding season. Currently, a small initiative called "Native Territories Avian Research Project"(Rachel Polwess) does exist in the vicinity of Walpole Island. This group could serve as the 'base' for operations and have several satellite bird banding stations at Kettle and Stony Point, Aamjiwnaang and other areas run by First Nations up to Tobermory. All of this could happen in the following stages:

- Initially, the existing bird education program at Walpole could be supported further and branch out to establish similar education initiatives at Kettle and Stony Point and Aamjiwnaang

- Bird banding experience would then need to be accrued by willing, interested and committed individuals; detailed training would need to occur and some of this assistance could be provided by existing banding stations including Long Point Bird Observatory and the Pelee Island Bird Observatory.

- The next steps would be to refine the expertise within the three communities and then pick locations for permanent mist nets, purchase equipment and set up staff accommodations, including an office and secure data repository.

- No studies to date have used radar to evaluate the densities and timing events of spring and fall migrations of songbirds along the southern Ontario corridor (Fig. 2 - from Windsor to Tobermory). While this would change slightly from year to year, certain patterns and trends would be consistent and specific weather patterns could be studied to determine the nature of the 'big waves' of migrant birds and their locations. Given that this geographic stretch does include, by our best estimates, about 3,000 wind turbines and is increasing in numbers, a true cumulative potential impact does exist for songbirds. Suitable to conduct this study would be Dr. Phil Taylor at Acadia, Detect Radar Systems, the Canadian Wildlife Service, the U.S. Forestry Service (looking at the Great Lakes Region as a whole) or a combination of these. Ideally, this study would be funded fully by the wind industry (all the companies operating in the identified region).

- In combination with the above, as the density in wind turbines increases in parts of Ontario, including the eastern coast of Lakes Huron, St. Clair and the St. Clair River, it may become feasible or desired to employ radar to monitor bird approaches, especially during spring and fall migration, similar to what has been undertaken in Texas.

4. Recommendations - Bats:

- Hire some First Nations community members to assist in the monitoring of bat mortality around wind turbines. This work has to be completed, and so it makes sense to hire local monitors in this manner.

- Complete observation studies (possibly using radar) to determine peak times of year and daily activity patterns of bats in general study area; custom the findings above for individual wind turbine locations to come up with a formula for each turbine's seasonal shifts in operation

- Employ the newest bat detecting technology in the nacelles of all operational wind turbines

- NextEra Canada should be in contact with the leading bat researcher in Canada, Dr. Brock Fenton (bfenton@uwo.ca) at the University of Western Ontario to possibly study rates of infection of White-Nosed Syndrome and other aspects of bat and bat ecology related to daily behaviour patterns and/or mortality

5. Recommendations - Pollinators:

- Habitat restoration using native plants would greatly benefit pollinators and should be undertaken at core areas in corridors.

- First Nations community members could be involved in setting up and undertaking a controlled study with bee hives managed within wind turbine farms and outside of them (see details below next recommendation)

- An open house inviting Elders, scientists and community representatives should be supported to broadcast the opportunities to learn about pollinators and the opportunities for some to become involved in the controlled study and possible apiary/honey production company

If accepted, Kettle and Stony Point could be the base for this operation and it could be set up as a business. If the right interested and dedicated individuals are found, they could be sponsored to go to an intensive 5 day training course in Buckhorn, Ontario. There they would be training and outfitted with everything necessary to begin operation, data keeping, honey extraction, sales and distributing from one of the top experts in the province. The resulting honey could be marketed as a brand called, 'First Nations Collaborative Honey'. They could also be mentored through the process of the first months to a year by staff at the 'Herb-Honey House' in Buckhorn.

The business can be utilized to complete a study on pollinators within a matrix of wind farms. Four groupings of hives could be set up with six in each at each community. Two groups of six could be put in areas with wind turbines and the other two could be put in two groups of six in areas without wind turbines. The same could be done at Aamjiwnaang and Walpole. All hives would need to be treated the same and their success is determined by the amount of honey produced by the hives/and the health of each colony/hive (number of survivors per year). The frames could be emptied at Kettle and Stony Point First Nation where the extraction and bottling equipment could be kept. All the honey proceeds could then be sold to maintain the business.

Appendix B

Key Aboriginal Correspondence

NextEra Energy Canada Wind Energy Centres: Adelaide, Bluewater, Bornish, Goshen & Jericho

June 12, 2013

NextEra Energy Canada personnel:

- **Brian Hay, Director, Aboriginal Relations**
- **Nicole Geneau, Director** – Bluewater & Goshen
- **Ben Greenhouse, Director** – Adelaide & Bornish
- **Ross Groffman, Director** – Jericho
- **Cassandra Bowers, Project Manager**
- **Tom Bird, Environmental Services Project Manager**

Consultants

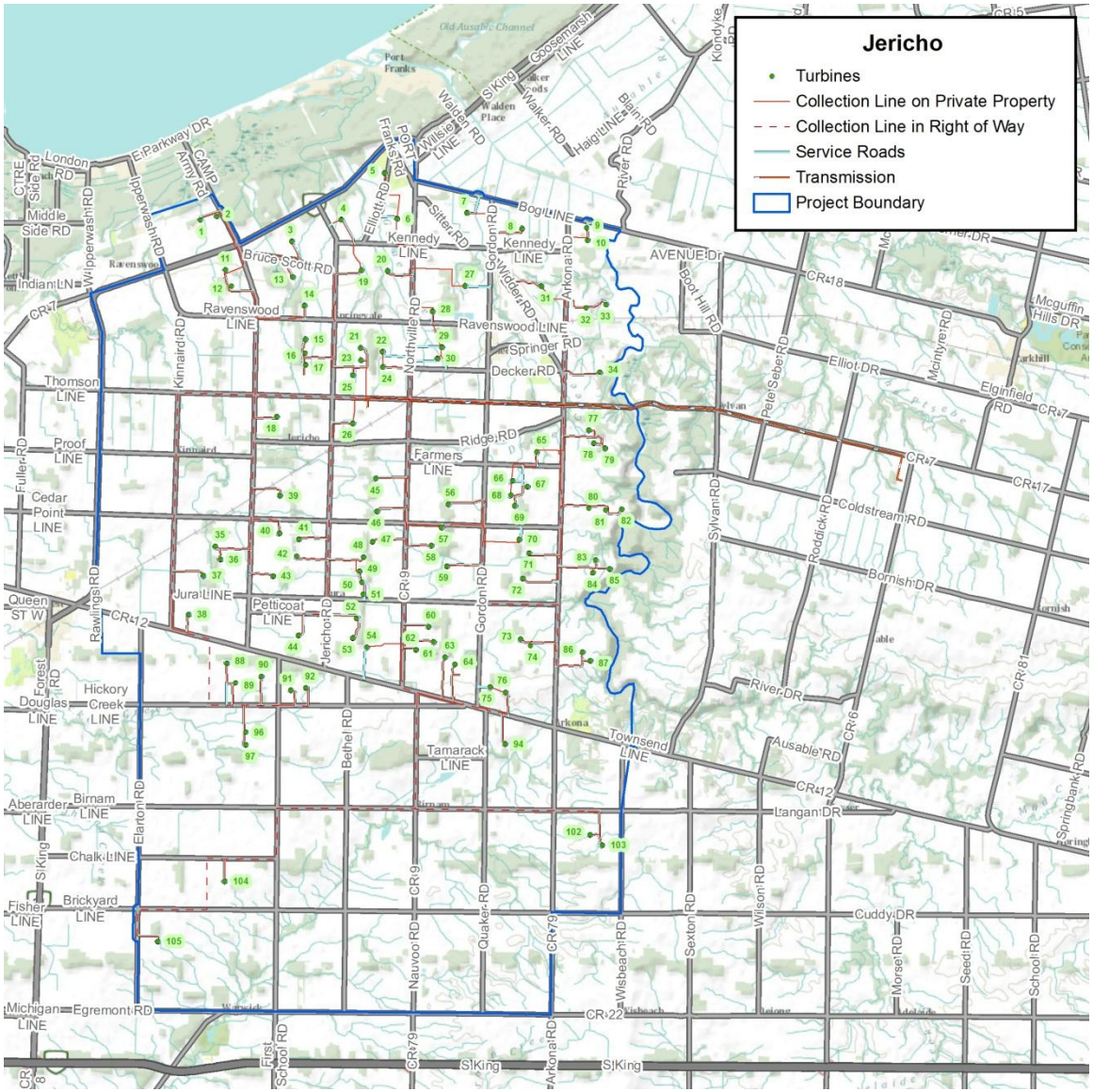
- **Arthur Figura, M.A.**
  Project Archaeologist, Archaeobotanist – Stantec

- **Tracie Carmichael**
  Senior Associate, Environmental Services - Stantec

- **Jessica MacKay Ward, Ph.D.**
  Ecologist – AECOM

- **Loren Knopper, B.Sc., M.Sc., Ph.D.**
  Senior Scientist - Intrinsik Environmental Sciences Inc.

Jericho


Jericho
Turbines
Collection Line on Private Property
Collection Line in Right of Way
Service Roads
Transmission
Project Boundary
Old Ausable Channel
Port Franks
Walden Place
Goosemarsh LINE
S King
Walker RD
Haigh LINE
Blain RD
River RD
Klondyke RD
CR 15
London RD
Middle Side RD
Elliott RD
Kennedy LINE
Sitter RD
Gordon RD
Widder RD
Arkona RD
Bog LINE
AVENUE Dr
Boot Hill RD
CR 18
Mcguffin Hills DR
Elliot DR
McIntyre RD
Elginfield RD
CR 47
Bruce Scott RD
Ravenswood LINE
Springer RD
Decker RD
Northville RD
Thomson LINE
Kinnaird RD
Proof LINE
Ridge RD
Farmers LINE
Fuller RD
Cedar Point LINE
Pete Seber RD
Sylvan RD
Roddick RD
Coldstream RD
Bornish DR
Queen ST W
Rawlings RD
CR 12
Jura LINE
Petticoat LINE
Jericho RD
CR 9
Gordon RD
Forest RD
Hickory Creek LINE
Douglas LINE
River DR
CR 81
CR 6
Ausable RD
Townsend LINE
Arkona
Bethel RD
Tamarack LINE
Springbank RD
Aberarder LINE
Birnam LINE
Elarton RD
Tangan DR
Chalk LINE
S King
Fisher LINE
Brickyard LINE
Quaker RD
Nauvoo RD
CR 79
Wisbeach RD
Sexton RD
Wilson RD
Cuddy DR
Morse RD
Seed RD
School RD
Michigan LINE
Egremont RD
CR 22
First School RD
CR 8
S King
Arkona RD
S King

Jericho Project Facts

- **Location:** Lambton County and Middlesex County, Ontario
- **Total Project Nameplate Capacity:** up to 149 (MW)
- **Type of Turbines:** General Electric (GE) 1.62 MW capacity
- **Size of Turbines:** 100 m Rotor Diameter/80 m Hub Height = 130 m Total Height
- **Number of Turbines:** up to 92
- **Start construction:** 2014
- **Completion:** 2014

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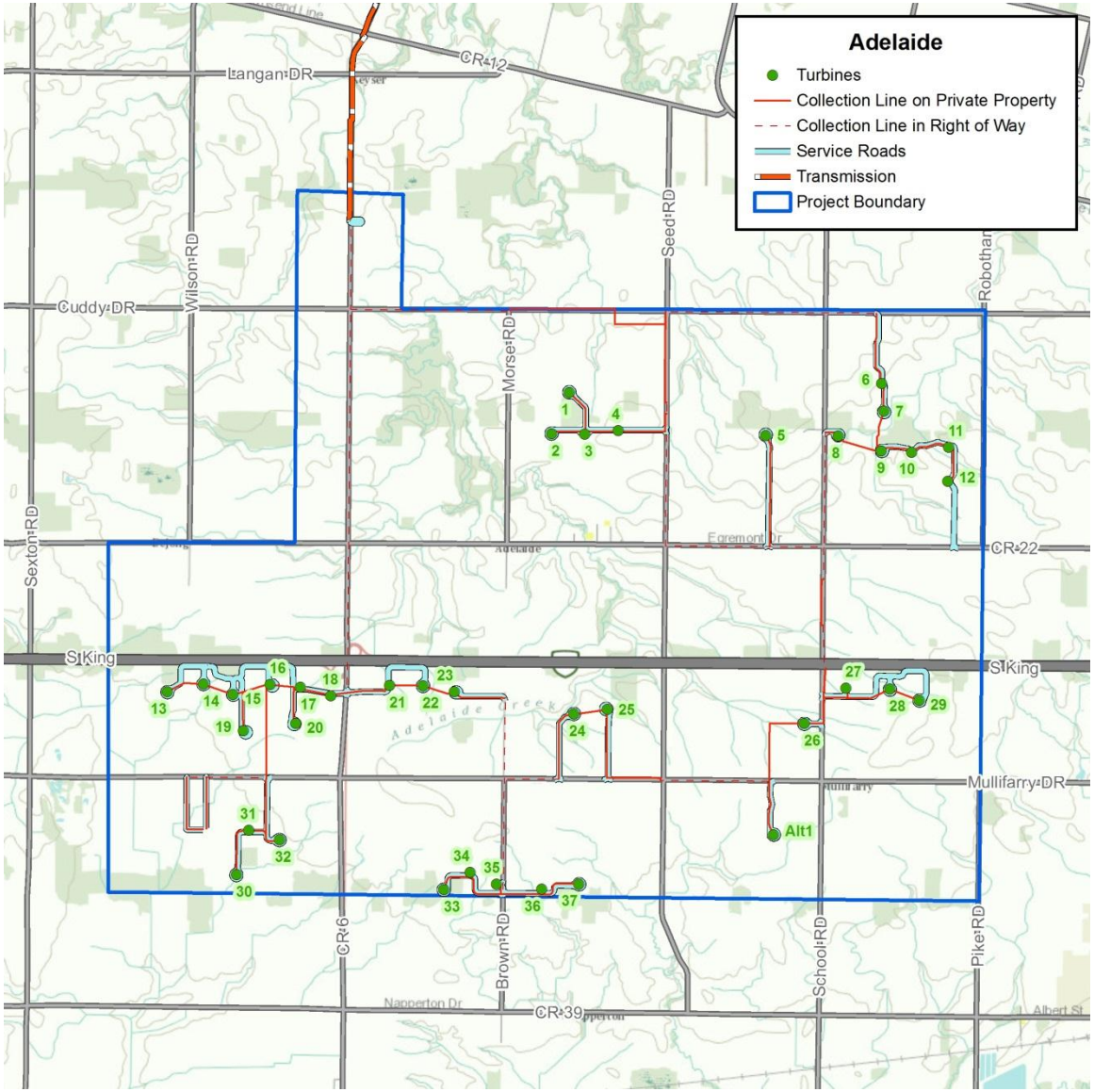
Adelaide


Adelaide
Turbines
Collection Line on Private Property
Collection Line in Right of Way
Service Roads
Transmission
Project Boundary
CR-12
Langan-DR
Wilson-RD
Seed-RD
Robothan
Cuddy-DR
Morse-RD
Sexton-RD
CR-22
St King
Mullifarry-DR
CR-6
Brown-RD
School-RD
Pike-RD
CR-39
Napperton Dr
Alt1

Adelaide Project Facts

- **Location:** Middlesex County, Ontario
- **Total Project Nameplate Capacity:** up to 59.9 (MW)
- **Type of Turbines:** General Electric (GE) 1.62 MW capacity
- **Size of Turbines:** 100 m Rotor Diameter/80 m Hub Height = 130 m Total Height
- **Number of Turbines:** up to 37
- **Start construction:** Fall 2013
- **Completion:** Summer 2014

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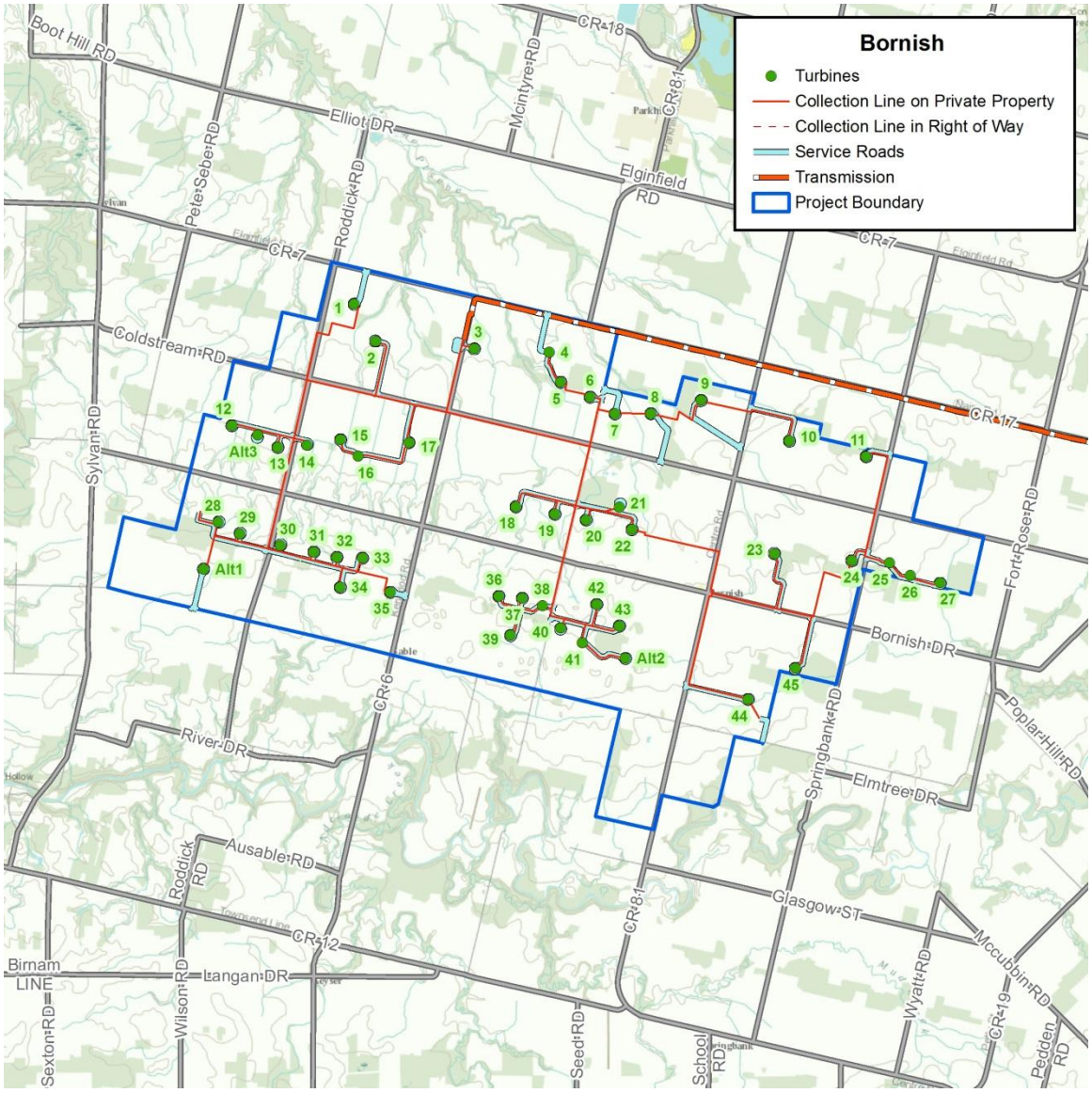
Bornish


Bornish
Turbines
Collection Line on Private Property
Collection Line in Right of Way
Service Roads
Transmission
Project Boundary
Boot Hill RD
Elliott DR
McIntyre RD
CR 18
CR 8
Elginfield RD
Peter Sebert RD
Roddick RD
CR 7
Coldstream RD
Sylvan RD
CR 17
Fort Rose RD
Bornish DR
Poplar Hill RD
Springbank RD
Elmtree DR
River DR
CR 6
Ausable RD
Roddick RD
CR 12
Glasgow ST
Mccubbin RD
Birnam LINE
Langan DR
Wilson RD
Sexton RD
Seed RD
School RD
Wyatt RD
CR 19
Pedden RD
1
2
3
4
5
6
7
8
9
10
11
12
Alt3
13
14
15
16
17
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32
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34
35
Alt1
36
37
38
39
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41
42
43
Alt2
44
45

Bornish Project Facts

- **Location:** Middlesex County, Ontario
- **Total Project Nameplate Capacity:** up to 72.9 (MW)
- **Type of Turbines:** General Electric (GE) 1.62 MW capacity
- **Size of Turbines:** 100 m Rotor Diameter/80 m Hub Height = 130 m Total Height
- **Number of Turbines:** up to 45
- **Start construction:** Fall 2013
- **Completion:** Summer 2014

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