Appendix A5. Final Public Meeting – Municipalities of Bluewater and Huron East

NOTICE OF PUBLIC MEETING #2

To be held by Varna Wind, Inc. regarding a Proposal to Engage in a Renewable Energy Project

Project Names: Bluewater Wind Energy Centre

Project Location: Bluewater and Huron East, Huron County, Ontario

Dated at the Municipalities of Bluewater, Huron East and Huron County this the 13 of April, 2012

Varna Wind, Inc., (a wholly owned subsidiary of NextEra Energy Canada) is planning to engage in a renewable energy project in respect of which the issuance of a renewable energy approval is required. The proposal to engage in the project and the project itself is subject to the provisions of the *Environmental Protection Act* (Act) Part V.0.1 and Ontario Regulation 359/09 (Regulation). This notice must be distributed in accordance with section 15 of the Regulation prior to an application being submitted and assessed for completeness by the Ministry of the Environment. **The purpose of the meeting is to provide residents an opportunity to review and discuss the draft documentation related to the Project's Renewable Energy Approval.**

Public meetings will be held for the project on the following dates:

DATE: June 13, 2012	DATE: June 14, 2012
TIME: 4:00 p.m. to 7:00 p.m.	TIME: 4:00 p.m. to 7:00 p.m.
PLACE: Seaforth Community Centre	PLACE: Stanley Complex
122 Duke Street, Seaforth, ON	38594A Mill Road, Varna, ON

Please note that the meetings will be in an Open House format allowing attendees to visit any time during the event.

Project Description: Pursuant to the Act and Regulation, the facility, in respect of which this project is to be engaged in, is a Class 4 Wind Facility. If approved, this facility would have a total maximum name plate capacity of 60 MW. The Project Location is described in Figures 1 and 2.

Documents for Public Inspection:
The Draft Project Description Report titled "Project Description Report – Bluewater Wind Energy Centre" describes the project as consisting of 37 GE 1.6 MW turbines (although the Renewable Energy Approval application will include 41 turbine locations), a pad mounted transformer at each turbine, one transformer substation, underground electrical collection lines and an overhead transmission line, turbine access roads, an operations building, two meteorological towers and construction staging areas.

Varna Wind, Inc. has prepared the following supporting documents in order to comply with the requirements of the Act and Regulation: Project Description Report; Construction Plan Report; Design and Operations Report; Decommissioning Plan Report; Wind Turbine Specifications Report; Natural Heritage Assessment Report; Water Assessment and Water Body Report; Stage 1 and 2 Archaeological Assessment Reports; Heritage Assessment Report; and Noise Study Report.

Written copies of these draft supporting documents are available for public inspection on April 13, 2012 at www.NextEraEnergyCanada.com and at the Bluewater, Huron East and Huron County Municipal Offices:

Municipality of Bluewater	Municipality of Huron East	Huron County
14 Mill Avenue, Box 250	72 Main Street, Box 610	1 Courthouse Square
Zurich, Ontario, N0M2T0	Seaforth, Ontario, N0K 1W0	Goderich, Ontario, N7A 1M2

Written copies will also be available at the public open houses.

Comments received on or before June 18, 2012 will be included in our Public Consultation report to the Ministry of the Environment. Should you wish to provide comments after this date, they can be forwarded directly to the Ministry of the Environment.

Project Contact and Information: To learn more about the project proposal, public meetings, or to communicate concerns please contact:

Derek Dudek
Community Relations Consultant, NextEra Energy Canada, ULC
5500 North Service Road, Suite 205, Burlington, ON, L7L 6W6
Phone: 1-877-257-7330
Email: Bluewater.Wind@NextEraEnergy.com
Website: www.NextEraEnergyCanada.com

Figure 1

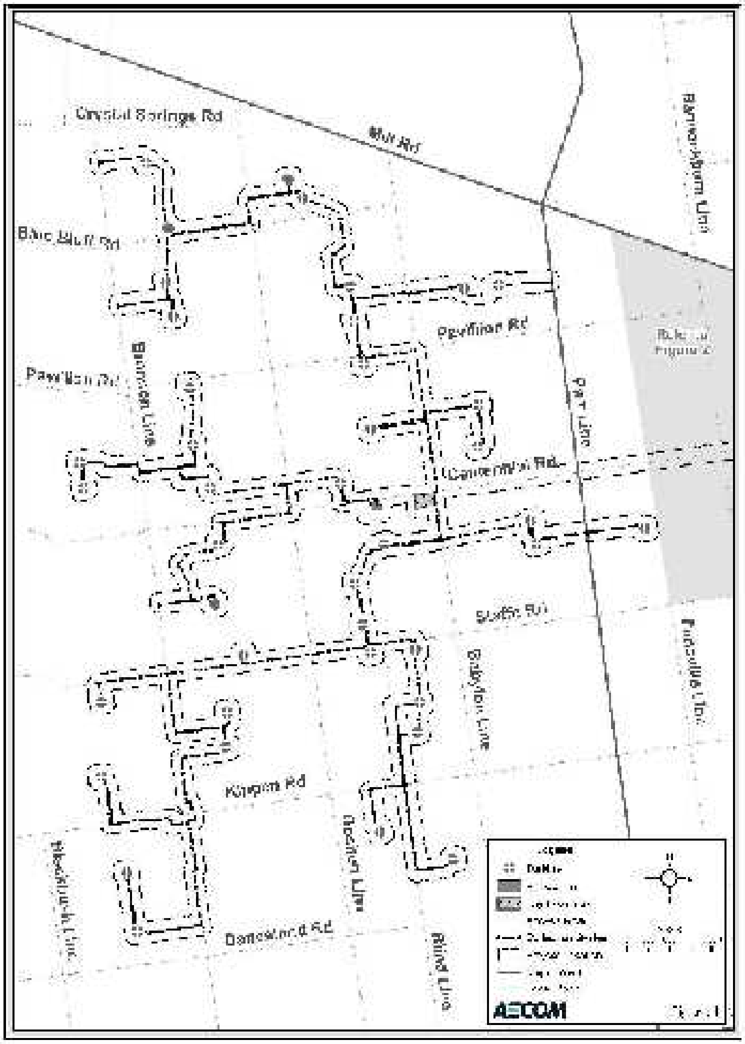
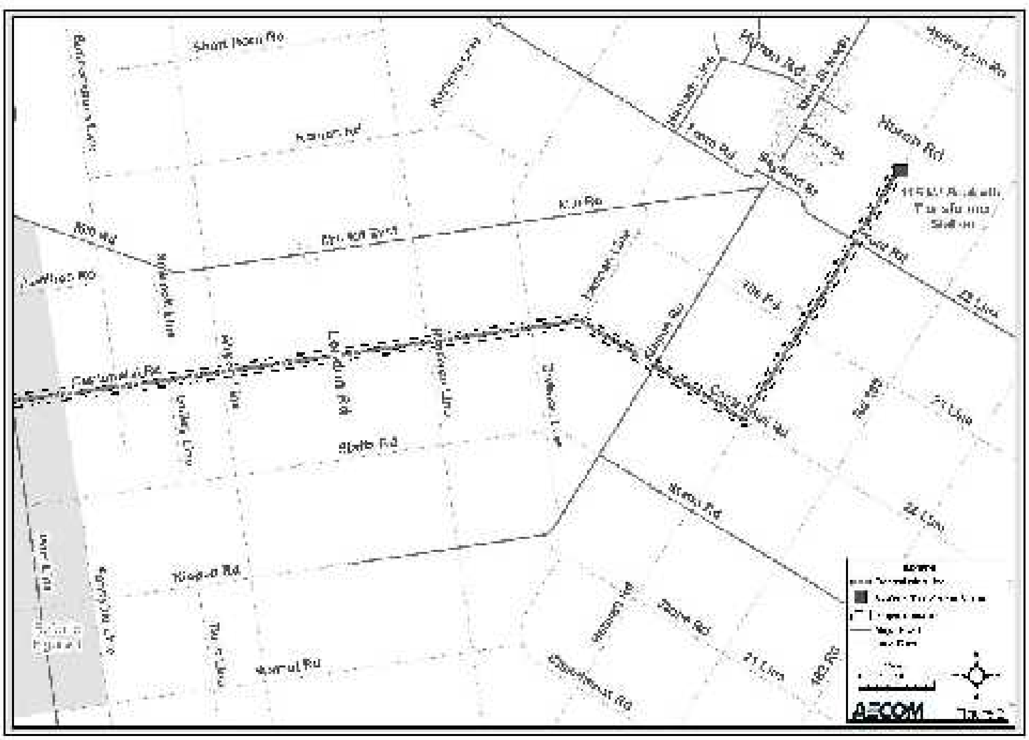


Figure 2



Welcome!

NextEra Energy Canada welcomes you to tonight's event.

We are here to:

- Present the final turbine and transmission line route layout for the Bluewater Wind Energy Centre
- Present field study findings and how we propose to address any effects
- Answer your questions
- Receive your comments
- Discuss draft reports

NEXTera ENERGY CANADA

www.NextEraEnergyCanada.com

A Leader in Clean Energy

NextEra Energy Canada is an indirect, wholly-owned subsidiary of NextEra Energy Resources. NextEra Energy Resources, LLC is the largest generator of wind energy in North America.

NextEra Energy Canada

NextEra Energy Canada is a leading renewable energy developer in Canada focused on developing electricity derived from clean, renewable sources. Our Canadian operations are headquartered in Burlington, Ontario. We are the owner and operator of four wind energy projects and two solar energy projects in the following provinces:

- Quebec: Mount Copper and Mount Miller Wind Energy Centres
- Nova Scotia: Pubnico Point Wind Energy Centre
- Alberta: Ghost Pine Wind Energy Centre
- Ontario: Sombra and Moore Solar Energy Centres

NextEra Energy Canada is currently working toward approval of six wind energy centres in Ontario. We currently have two projects that received Renewable Energy Approval (REA).

NextEra Energy Resources

We are:

- The operator of 90 wind projects in 18 states and three provinces with nearly 9,000 wind turbines providing over 8,700 megawatts of generation
- The second largest global generator of renewable energy
- The largest generator of both wind and solar power in North America operating wind energy facilities for over 21 years

Did you know that NextEra Energy Resources...

- Began developing renewable energy projects in 1989?
- Has approximately 4,500 employees in North America?
- Generates approximately 95% of its electricity from clean or renewable sources?

Why is Southwestern Ontario considered a great choice for wind energy?

Wind developers favour Southwestern Ontario for two main reasons:

1. Strong and consistent wind levels, particularly around the Great Lakes

2. Available and adjacent electricity transmission

   - Wind data has been collected in the Project Study Area since 2007 measuring wind speeds at heights of 40 metres (131 feet), 50 metres (164 feet) and 60 metres (197 feet)

   - Wind speeds are viable for commercial wind energy generation

   - The region is well served by existing and planned transmission lines (such as Hydro One's Bruce to Milton line) that have available capacity to receive the electricity generated by the project

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:

- $166 million in corporate income tax
- $10 million in property tax revenue to Huron County
- $21 million in landowner payments

Price Stability

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

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

Renewable Energy in Ontario

The Green Energy and Green Economy Act

- Developed to stimulate the "green" economy in Ontario and create up to 50,000 jobs

Key Components:

- Provincial obligation to purchase green energy
- Priority grid access for renewable energy projects
- Long-term fixed-price power contracts
- Coordinated regulatory and approvals process

Provincial Green Energy Initiatives and the Feed-in-Tariff Program:

- Feed-in-Tariff (FIT) Program, launched by the Ontario Power Authority, is North America's first comprehensive guaranteed pricing structure for renewable electricity production

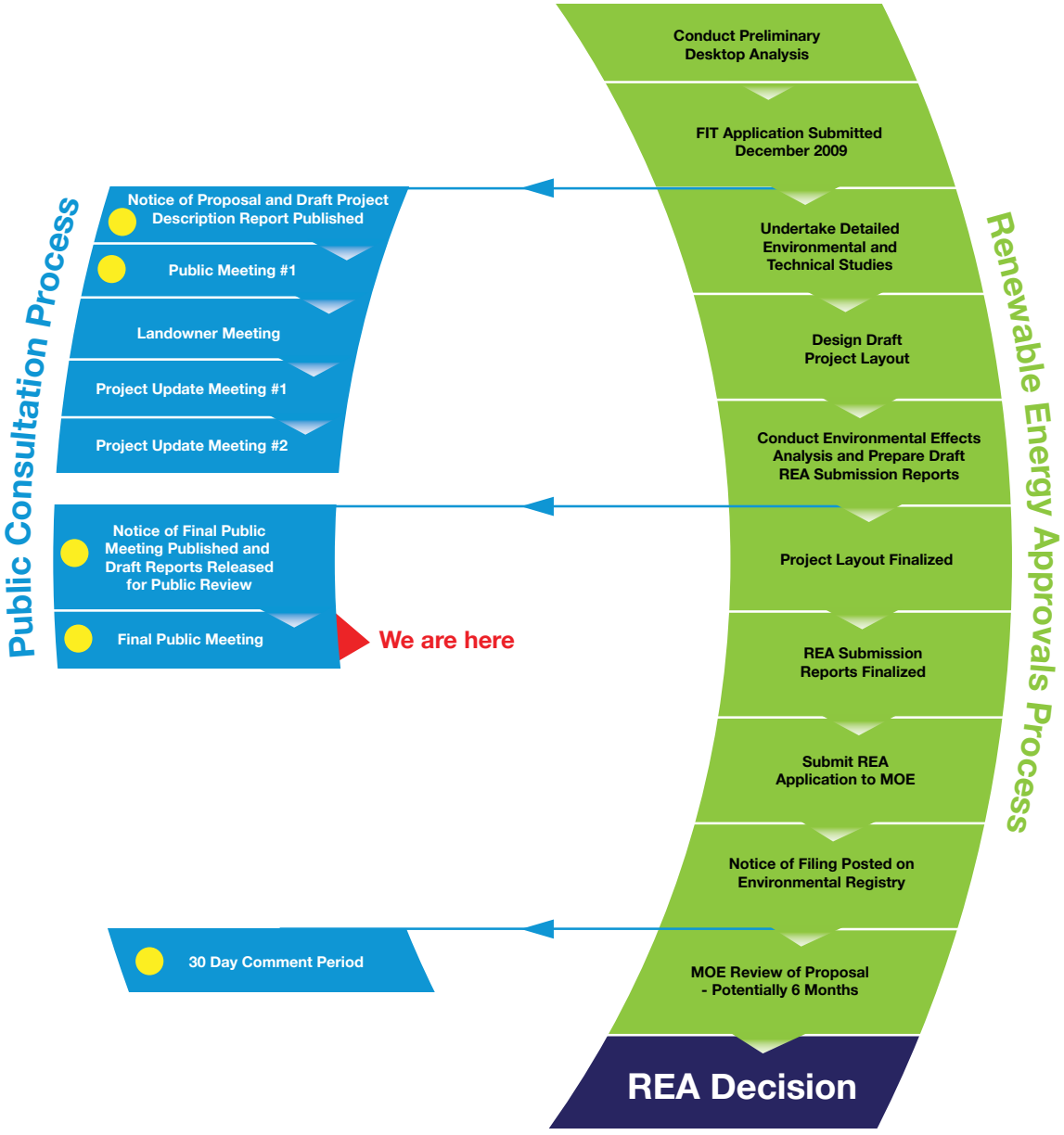
- The FIT Program offers stable prices and long-term contracts to green energy projects that encourage investment in renewable energy and economic development across the Province

- NextEra Energy Canada had six projects that were awarded FIT contracts on July 4, 2011:

    - Adelaide Wind Energy Centre
    - Bluewater Wind Energy Centre
    - Bornish Wind Energy Centre
    - East Durham Wind Energy Centre
    - Goshen Wind Energy Centre
    - Jericho Wind Energy Centre

We have two additional projects (Conestogo and Summerhaven Wind Energy Centres) which have been awarded a FIT contract by the Ontario Power Authority and have received the Renewable Energy Approval.

Renewable Energy Approval Process



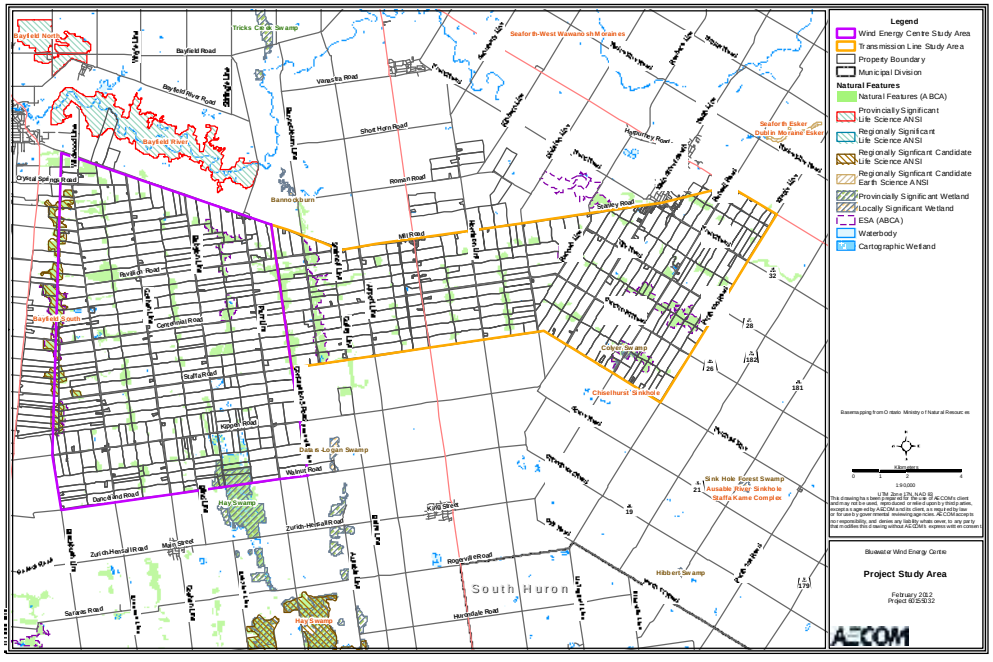
Mandatory Consultation Activity

The Bluewater Project

- The proposed Bluewater Wind Energy Centre project is located within the municipalities of Bluewater and Huron East in Huron County, Ontario.
- The project will be able to generate up to 60-megawatts of electricity, enough energy for nearly 15,000 homes in Ontario
- Up to 37 1.6-megawatt turbines will be constructed; however, up to 41 turbines will be permitted through the Renewable Energy Approvals process

Facility components for the Bluewater Wind Energy Centre will include:

- Laydown and storage areas (including temporary staging areas) for construction equipment and supplies
- Underground electrical collection lines (on private property and in the municipal right-of-way) to connect the turbines to the transformer substation
- A transformer substation to feed the electricity generated by the project into a new 115 kV transmission line that will connect to the existing Hydro One Seaforth Transformer Station
- Access roads for construction and maintenance
- Permanent meteorological towers to measure wind speeds, wind direction, temperature and humidity during operation
- An operations and maintenance building



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Your Concerns... Our Response

Q: How much noise will there be from turbines?

A: *Wind projects must show that they meet the sound limit requirements prescribed by the Ministry of Environment. For non-participating residences (those that are not a part of the project) the sound limit is 40 decibels (dBA). This is quieter than many sources of sound within a home (i.e., 40 dBA is about halfway between a whisper and a normal conversation between two people less than a metre apart). Sound from a wind turbine diminishes over distance, as such; NextEra meets or exceeds the 550 metre minimum setback distance required by the Province between wind turbines and dwellings.*

Q: What effects will there be on wildlife? (e.g. birds, bats etc)

A: *When properly sited, wind turbines present less of a danger to wildlife than other structures such as buildings and roads. Turbines will be located as carefully as possible to minimize any effects on wildlife. NextEra Energy Canada will work closely with the relevant experts to assess any potential effects on wildlife, including birds and bats.*

Q: What risks are there to my health from turbines?

A: *There is little credible evidence to support any links between wind turbines and adverse effects on human health either related to noise or shadow flicker. NextEra will have a Complaint Resolution Process in place to address any concerns related to the project that may arise.*

Q: What risks are there to my health from transmission lines?

A: *It is very unlikely that electro-magnetic fields (EMF) from high voltage power lines will have any effect on health. The EMF from power lines and transformer boxes are much weaker than those from normal household appliances.*

Your Concerns... Our Response

Q: I am concerned about the effect on the value of my property.

A: *Based on available research, we are not aware of any credible evidence to indicate a decline in property values from the siting of a wind farm. Independent studies have been conducted by Ontario municipalities, leading universities, and other entities which have concluded that the construction of a wind facility does not detract from property values.*

Q: What will it cost to decommission the turbines?

A: *The decommissioning costs will be established through the Renewable Energy Approval process which will specify the requirements for a decommissioning plan and incorporate them in the permit under 0.Reg. 359/09. The public will have an opportunity to provide input and comment on the plan that will be apart of the application filed with the Ministry of the Environment. The project owner will be responsible for the cost of the decommissioning.*

Q: I have concerns about the impact on the landscape from the turbines.

A: *The visual impact of any development is highly subjective. Through our consultation we will present visualizations of our proposed development for public comment and feedback that may result in changes that would make the development more visually appealing.*

Q: I am concerned that wind turbines may prove distracting to motorists.

A: *NextEra is unaware of any issues regarding our wind turbines causing distractions to drivers. We will ensure that we adhere to the guidelines put in place by the Ministry of Environment regarding setbacks from the road.*

For a complete list of comments and questions from the public, please visit the Frequently Asked Questions sections on our website. We will also publish concerns and inquiries

REA documents and posted on our website.

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

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 regime 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 constraints based on input from project engineers, ecologists and aquatic biologists, cultural experts, local landowners, Aboriginal groups, and government agencies

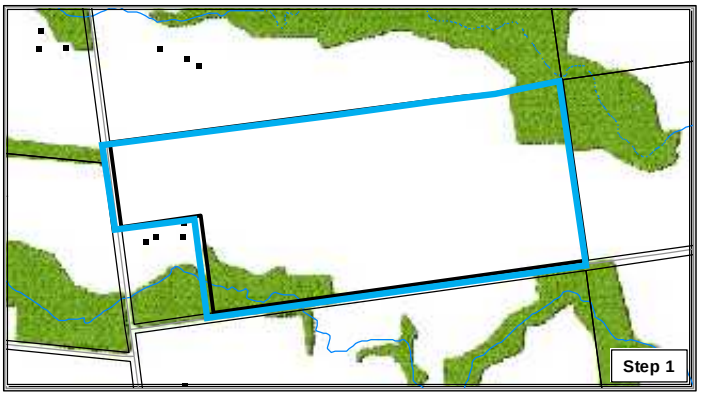
4. Identify locations to site project infrastructure by balancing these technical and environmental constraints while adhering to the setback distances prescribed by the Province (i.e., Ontario Regulation 359/09) as identified in **Table 1** below. Project components can be sited within the setbacks for some terrestrial features provided that an Environmental Impact Study is completed and mitigation measures identified.

Table 1. Turbine Siting Process Constraint Categories

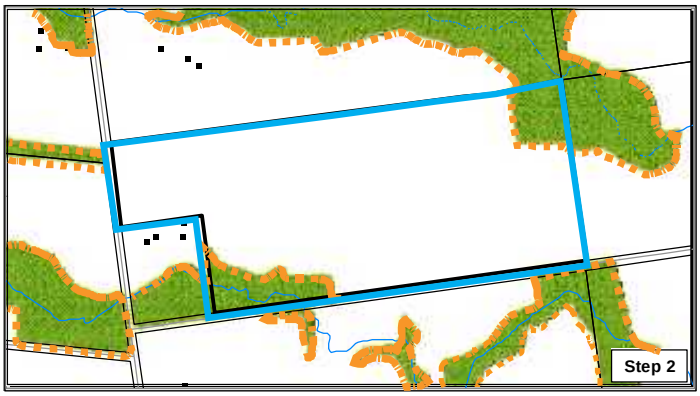
Terrestrial Features	• Area of Natural and Scientific Interest (ANSI) Earth Science: 50m • ANSI Life Science:120m • Significant Wildlife Habitat:120m • Significant Woodlands and Valleylands:120m • Provincially Significant Wetland:120m
Aquatic Features	• Streams and Waterbodies: 30m
Local Infrastructure	• Petroleum Resource Facilities: 75m • Road Right-of-Way: 60m • Railway Right-of-Way: 60m
Socio-Economic	• Property Line: 60m • Residents and other uses sensitive to noise: 550m

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

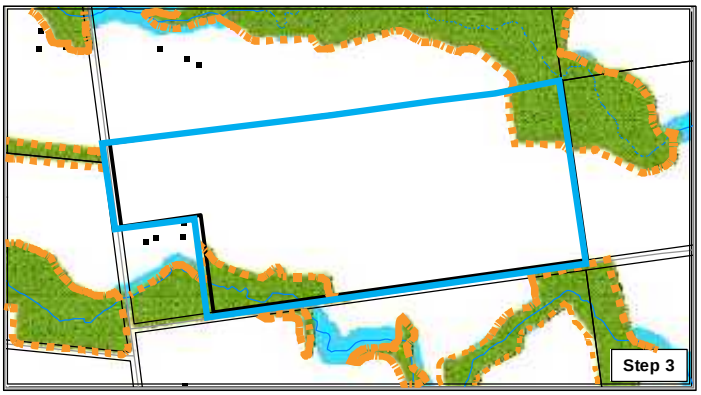
Turbine Siting Process



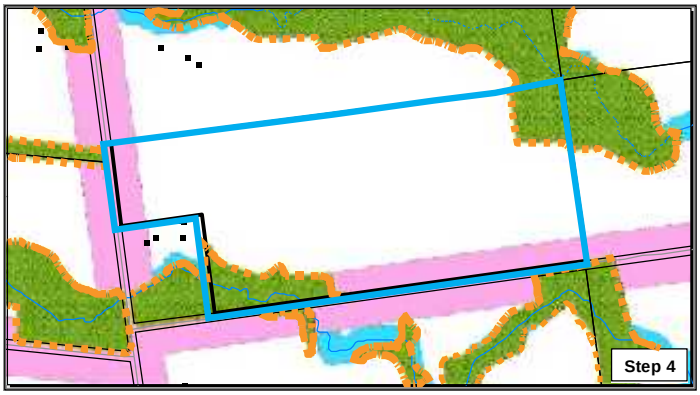
Step 1: Work with local landowners to option land



Step 2: Identify terrestrial constraints

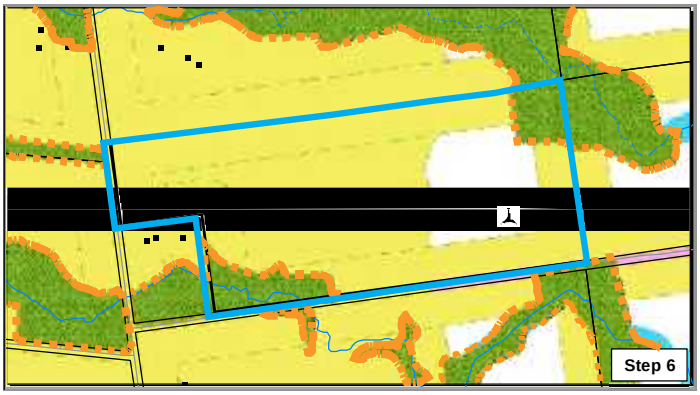


Step 3: Identify aquatic constraints



Step 4: Identify local infrastructure constraints

Step 5: Identify socio-economic constraints



Step 6: Site turbine within remaining land available

Legend

Turbine Location

Terrestrial Features

Woodlots

Aquatic Features

Waterbody

Socio-Economic

Noise Receptor

Local Infrastructure

Major Road

Setback

Terrestrial Setback

Aquatic Setback

Local Infrastructure Setback

Socio-Economic Setback

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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

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

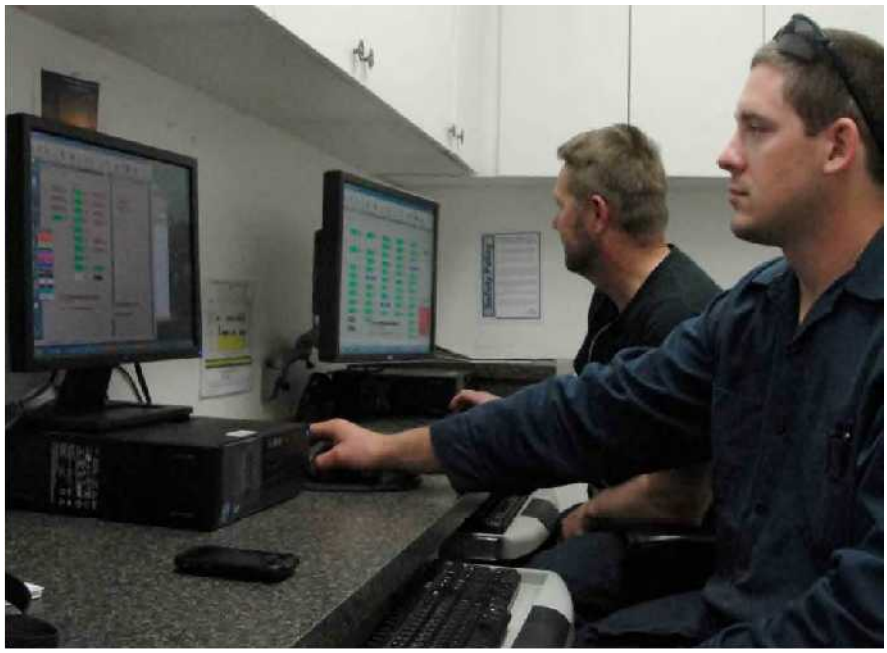
Operations and Maintenance Building:

- 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

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



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.

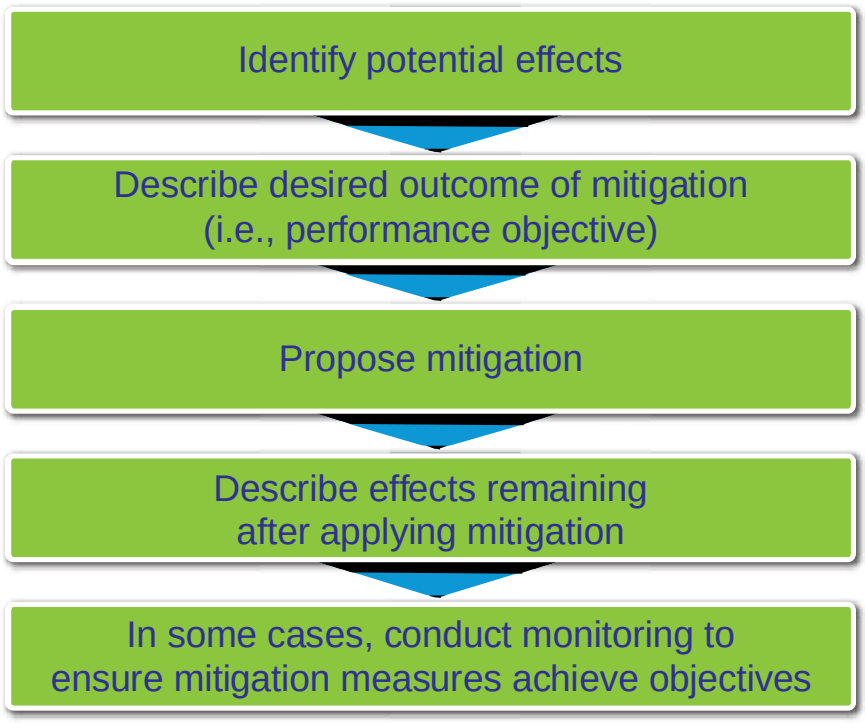
*e.g., Chatham-Kent Public Health Unit, 2008; Minnesota Department of Health, 2009; Australian Government, National Health and Medical Research Council, 2010; Australian Government, 2011, Massachusetts Department of Environmental Protection (MassDEP) and Massachusetts Department of Public Health (MDPH),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

Effects Assessment

Potential effects were assessed based on the following:

- Archaeological sites;
- Natural Heritage (e.g. birds, bats, wetlands etc.);
- Water Bodies;
- Cultural Heritage features;
- Noise; and
- Shadow flicker.

The diagram below shows the process followed for the effects assessment:



Archaeological Studies - Bluewater Project

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 potential for discovering Aboriginal and Euro-Canadian archaeological resources was deemed to be moderate to high;
- Important features included: drinking water sources, areas of flat landscape, soils for agricultural purposes, known archaeological sites and Euro-Canadian historic documents; and
- Evidence exists for both Aboriginal and Euro-Canadian use of the area over time.

Stage 2 Key Findings:

- 25 archaeological sites were identified, including: 18 pre contact Aboriginal sites and 7 historic Euro-Canadian sites;
- Stage 3 Archaeological Assessment was recommended for 4 of the historic Euro-Canadian sites, meaning that the locations have cultural heritage value or interest that requires further investigation; That work is underway.
- No further investigation was deemed necessary at any of the other sites.

Cultural Heritage – Bluewater Project

- A Cultural Heritage Assessment was conducted using historic research, mapping, field surveys and consultation with local historians;
- No protected properties or protected cultural heritage landscapes were found in the Project Location;
- 76 structures (45 houses and 31 barns) older than 40 years were identified within the Project Location. These structures were identified as contributing to the character of the rural area. Of these structures 47 of them (20 houses and 27 barns) were deemed to have cultural heritage value or interest but no further work was recommended since there are no anticipated direct or indirect impacts on these structures.

Water – Bluewater Project

- A Water Assessment was conducted to identify water bodies within 120m of the Project Location. A water body includes a lake, permanent stream, intermittent stream and seepage area, defined under O.Reg. 359/09.

- 69 water bodies were identified within 120m of the Project Location through desktop research and field investigations.

- Key Findings
  - 15 water bodies are located within 120m of turbines;
  - Seven water bodies will require a watercourse crossing through installation of a culvert;
  - 17 water bodies are located within 120m of an access road;
  - Five water bodies are located within 120m of collection lines;
  - The transmission line will span 11 water bodies; and
  - One water body is located within 120m of the substation and laydown area.

Potential Effects and Mitigation

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

Project Phase	Potential Effects	Mitigation Measures
Construction/ decommissioning	Erosion and sedimentation from clearing vegetation	Erosion blankets, erosion control fencing and straw bales will be used to control erosion and prevent soil from entering watercourse.
	Degradation of fish habitat from access roads crossing water courses	Culverts will be designed and installed in a way to prevent barriers to fish movement.
	Soil compaction which could increase water runoff into watercourses	Changes in land contours and natural drainage will be minimizes and temporary storage basins installed to allow water infiltration, or permanent stormwater management facilities used as necessary.
Operations	Water contamination from accidental spills associated with maintenance activity (unlikely to occur).	Spill response plan will be developed and an emergency spill kit kept on site. Any spills will be reported to the Ministry of the Environment and local municipalities.

Natural Heritage - Bluewater Project

- 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 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 negative environmental effects.

- The following features were identified as significant:
  - 9 wetlands;
  - 31 woodlands;
  - 1 valleyland; and
  - 11 types of significant wildlife habitat (e.g. amphibian breeding habitats, rare forest types, bat maternity colonies, waterfowl nesting habitat, woodland raptor nesting habitat.)

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

Potential Effects and Mitigation

Project Phase	Potential Effect	Mitigation Measures
Construction/ Decommissioning	Increased erosion, sedimentation and turbidity from clearing vegetation for access roads, crane paths etc.	Erosion control fencing will be kept in place until disturbed areas are stable. All stockpiled materials will be kept away from the features and periodic monitoring will take place during construction to ensure compliance.
	Damage to vegetation	Protective fencing installed to ensure work is kept within identified zones. Periodic monitoring will take place during construction to ensure compliance.
	Soil and water contamination from accidental spills or oil, gasoline or grease.	A spill response plan will be developed to outline the steps to be taken in the event of a spill. An Emergency Response and Communications Plan has been included in the Design and Operations Report.
Operations	Disturbance or mortality to wildlife (e.g. birds and bats) from turbine collisions.	Operational mitigation techniques including periodic shut down of turbines when the chances for bird or bat collisions are increased. Monitoring will include three year post-construction mortality surveys for birds and bats which will be submitted to the MNR.

Noise Studies - Bluewater Project

Noise studies were conducted to help determine the final turbine layout. The noise studies comprise the following steps:

- **Step 1:** Identify points of reception – dwellings (typically houses) that are within 2km of the wind turbines
- **Step 2:** Obtain wind turbine specifications and noise emission ratings from the manufacturer
- **Step 3:** Using an initial wind turbine layout, predict the noise levels generated at points of reception using a noise prediction model to ensure allowable limits are not exceeded. The noise model is designed in accordance with standards set by the Ministry of the Environment (MOE)
- **Step 4:** Using the noise model results, revise the turbine layout as necessary to ensure that the final turbine layout meets all applicable noise guidelines

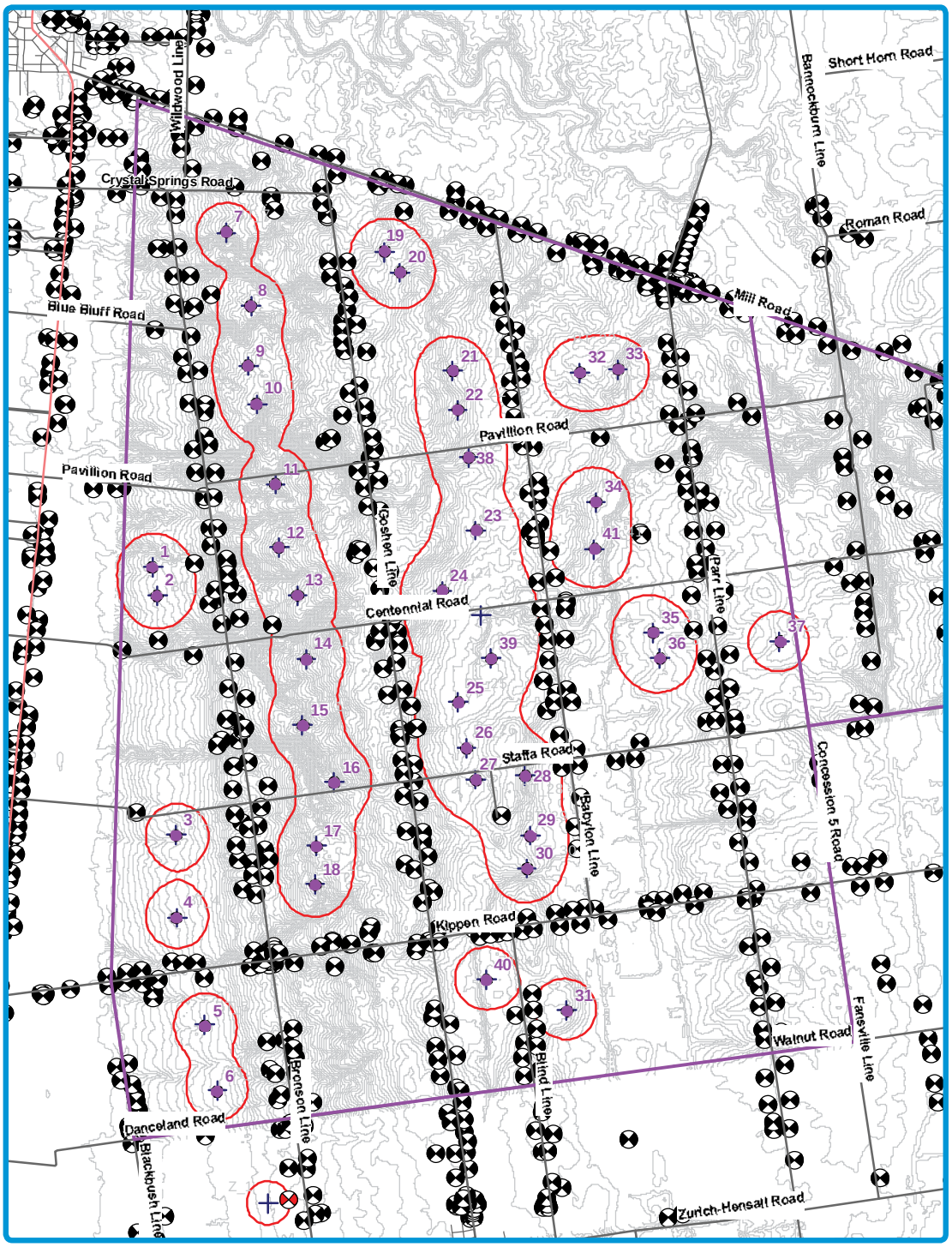
Noise requirements under Renewable Energy Approval Regulation (O.Reg. 359/09)

- Wind turbines will be set back from dwelling units that are not part of the project by at least 550m (1804ft) and must be at or below 40dBA.
- Noise from turbines must meet provincial noise limits as outlined in MOE publication 4709e "Noise Guidelines for Wind Farms"

Noise Assessment results

- Modelling of predicted noise levels from the proposed turbines, transformer station and the existing Zurich wind turbine was undertaken. The results were as follows:
  - All non-participating residences (vacant or occupied) comply with MOE guidelines for wind turbines – they are below the 40 dBA noise threshold and are greater than 550m from the nearest wind turbine;
  - A 5m high noise barrier will ensure that the transformer substation is in compliance with MOE noise limits.

Noise Studies - Bluewater Project



Wind speed of 6 m/s

>= 40.0 dBA

Noise Receptor

www.NextEraEnergyCanada.com

Shadow Flicker - Bluewater Project

- Shadow flicker is a temporary condition resulting from the sun casting intermittent shadows from the rotating blades of a wind turbine onto a sensitive receptor such as a window in a building. For shadow flicker to occur, the following criteria must be met:

1. The sun must be shining and not obscured by any cloud cover.

2. The wind turbine must be between the sun and the shadow receptor.

3. The wind turbine must be facing directly towards (or away from) the sun.

4. The line of sight between the turbine and the shadow receptor must be clear. Obstacles, such as trees, buildings or other structures, will prevent or reduce shadow flicker from occurring at the receptor.

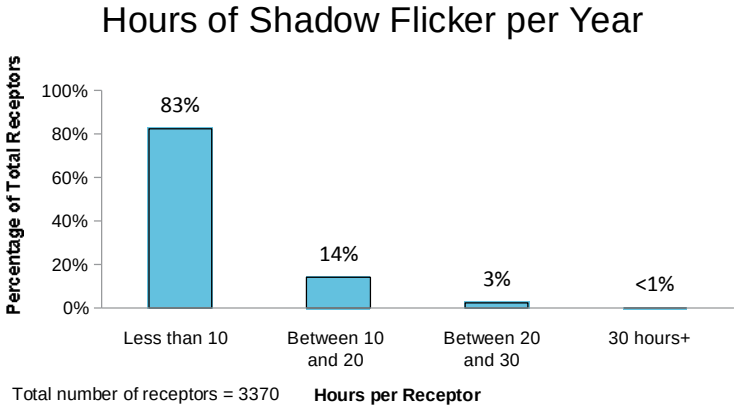
5. The receptor has to be close enough to the turbine to be in the shadow.

6. The turbine is operational and not stationary due to a lack of wind or maintenance activities.

Shadow Flicker Assessment and Results

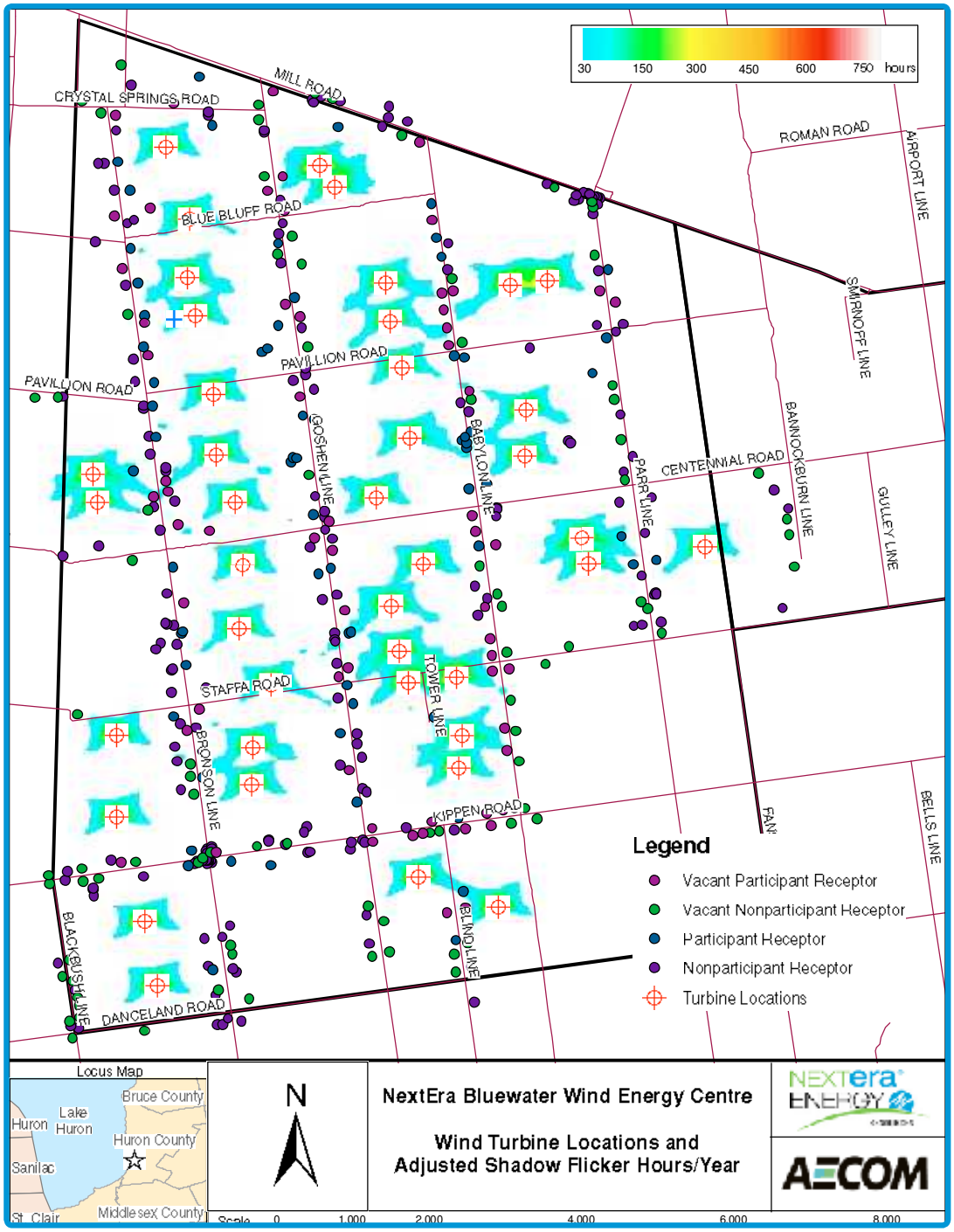
- To assess the effects of shadow flicker, hourly meteorological data, terrain features, receptor, and turbine locations were considered to show the predicted amount of hours when shadow flicker will occur.

- The worst case maximum shadow flicker per day is 1 hour and the worst case maximum shadow flicker per year is 35 hours.



- This is a conservative analysis that does not account for maintenance time, winds less than 3 m/s when the turbines will not operate, or that the turbine will rarely be directly facing the sun which will shorten the shadow from the turbine blades.

Shadow Flicker Contour Map - Bluewater Project



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.

- 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.

Transmission Line

Transmission line - Why is it needed?

- Deliver clean energy to the Ontario system operator to reduce the use of fossil fuel generated electricity by Ontarians.
- System studies indicate there is ample capacity at this point of interconnection without significant network upgrades.
- Investment in transmission infrastructure is needed in Ontario. The plan places no additional burden on our aging infrastructure or Ontario ratepayers.

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 breaker switch station.
- The breaker switch station will occupy less than 5 acres of land and is 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.
- Landowners will be paid a fair market value for the property subject to an easement.
- Compensation will be made for property damage caused during construction and operation of the transmission line (including crops).

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.

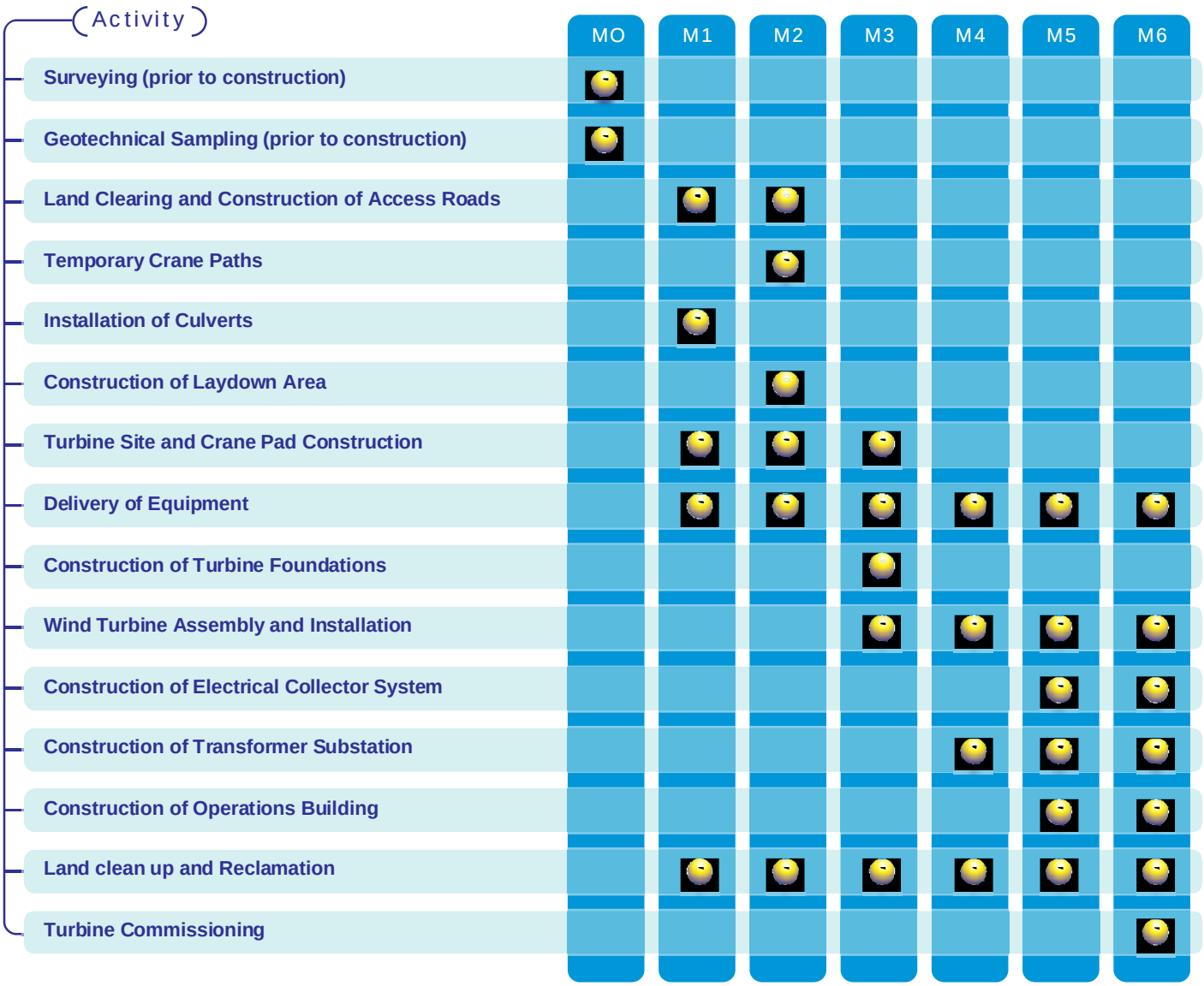
Transmission Approvals Process

- 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.

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 May 2013 and last for 6 months.



Next Steps - Bluewater Project

REA Process

- The final REA reports will be submitted following the public open houses which will initiate the Ministry of the Environment's review.

- Final reports will be available online at www.NextEraEnergyCanada.com for comment by the public and by stakeholders.

Other Approvals Required Before Construction

- In addition to the REA, permits and certificates of approval may be required from approval agencies before construction can begin. These may include:

    - Archaeological Clearance from the Ontario Ministry of Tourism, Culture and Sport (MTCS);
    - Fisheries Act Authorizations from the Federal Department of Fisheries and Oceans (DFO);
    - Aeronautical Obstruction Clearance from Transport Canada;
    - Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Permit from the Ausable Bayfield Conservation Authority (ABCA); and
    - Other permits or authorizations from the Ontario Ministry of Natural Resources (MNR) and Huron County.

Please visit www.NextEraEnergyCanada.com for more details on the progress of the project

Thank you for Attending!

- Thank you for attending this evening's Event
- Your input is important to us: please fill out an exit questionnaire and either leave it with us tonight or mail it to us using the contact information below
- Should you have any further questions or comments, please do not hesitate to contact us:

E-mail:
Bluewater.Wind@NextEraEnergy.com

Phone: 1-877-257-7330
Mail: Derek Dudek
Community Relations Consultant
NextEra Energy Canada
5550 North Service Road, Suite 205
Burlington, ON, L7L 6W6

Our environmental consultants:

Bluewater Wind Energy Project
AECOM
Marc Rose, Project Manager
905-477-8400, Ext. 388
Marc.Rose@aecom.com

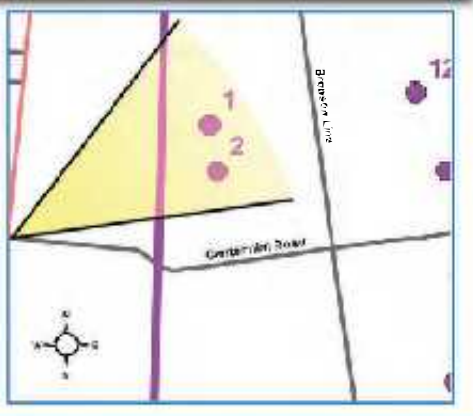
Prepared for:

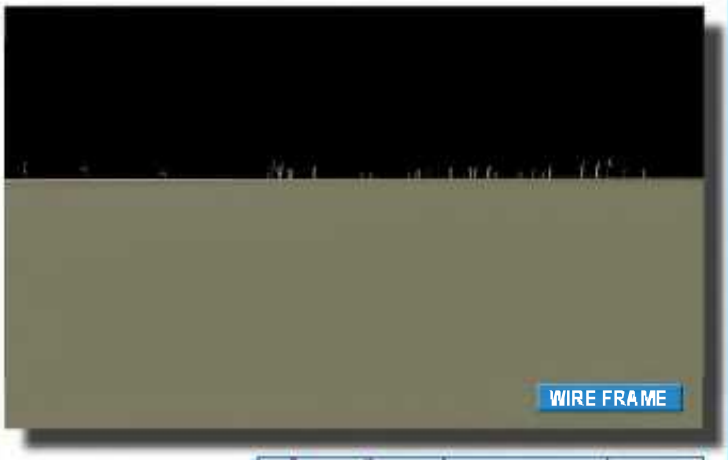
NEXTera™ ENERGY

Bluewater Wind Farm

VISUAL SIMULATION as viewed from Centennial Road

AECOM





Prepared for:

NEXTera ENERGY

Bluewater Wind Farm

VISUAL SIMULATION
as viewed from
Zurich Road

AECOM

Prepared for:

NEXTera ENERGY

Bluewater Wind Farm

VISUAL SIMULATION as viewed from Kippen Road

AECOM

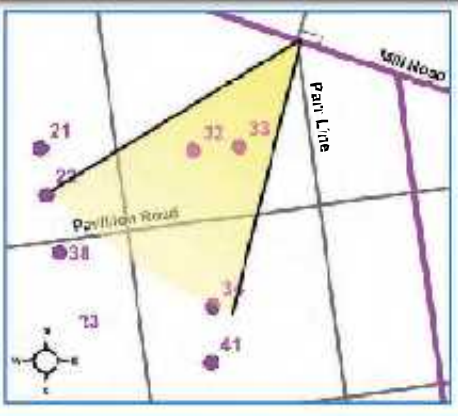
Prepared for:

NEXTera ENERGY

Bluewater Wind Farm

VISUAL SIMULATION as viewed from Parr Line

AECOM



Bluewater Wind Energy Centre

NEXTera ENERGY CANADA

COMMENT FORM • JUNE 13-14, 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 at the meeting meet your expectations?
   - [x] 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
   - [x] 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
   - [ ] Socio-economic
   - [ ] Environment
   - [ ] Human Health
   - [ ] Community Partnerships
   - [ ] Transmission
   - [ ] Project Details
   - [ ] Other (Specify)_____

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

Do not think it is a good idea to desecrate the whole country side.
Make wind farm in one area (& solar farm)
Put them along the hydro line which is already an eye sore & built on the highest ridge in area.
If they were all in one place you would drive by & it would leave country side as is.
I sincerely disapprove

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

Name: [redacted]
Street Add
City/Provi
Postal Coc **Email:**

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

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Community Relations Consultant
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5500 North Service Road, Suite 205
Burlington, Ontario L7L 6W6

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   - ☐ Socio-economic
   - ☐ Environment
   - ☐ Human Health
   - ☐ Community Partnerships
   - ☐ Transmission
   - ☐ Project Details
   - ☐ Other (Specify) How you people will get out of Ontario.

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

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Street Address: _____
City/Province: _____
Postal Code: _____ **Email:** _____

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   - ☐ Somewhat
   - ☐ No

   Please explain: _____

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

   Please explain: _____

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   - ☐ Environment
   - ☐ Human Health
   - ☐ Community Partnerships
   - ☐ Transmission
   - ☐ Project Details
   - ☐ Other (Specify)_____

372
268
529
1169

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   - ☐ Yes
   - ☑ Somewhat
   - ☑ No

   Please explain: did not like answers.

2. If you asked questions during the meeting did you get a satisfactory response?
   - ☐ Yes
   - ☐ Didn't speak to anyone
   - ☑ Somewhat
   - ☑ No

   Please explain: Not all the knowledge available ~~available~~.

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:
   Do not want them in my front & back yard. noise, bird enjoyment Propery values

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

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   - ☐ Socio-economic
   - ☑ Environment
   - ☑ Human Health
   - ☐ Community Partnerships
   - ☐ Transmission
   - ☑ Project Details
   - ☐ Other (Specify)_____

Large pond next to us. large number of nesting Canadian Geese, Trumpter swans, eagles, Turkey vultures Nesting, turtles bats - all close to one my property.

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

look over

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

Name:
Street Add
City/Provin
Postal Cod

[redacted]

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   - ☐ Somewhat
   - ☑ No

   Please explain: Do not want them period.

2. If you asked questions during the meeting did you get a satisfactory response?
   - ☐ Yes
   - ☐ Didn't speak to anyone
   - ☐ Somewhat
   - ☑ No

   Please explain: People just bullshit me think I am stupid

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: Do not want them

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   - ☐ Socio-economic
   - ☐ Environment
   - ☐ Human Health
   - ☐ Community Partnerships
   - ☐ Transmission
   - ☐ Project Details
   - ☐ Other (Specify)

   about not having them

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