

# Adelaide Wind Energy Centre



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

I am 17 years old and this affects my FUTURE without my consent!

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

Name: [Redacted]  
Street Address: [Redacted]  
City/Province: [Redacted]  
Postal Code: [Redacted] 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  
5500 North Service Road, Suite 205  
Burlington, Ontario L7L 6W6

Toll Free: 1-877-257-7330  
Email: [Adelaide.Wind@NextEraEnergy.com](mailto:Adelaide.Wind@NextEraEnergy.com)  
Website: [www.NextEraEnergyCanada.com](http://www.NextEraEnergyCanada.com)

# Adelaide Wind Energy Centre



## OPEN HOUSE COMMENT FORM

• Ailsa Craig Community Centre • 155 Annie Aida Shipley Street • Ailsa Craig, ON • July 11, 2012 •

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 presented tonight meet your expectations?

- Yes
- Somewhat
- No

Please explain: \_\_\_\_\_  
\_\_\_\_\_

2. If you asked questions during the Open House, did you get a satisfactory response?

- Yes
- Didn't speak to anyone
- Somewhat
- No

Please explain: \_\_\_\_\_  
\_\_\_\_\_

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

- Yes
- Somewhat
- No

Please explain: I don't like these wind turbines  
any where in ONTARIO CANADA

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

- |   |   |
|---|---|
| <input type="checkbox"/> Aboriginal Interests | <input type="checkbox"/> Community Partnerships |
| <input type="checkbox"/> Socio-economic       | <input type="checkbox"/> Transmission           |
| <input type="checkbox"/> Environment          | <input type="checkbox"/> Project Details        |
| <input type="checkbox"/> Human Health         |   |

Other: \_\_\_\_\_

# Adelaide Wind Energy Centre



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

What about the people, animals & birds?  
It would be nice to get straight answers  
to our question. You have a rack for  
saying one thing & doing another.  
We do not want them  
or your power lines.

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

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Street Address: \_\_\_\_\_  
City/Province: \_\_\_\_\_  
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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 presented tonight meet your expectations?

- Yes
- Somewhat
- No

Please explain: Would like to hear scientific proof that turbines don't affect the health of people

2. If you asked questions during the Open House, did you get a satisfactory response?

- Yes
- Didn't speak to anyone
- Somewhat
- No

Please explain: More animals are killed by cars than there will be by turbines.

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

- Yes
- Somewhat
- No

Please explain: I live in town so am not affected directly by turbines

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

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Aboriginal Interests                         | <input type="checkbox"/> Community Partnerships |
| <input type="checkbox"/> Socio-economic  | <input type="checkbox"/> Transmission           |
| <input type="checkbox"/> Environment   | <input type="checkbox"/> Project Details        |
| <input checked="" type="checkbox"/> Human Health - <u>with scientific proof.</u> | Other: _____                                    |





# WIND ENERGY CENTRE - OPEN HOUSE

## Benefits of Wind Power

### Environmental Compatibility

- ✦ Creates no air or water pollution
- ✦ Minimal greenhouse gas emissions
- ✦ Efficient and reliable
- ✦ Allows land to remain in agricultural use
- ✦ Does not use water in power generation
- ✦ Low environmental impact
- ✦ Free, renewable energy source

### Local Economic Benefits

- ✦ Provides new employment opportunities
- ✦ Adds tax base to the local municipalities
- ✦ Supports the economy through purchases of regional goods and services
- ✦ 8-10 full time jobs
- ✦ 200-300 construction jobs
- ✦ Delivers landowner lease payments
- ✦ Community Vibrancy Funds to support local initiatives

Over the next 20 years, we estimate the project will contribute:

- ✦ \$90 million in corporate income tax
- ✦ \$14 million in property tax revenue to Middlesex County
- ✦ \$17 million in landowner payments

### Price Stability

- ✦ Decentralizes power production
- ✦ No fuel cost
- ✦ Helps stabilize the cost of power
- ✦ Electricity produced domestically



# WIND ENERGY CENTRE - OPEN HOUSE

## Ontario's Renewable Energy Approval Process

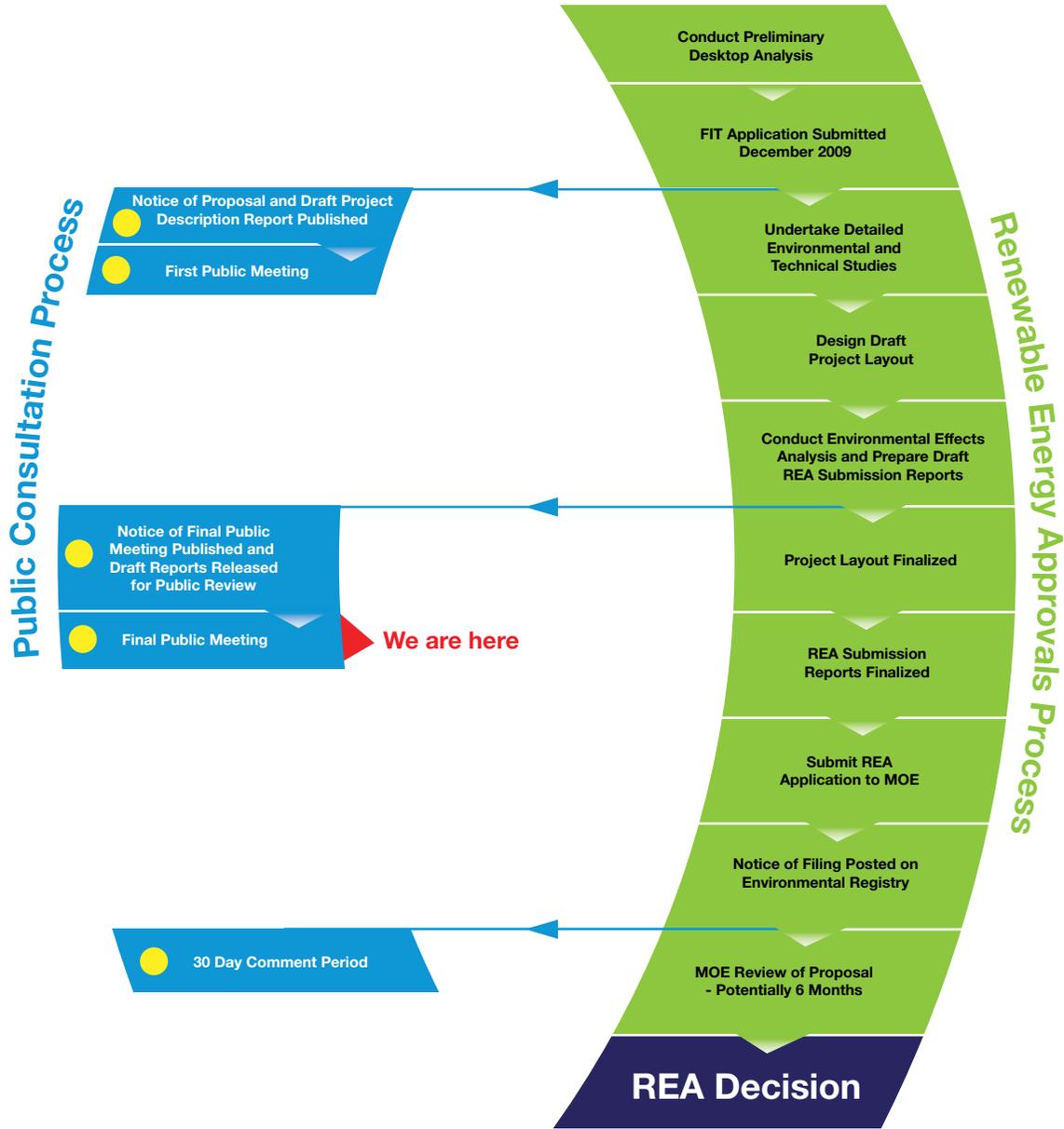
- The Renewable Energy Approval (REA) process, outlined in Ontario Regulation 359/09, is a requirement for large wind power projects under Ontario's Green Energy Act
- NextEra Energy Canada will submit a Renewable Energy Approval application to the Ontario Ministry of the Environment (MOE) for each project
- The MOE will assess the application for completeness and then undertake a technical review to determine whether to issue an approval
- Other agencies, including the Ministry of Natural Resources (MNR), the Ministry of Transportation (MTO), the Ministry of Tourism, Culture and Sport (MTCS) and local conservation authorities and municipalities will provide input

## Reports included in application:

- ✦ **Project Description Report** – to provide an overview of the project and a summary of all the required REA reports
- ✦ **Archaeology and Cultural Heritage Assessment Reports** – to identify potential effects on archaeological or cultural heritage resources
- ✦ **Natural Heritage Assessment Report** – to identify potential effects on birds, bats, other wildlife, woodlands, wetlands, areas of natural and scientific interest, etc.
- ✦ **Noise Study Report** – to ensure the project is in compliance with noise regulations
- ✦ **Water Body and Water Assessment Report** – to identify potential effects on streams, seepage areas and lakes
- ✦ **Construction Plan, Design and Operation, Decommissioning Reports** – to describe these activities and identify any potential effects resulting from the various project phases
- ✦ **Consultation Report** – to demonstrate how NextEra Energy Canada engaged local and Aboriginal governments, as well as the public, during the project
- ✦ **Wind Turbine Specifications** – to describe the turbine technology selected for the project

# WIND ENERGY CENTRE - OPEN HOUSE

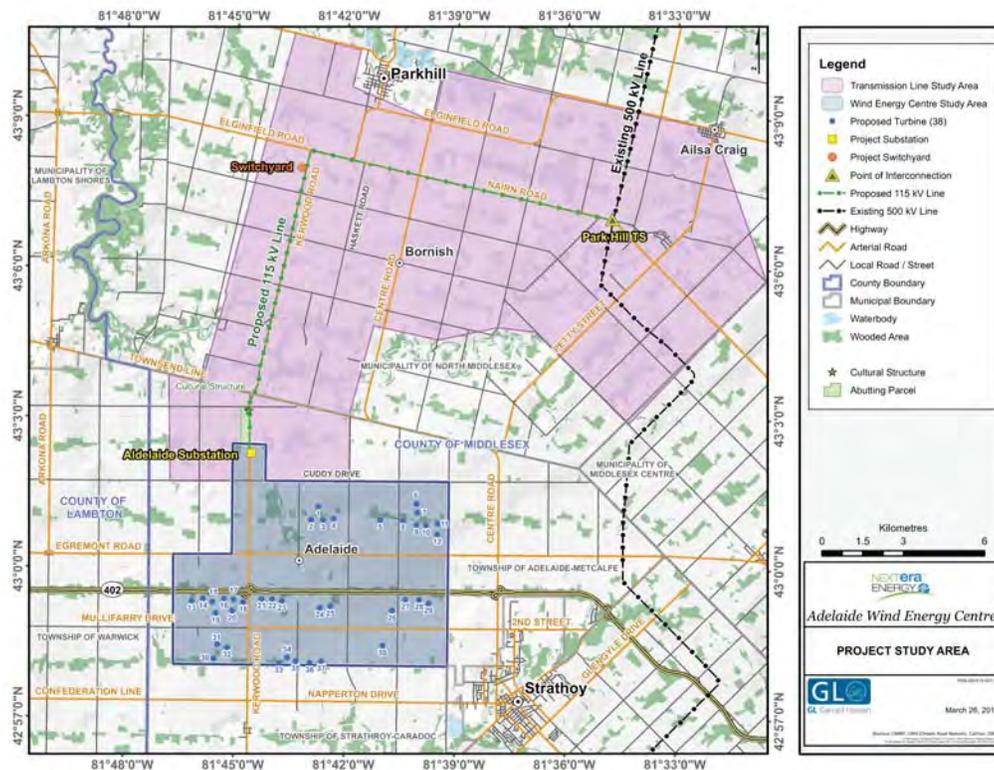
## Renewable Energy Approval Process



# WIND ENERGY CENTRE - OPEN HOUSE

## The Adelaide Project

- The proposed Adelaide Wind Energy Centre is planned to be located in the Municipality of North Middlesex, Middlesex County, Ontario
- Project components will be installed on privately-owned agricultural lots
- The project will have a maximum name plate capacity of 59.90 - megawatts of electricity which will generate enough energy to power approximately 15,000 homes
- Project infrastructure will include:
  - ✦ 37, 1.6 - megawatt GE turbines, though 38 turbine location will be permitted
  - ✦ Laydown and storage areas (including temporary staging areas) for construction equipment and supplies
  - ✦ A substation located on site and a 115 kV transmission line to connect to the Hydro One transmission system
  - ✦ The proposed transmission line will travel north along Kerwood Road and east along Elginfield and Nairn Roads, connecting to the Hydro One transmission system
  - ✦ Underground electrical collection lines (located on private lands and municipal right of ways) to connect the turbines to the transformer substation
  - ✦ Turbine access for road construction and maintenance
  - ✦ An operations and maintenance building





## Aboriginal Consultation

- Canada's Constitution Act, 1982, recognizes the rights of Aboriginal peoples (First Nation, Inuit and Métis)
- Ontario Regulation 359/09 has specific requirements for Aboriginal consultation
- Ontario Power Authority's Feed in Tariff program reinforces the importance of Aboriginal consultation
- Project proponents are delegated the "procedural aspects" of Aboriginal consultation
- Aboriginal consultation may include environmental, archaeological, cultural and spiritual issues
- NextEra Energy Canada is working closely with Aboriginal communities and leadership as required by law and good practice to:
  - Offer meaningful information about its projects
  - Seek information that helps ensure good planning to avoid or minimize impacts
  - Openly discuss issues, interests and concerns
  - Seek workable and mutually acceptable solutions
  - Foster relationships of mutual respect

# WIND ENERGY CENTRE - OPEN HOUSE

## Turbine Siting Process

### Developing a Site Plan

The following steps outline the process of developing a project site plan:

1. Identify a sufficient wind resource and study the wind characteristic for several consecutive years
2. Work with local landowners to option land for wind turbines and ancillary facilities (i.e. collection lines and access roads)
3. Identify technical and environmental limitations based on input from project engineers, ecologists and aquatic biologists, cultural experts, local landowners, Aboriginal groups, and government agencies
4. Identify locations to site project infrastructure by balancing these technical and environmental limitations while adhering to the setback distances prescribed by the Province (i.e., Ontario Regulation 359/09) as identified in **Table 1** below. Project components can be sited within the setbacks for some environmental features provided that an Environmental Impact Study is completed and mitigation measures identified.

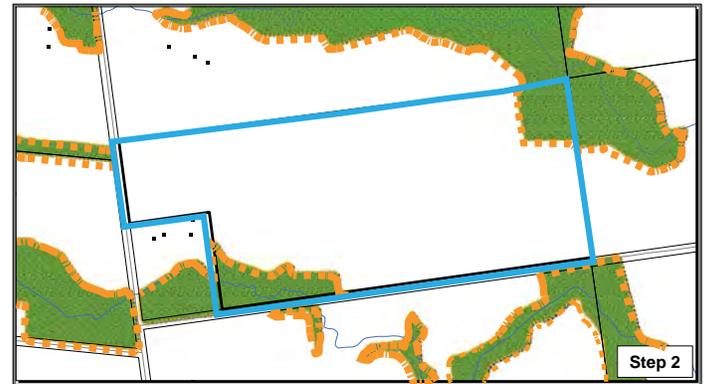
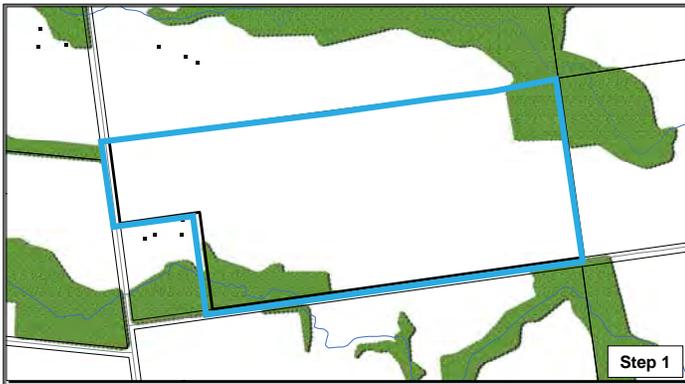
Table 1. Turbine Siting Process Constraint Categories

Category	Distance Considerations*
Natural Heritage Features	<ul style="list-style-type: none"><li>• Area of Natural and Scientific Interest (ANSI) earth Science: 50m</li><li>• ANSI Life Science: 120m</li><li>• Significant wildlife Habitat: 120m</li><li>• Significant Woodlands and Valleylands: 120m</li><li>• Provincially Significant Wetland</li></ul>
Aquatic Features	<ul style="list-style-type: none"><li>• Streams and Waterbodies: 30m</li></ul>
Local Infrastructure	<ul style="list-style-type: none"><li>• Petroleum Resource Facilities: 75</li><li>• Road Right-of-way: 60m</li><li>• Railway right-of-way: 60m</li></ul>
Socio-Economic	<ul style="list-style-type: none"><li>• Property Line: 60m</li><li>• Residential and other uses sensitive to noise: 550m</li></ul>

\* Note that other requirements may be applicable to the projects (e.g. aerodromes, pipelines, and Ministry of Transportation setbacks, etc.)

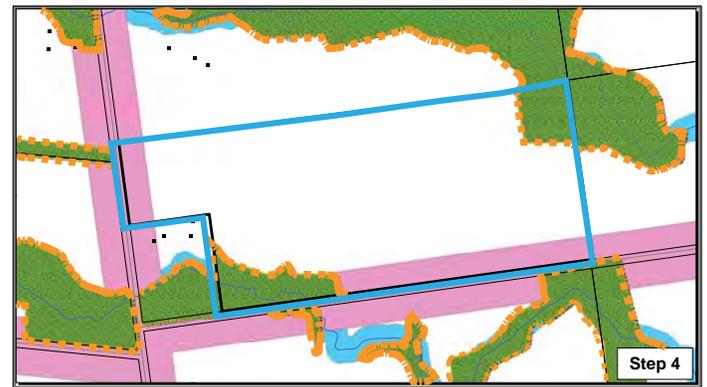
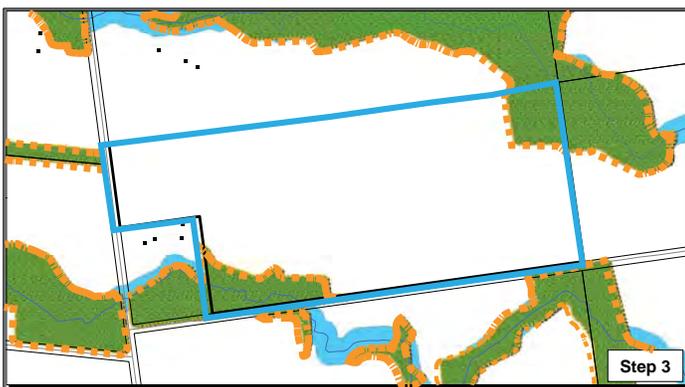
# WIND ENERGY CENTRE - OPEN HOUSE

## Turbine Siting Process



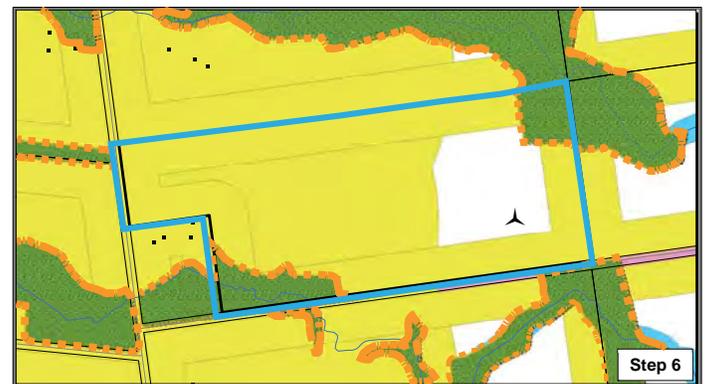
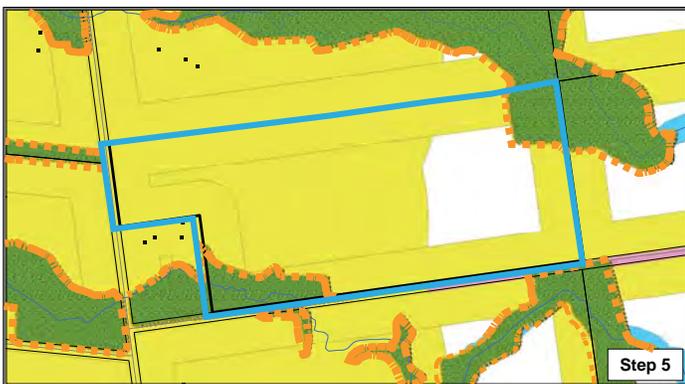
✦ Step 1: Work with local landowners to option land

✦ Step 2: Identify environmental limitations



✦ Step 3: Identify aquatic limitations

✦ Step 4: Identify local infrastructure limitations



✦ Step 5: Identify socio-economic limitations

✦ Step 6: Site turbine within remaining land available

### Legend

<ul style="list-style-type: none"> <li>✦ Turbine Location</li> <li><b>Terrestrial Features</b></li> <li>■ Woodlots</li> <li><b>Aquatic Features</b></li> <li>■ Waterbody</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Socio-Economic</b></li> <li>■ Noise Receptor</li> <li>— <b>Local Infrastructure</b></li> <li>— Major Road</li> </ul>	<ul style="list-style-type: none"> <li><b>Setback</b></li> <li>■ Terrestrial Setback</li> <li>■ Aquatic Setback</li> <li>■ Local Infrastructure Setback</li> <li>■ Socio-Economic Setback</li> </ul>
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# WIND ENERGY CENTRE - OPEN HOUSE

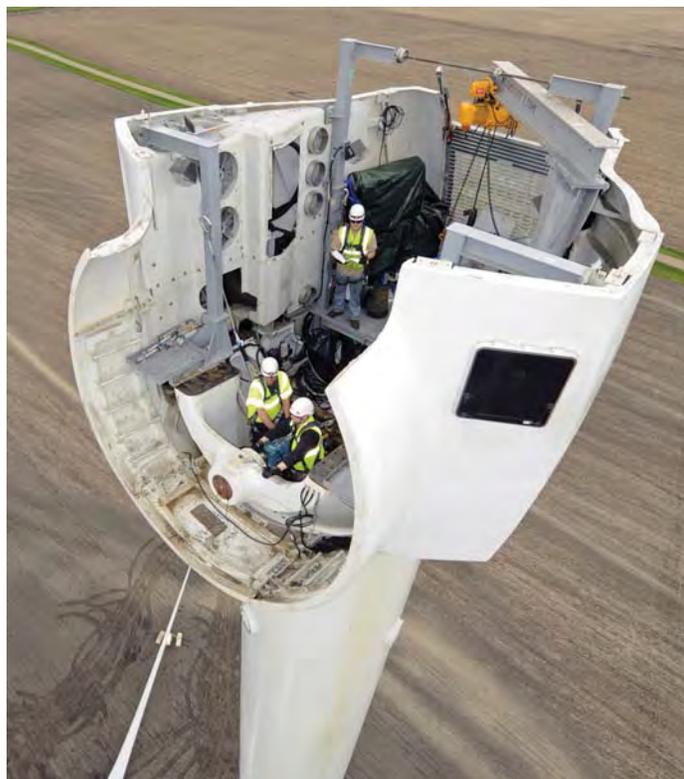
## Construction Plan

### Turbine siting and surveys

- ✦ Site preparation will include final turbine siting and surveys
- ✦ During these surveys, boundaries of turbine sites will be staked and existing buried infrastructure will be located and marked

### Access roads

- ✦ Municipal and Provincial roads will be used to transport equipment to the construction sites
- ✦ Minor modifications may be required to some of the existing roads (e.g. widening the turning radius) to transport equipment
- ✦ New access roads will typically be 10 m (34 feet) wide during the construction phase
- ✦ No permanent paved roads will need to be constructed for the turbines
- ✦ Equipment will be delivered by truck and trailer as needed throughout the construction phase and stored at temporary laydown sites surrounding each turbine



# WIND ENERGY CENTRE - OPEN HOUSE

## Construction Plan

### Electrical Collector System:

- ✦ This system consists of a mixture of underground cables, pad mounted transformers and a substation
- ✦ Ploughing and trenching will be used to install the underground cables
- ✦ The cabling will be buried at a depth that will not interfere with normal agricultural practices and maps of cable locations will be provided to landowners

### Wind Turbines:

- ✦ Foundations will be made of poured concrete, reinforced with steel rebar to provide strength
- ✦ Each foundation will require an excavation of approximately 3 metres (10 feet) deep, and 20 metres (66 feet) by 20 metres (66 feet) square
- ✦ Only the tower base portion of the foundation will be left above ground
- ✦ The turbine will then be anchored to the foundation by large bolts set in the concrete foundation
- ✦ Turbine assembly and installation will typically require 4 - 5 days per turbine
- ✦ Following commissioning, the area surrounding the turbine will be returned to its pre-construction state

### Operations and Maintenance Building:

- ✦ This building will be used to monitor the day-to-day operations of the wind farm and maintenance effort. Preferably, an existing building will be obtained for this purpose; otherwise, a new building will be constructed on privately held lands
- ✦ Potable water will be supplied by a well or through the municipal water system and if required, a septic bed will be constructed for the disposal of sewage
- ✦ These elements will be constructed in accordance with applicable municipal and provincial standards



# WIND ENERGY CENTRE - OPEN HOUSE

## Construction Plan

- A construction plan has been developed to detail all the activities that are part of the Project's construction phase. This plan includes details of any potential effects, the appropriate mitigation measures and ongoing monitoring commitments.
- The schedule below shows the anticipated construction schedule for the Project. Construction is expected to start in late summer/early fall 2013 and last for 6 months.

(Activity)	MO	M1	M2	M3	M4	M5	M6
Surveying (prior to construction)	●						
Geotechnical Sampling (prior to construction)	●						
Land Clearing and Construction of Access Roads		●	●				
Temporary Crane Paths			●				
Installation of Culverts		●					
Construction of Laydown Area			●				
Turbine Site and Crane Pad Construction		●	●	●			
Delivery of Equipment		●	●	●	●	●	●
Construction of Turbine Foundations				●			
Wind Turbine Assembly and Installation				●	●	●	●
Construction of Electrical Collector System						●	●
Construction of Transformer Substation					●	●	●
Construction of Operations Building						●	●
Land clean up and Reclamation		●	●	●	●	●	●
Turbine Commissioning							●

# WIND ENERGY CENTRE - OPEN HOUSE

## Transmission Route Overview

- NextEra Energy Canada will build a 115 kV electrical transmission line from the step-up transformer station to the connection point with the Provincial electricity grid.
- The transmission line will be located on private property or within existing road rights-of-way.
- The electricity collected via the 34.5 kV underground collection lines will converge at the transformer substation where the electricity will be “stepped-up” to 115 kV for transmission and then routed to a switchyard.
- The switchyard will occupy 2-3 hectares and is common to three of NextEra’s Wind Energy Centres (i.e. Bornish, Adelaide, and Jericho).
- The switchyard will collect power from the three Wind Energy Centres and will deliver the electricity to a second substation where the electricity will be “stepped up” to 500 kV at the point of interconnect with the existing Hydro One transmission line.

### Selecting a Transmission Route

- Distance between the transmission line and existing structures is considered when selecting a route.
- Easement widths located on private property will vary between 33 - 200 feet (10 - 60 metres). Widths vary due to special features on a particular parcel.
- Existing land uses and the location of environmentally sensitive features are considered when choosing a route.

### Land Owners and Easement Agreements

- NextEra Energy Canada is committed to working with landowners within the transmission corridor to find a mutually acceptable route for the transmission line.

# WIND ENERGY CENTRE - OPEN HOUSE

## Construction of a Transmission System

The construction of the transmission system is being considered on municipal rights of way, private lands or a combination of both within the transmission study area.

- Transmission structures will typically be single poles made of metal, wood, or concrete.
- Poles will be approximately 18 – 27 metres (60 - 90 feet) in height. The transmission line will be mounted on existing or new hydro poles.
- A typical span between poles will be 91 – 182 metres (300 - 600 feet).
- Wherever practical, transmission and distribution will be co-located on a single pole.
- Transmission lines must be constructed to standards outlined by the Province and/or electrical codes.

### Transmission Approvals Process

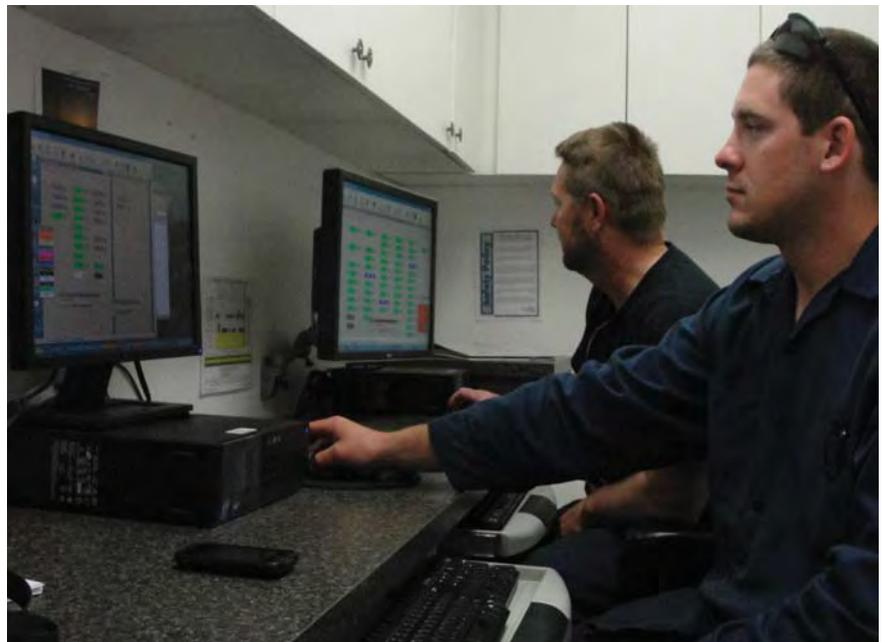
- Transmission lines (lines with voltages higher than 50 kV) that are longer than 2km require a Leave to Construct from the Ontario Energy Board.
- This process examines the need for the line and the proposed routing to ensure that the priorities given to the Ontario Energy Board by the government are met.
- The line is also permitted as part of the Renewable Energy Approval (REA) process.
- Natural heritage and archaeological studies are being conducted along proposed routes within the transmission study area including:
  - ✦ Vegetation studies
  - ✦ Aquatic habitat assessments; and
  - ✦ Birds, bat and wildlife studies
- Any additional studies that may be required as a result of route selection will be conducted prior to construction.

# WIND ENERGY CENTRE - OPEN HOUSE

## Operations and Maintenance

NextEra Energy believes in “prevention” versus “event response” through component condition and performance assessment

- ✦ Experienced operations and maintenance managers on site
- ✦ On-going training and mentoring programs to maintain safe and efficient operation
- ✦ Site staff supported by centralized maintenance and environmental staff
- ✦ Supported by 24/7 Fleet Performance and Diagnostic Centre
- ✦ Local operations team available to answer questions and address concerns



# WIND ENERGY CENTRE - OPEN HOUSE

## Decommissioning

- The anticipated life of the project is approximately 30 years. Decommissioning of the turbines will occur following the operations phase. A plan has been developed to dismantle or decommission the Project and to restore the land and manage excess water or waste.
- Decommissioning will be done in accordance with the Ontario Health and Safety Act and any applicable municipal, provincial and federal regulations and standards.
- The following components will be removed during dismantling:
  - 1. Turbines;**
  - 2. Overhead lines and poles; and**
  - 3. Transformer substations.**

### Restoration of land and water

- All areas, including the access roads, transformer pads and crane pads will be restored as much as practical to their original condition with native soils and seeding in consultation with the landowner.
- There is the option for turbines to be “re-powered”, meaning that components could be replaced to extend the life of the Project and delay decommissioning. This is optional, and turbines may still be decommissioned.



# WIND ENERGY CENTRE - OPEN HOUSE

## Health and Wind Turbines

- Public health and safety will be considered during all stages of the Project.
- Many studies have been conducted world-wide to examine the relationship between wind turbines and possible human health effects.
- In Ontario “Ontario doctors, nurses, and other health professionals support energy conservation combined with wind and solar power – to help us move away from coal”

Ontario College of Family Physicians, Registered Nurses Association of Ontario, Canadian Association of Physicians for the Environment, Physicians for Global Survival, the Asthma Society of Canada, and the Lung Association

- In “The Potential Health Impact of Wind Turbines” (May 2010), Ontario’s Chief Medical Officer of Health examined the scientific literature related to wind turbines and public health, considering potential effects, such as dizziness, headaches, and sleep disturbance. The report concluded that:
  - ✦ “...the scientific evidence available to date does not demonstrate a direct causal link between wind turbine noise and adverse health effects. The sound level from wind turbines at common residential setbacks is not sufficient to cause hearing impairment or other direct health effects, although some people may find it annoying.”
  - ✦ The report also concluded that low frequency sound and infrasound from current generation upwind model turbines are well below the pressure sound levels at which known health effects occur. Further, the report states that there is no scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects.
- Overall, health and medical agencies agree that sound from wind turbines is not loud enough to cause hearing impairment and is not causally related to adverse effects.\*
- Scientists and medical experts around the world continue to publish research in this area. Through our health consultants, NextEra is committed to staying informed on this issue.

\*e.g., Chatham-Kent Public Health Unit, 2008; Minnesota Department of Health, 2009; Australian Government, National Health and Medical Research Council, 2010; Australian Government, 2011, Massachusetts Department of Environmental Protection (MassDEP) and Massachusetts Department of Public Health (MDPH), 2012

# WIND ENERGY CENTRE - OPEN HOUSE

## Archaeological Studies - Adelaide Wind Energy Centre

A Stage 1 Archaeological Assessment was conducted to establish if any known archaeological sites exist in or near the Project Location. Where the Stage 1 findings showed that there is archaeological potential, a Stage 2 Archaeological Assessment was completed to identify any archaeological resources and confirm if further studies are required. A Stage 3 Archaeological Assessment is conducted if a location has cultural heritage value or interest that needs further study or additional mitigation measures to protect the resource.

### Stage 1 Key Findings:

- The presence of 1 pre-contact Aboriginal sites has been documented to be within 1 km of the Project Study Area.
- The potential for Aboriginal and Euro-Canadian resources within the Study Area was determined to be moderate to high. The potential for Aboriginal sites was primarily due to the proximity of the Study Area to nearby water sources, level topography, soils that can be used for agriculture, and known archaeological sites. The potential for Euro-Canadian sites was due to an account of documentation indicating early 19th century occupation, abandoned villages, plus the continued existence of historic transportation routes such as Egremont Road.

### Stage 2 Key Findings:

- 29 archaeological sites were identified, including: 17 pre-contact Aboriginal sites and 12 Euro-Canadian sites
- A Stage 3 Archaeological Assessment was recommended for 13 of the archaeological sites, meaning that their locations were determined to have cultural heritage value or interest that requires further investigation
- To date, 6 of 13 have been completed, of which, 1 has been recommended for a Stage 4 Archaeological Assessment.



# WIND ENERGY CENTRE - OPEN HOUSE

## Water – Adelaide Wind Energy Centre

- A Water Assessment and Water Body Report was completed in accordance with O.Reg 359/09 to identify and address any water bodies within 120m of the Project Location. A water body includes a lake, permanent stream, intermittent stream and seepage area.
- 19 water bodies were identified within the Project Area and 28 sites within these features were identified within 120 m of the Project Location
- No lakes, Lake Trout lakes, or seepage areas were identified within 120 m of the Adelaide Wind Energy Centre Project Location.
- The report concluded that the Project can be constructed and operated without any remaining effects that could harm the environment.

### Potential Effects and Mitigation

The table below presents a summary of the potential effects on water bodies and proposed mitigation measures:

Project Phase	Potential Effect	Mitigation Measures
Construction and Decommissioning	Erosion and sedimentation	<p>Schedule clearing, grubbing and grading activities to avoid times of very high runoff volumes, wherever possible.</p> <p>Stabilize banks as soon as possible after construction disturbance (i.e. plantings, rock etc.), if insufficient time is available in the growing season to establish vegetative cover, an overwintering treatment such as erosion control blankets, fiber matting etc. should be applied to contain the site over the winter period.</p> <p>Minimize disturbance by keeping construction equipment outside and away from water bodies wherever possible.</p> <p>Work in dry conditions (i.e. low flow period) or isolate in-water work area using good engineering practices and dewatering techniques.</p> <p>Install silt fencing in-water downstream of dewatering activities.</p> <p>Dewatering discharge should be dissipated (i.e. sand bags, hay bales etc.)</p>
	Temporary disruption of fish habitat (in-water work)	<p>Restrict construction during sensitive timing windows, as indicated by local OMNR.</p> <p>Work in the dry (i.e. low flow) or isolate work area using good engineering practices or by working in dry conditions using accepted methods to bypass flows.</p> <p>Machinery should be operated in a manner that minimizes disturbance to the banks and bed of the watercourse.</p> <p>Stabilize banks as soon as possible after construction disturbance (i.e. plantings, rock etc.).</p>
	Soil Compaction	<p>Controlled vehicle access routes.</p> <p>Staging areas should be located away from water bodies (i.e. 30 m).</p> <p>Details of the Water Body Assessment can be found in the reports on this subject as part of the complete REA application.</p>
Operations		<p>Implement Spill Response Plan</p> <p>Implement road salt, sand management Plan.</p> <p>Avoid or limit use of pesticides, where possible.</p> <p>Address any impacts resulting from design or construction phases</p>

# WIND ENERGY CENTRE - OPEN HOUSE

## Natural Heritage - Adelaide Wind Energy Centre

- Information was gathered to identify and investigate natural features such as provincial parks, wetlands, woodlands or wildlife (e.g. bird or bat) habitats within 120m of the Project Location. Features were evaluated for significance, according to provincial criteria. Where significance was established an Environmental Impact Study (EIS) was conducted.
- The EIS identified potential negative effects on the environment, proposed mitigation measures, identified residual effects and their significance, and described how the environmental effects monitoring plan, and construction plan address any potential negative environmental effects.
- The following features were identified as significant:
  - ✦ 5 wetlands;
  - ✦ 42 woodlands;
  - ✦ 2 valleylands;
  - ✦ 26 Candidate Significant Wildlife Habitats, as well as generalized candidate significant wildlife habitats
- For each natural heritage feature identified as significant, potential effects were assessed and mitigation measures/monitoring commitments proposed depending on the type of project infrastructure affecting the feature.
- The EIS was approved by the MNR

The table below presents a summary of the potential effects and mitigation.

Project Phase	Potential Effect	Mitigation Measures
Construction and Decommissioning	Direct vegetation removal	Clearly delineate work area within 30 m of significant natural features or wildlife habitats using erosion fencing, or similar barrier, to avoid accidental damage to species to be retained. Any tree limbs or roots that are accidentally damaged by construction activities within significant woodlands or valleylands will be pruned using proper arboricultural techniques. No vegetation removal will occur in rare plant communities, sensitive landforms or significant wetlands. Periodic monitoring will take place during construction/decommissioning to ensure compliance
	Sedimentation and erosion	Implement a sediment and erosion control plan within 30 m of a significant natural feature or wildlife habitat. Install, monitor, and maintain erosion and sediment control measures (i.e. silt fences) around the construction areas within 30 m of a significant natural feature or wildlife habitat. Periodic monitoring will take place during construction/decommissioning to ensure compliance
	Spills (i.e. oil, gasoline, grease, etc.)	All maintenance activities, vehicle refueling or washing, and chemical storage will be located more than 30 m from any significant natural feature or wildlife habitat. Develop a spill response plan and train staff on appropriate procedures. Keep emergency spill kits on site. Dispose of waste material by authorized and approved offsite vendors. Any stockpiled material will be stored more than 30m of a wetland, woodland, or water body.
Operations	Disturbance and/or mortality to local wildlife (i.e. birds and bats)	Avoid placing turbines within blade length of significant habitat. Propose obstruction lighting scheme that minimizes risk to bird and bat collisions while fulfills Transport Canada requirements. Conduct post construction mortality monitoring according to the document <i>Bat and Bat Habitats: Guidelines for Wind Power Projects</i> and <i>Bird and Bird Habitats: Guidelines for Wind Power Projects</i> .