ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998* s.O. 1998, c. 15 (Sched. B);

AND IN THE MATTER OF an application by East Durham Wind, Inc. for an Order or Orders pursuant to Section 41(9) of the *Electricity Act, 1998* (as amended) establishing the location of the applicant's distribution facilities within certain road allowances owned by the Municipality of West Grey.

EB-2013-0233

East Durham Wind, Inc.
Responses to Ontario Energy Board Staff Interrogatories

August 26, 2013

Board Staff Interrogatory No.1: Section 41

Reference:

a. Exhibit A/ Tab 2/ Schedule 1/ § 3

b. Exhibit B/ Tab 2/ Schedule 1/ § 1

c. Section 41 of the Electricity Act, 1998, S.O. 1998, c. 15, Schedule A, ("S.41")

Preamble:

At reference (a), East Durham indicates that "the Project is expected to be approved for up to 16 wind turbines".

Reference (b) indicates that the Project is being developed pursuant to a contract with the Ontario Power Authority.

Reference (c) delineates the rights and obligations of applicants in this type of proceeding.

Question/Request:

i. Please indicate whether the Project and the associated Distribution Facilities have been approved. If so, please submit evidence supporting this assertion to the Board.

East Durham was awarded a Feed-in-Tariff contract for the Project by the Ontario Power Authority on July 13, 2011.

Subsequently, East Durham filed an application for a renewable energy approval (REA) for the Project in accordance with Ontario Regulation 359/09 under the *Environmental Protection Act*. East Durham's REA application was deemed complete by the Ministry of the Environment (MOE) on May 14, 2013, as evidenced by correspondence from the MOE included in Appendix 1. Based on the MOE's six month REA approval process service standard (which is set out in the MOE's Technical Guide to Renewable Energy Approvals), East Durham anticipates receiving a REA for the Project by November 14, 2013.

ii. Did East Durham brief the Municipality on the extent, timing and implications of construction, installation, operation, maintenance and future decommissioning of the distribution facilities within the Municipality's road allowances? If so, please submit evidence supporting this assertion to the Board.

Yes, East Durham briefed the Municipality on a number of occasions regarding the Project and the associated Distribution Facilities, as indicated by East Durham's Chronology of Events at Exhibit B/ Tab 5/ Schedule 1 of East Durham's pre-filed evidence.

In addition, East Durham completed specific consultation with the Municipality regarding the Distribution Facilities, among other facilities, as part of the Project's REA application process. For example, pages 3, 8, 9, 12, 15, 16 and 21-25 of the Project Description Report (Appendix 2) describe the extent, timing and

implications of construction, installation, operation, maintenance and future decommissioning of the Distribution Facilities. The Draft Project Description Report (Appendix 3) was provided to the Municipality on October 29, 2012 (see Appendix 4) and the final Project Description Report was provided to the Municipality on January 29, 2013 (see Appendix 5). Drafts and final versions of East Durham's other REA application materials – including the construction plan report, design and operations report and decommissioning plan report – were also made available to the Municipality, as required by Ontario Regulation 359/09.

Board Staff Interrogatory No.2: Relief-Sought

Reference:

a. Exhibit A/ Tab 3/ Schedule 1/ p.2

b. Exhibit B/ Tab 6/ Schedule 1/ p.1

c. Exhibit B/ Tab 6/ Schedule 1/ Appendix D/ Drawings Showing Attachment of Distribution Systems to Bridge over Saugeen River

d. Exhibit B/ Tab 5/ Schedule 1/ p.5

Preamble:

At reference (a), East Durham states in part that:

> The only outstanding issue with respect to East Durham's use of the Road Allowances is the exact location of the Distribution System within the Road Allowances.

With respect to the order sought, at reference (b), East Durham states in part that:

> Given that East Durham and the Municipality cannot agree to the location of the Distribution System within the Road Allowances, East Durham requests that the Board issue an order pursuant to section 41(9) of the Electricity Act determining such location as follows:
>
> - The Distribution System shall generally be located in the Road Allowances listed on Exhibit B, Tab 6, Schedule 1, Appendix A, as shown in the drawings included in Exhibit B, Tab 6, Schedule 1, Appendix B.
>
> - Where practicable, and where it meets all applicable engineering, environmental and health and safety standards, the Distribution System lines shall be located 1-4 meters from the abutting property line.
>
> - Where practicable, and where they meet all applicable engineering, environmental and health and safety standards, the diagrams shown at Exhibit B, Tab 6, Schedule 1, Appendices C and D shall be followed in constructing the Distribution System within the Road Allowances.

At reference (d), East Durham states in part that:

> On June 4, 2013, [...] the Clerk indicated that Council's new position was that East Durham must bore collector lines under the Saugeen River instead of locating them along the bridge as proposed by East Durham. This position was contrary to their previous position expressed by the Municipality as recently as March 15, 2013.

Question/Request:

i. Please provide large scale aerial maps covering the length of the Distribution Facilities route and show all abutting properties.

Please see Appendix 6.

ii. Please indicate how East Durham determined the "1-4 metres" parameter as being appropriate. If it is standard practice in Ontario, please submit relevant documentation.

In the experience of East Durham and its parent company, NextEra Energy Resources, LLC (which has a current operating portfolio of 100 wind energy projects in North America), municipalities and counties generally prefer that collection line infrastructure in road right of ways be buried 1-4 metres from abutting property lines in order to provide sufficient space to facilitate future road improvements and signage.

iii. With respect to reference (b), bullet 3, please clarify whether East Durham is requesting that the Board approve engineering drawings for construction purposes.

No, East Durham is not seeking Board approval of its engineering drawings. The engineering drawings in Appendices C and D of Exhibit B/ Tab 6/ Schedule 1 of East Durham's preliminary evidence have been approved by a licensed professional engineer and were included in East Durham's evidence to provide context for the Board. In particular, the drawings were provided to show the Board the proposed dimensions of the relevant Distribution Facilities to the extent that those dimensions are relevant to where in the Road Allowances the Distribution Facilities will be located.

Board Staff Interrogatory No.3: Affected Road Allowances

Reference:

a. Exhibit A/ Tab 2/ Schedule 1/ § 3 & 4

b. Exhibit B/ Tab 6/ Schedule 1/ Appendix A/ List of Affected Road Allowances

c. Exhibit B/ Tab 6/ Schedule 1/ Appendix B/ Drawings Showing Location of Distribution System Within Municipal Road Allowances

d. Exhibit A/ Tab 3/ Schedule 1/ p.2

Preamble:

With respect to the proposed location of the Distribution Facilities, reference (a) states in part that:

> ...the Applicant plans to own and operate certain distribution facilities. These facilities will include approximately 28.3 km of 34.5 kV distribution lines located on private property and municipal and county right-of-ways, which will convey electricity from each of the wind turbines to a transformer substation, from which an overhead 44 kV line will convey the electricity to Hydro One Networks Inc.'s distribution system (collectively, the **"Distribution System").**
>
> [...]
>
> As a distributor, East Durham has chosen to locate a portion of its Distribution System (approximately 9.1 km) within the Road Allowances owned by the Municipality.

Reference (b) lists the affected road allowances.

With respect to the proposed use of municipal road allowances, East Durham indicates at reference (d) that a balance of environmental, social, technical and economic considerations led to the applicant's decision to locate the Distribution Facilities with municipal road allowances.

Question/Request:

i. Are the considerations referenced at (d) and the associated analysis contained in the reports that form the Renewable Energy Approval (REA) submissions?

Yes, these considerations were factored in to East Durham's REA submissions. By way of background, in initiating the REA process, East Durham proposed an initial Project layout (including a layout for the Distribution Facilities within the Project area). East Durham then completed various environmental, social, technical and economic studies in accordance with Ontario Regulation 359/09 to refine that initial layout. For example, the following reports that formed part of East Durham's REA submissions consider potential impacts of, and constraints applicable to, the Distribution Facilities within the municipal road allowances and the Project area:

- **the Natural Heritage Assessment Reports (which assesses potential natural heritage features in the Project area and develops mitigation measures for any potential impacts on any such features identified as significant);**
- **the Consultation Report (which includes consultation on environmental, social, technical and economic aspects of the Project with regulatory agencies, the local community and the Municipality);**
- **the Water Assessment and Waterbody Reports (which assesses water bodies in the Project area and develops mitigation measures for any potential impacts on any such features identified as significant); and**
- **the Archeological Assessment Reports, specifically the Stage 2 Archeological Assessment Report and the Stage 2 Archeological Assessment Additional Report (which surveys for archaeological sites in the Project area and develops mitigation measures for any potential impacts on any such sites).**

In sum, the REA reports listed above, among others, identified significant environmental, social and other features in the Project area in the vicinity of the Distribution Facilities, determined appropriate setbacks from those features, and proposed additional mitigation measures where appropriate. Through this process, the proposed location of the Distribution Facilities was further refined to achieve the best balance of the aforementioned considerations. As a result, the location of the Distribution Facilities within the municipal road allowances that is being proposed in the present Application reflects the best balance of environmental, social, technical and economic considerations. Having submitted its REA application, East Durham cannot amend the proposed location in the REA application without submitting a formal request to the MOE, along with any supporting evidence and studies necessary to explain why the alternate location is acceptable rather than the location proposed following the studies submitted with in the original application.

ii. If not, please submit evidence related to the cost/benefit analysis alluded to in reference (d).

Not applicable.

iii. Please indicate whether the REA for the East Durham Wind Energy Centre has been approved. Otherwise, when is the REA approval expected?

Please see East Durham response to Board Staff Interrogatory No. 1(i).

iv. Please provide a description and summary review of any alternative location(s) that East Durham has considered and subsequently rejected in favour of the current configuration and the reasons for having rejected those alternative(s).

The current Project configuration was determined through an iterative approach. The Project area is located in a landscape that contains a high density of natural features. As indicated in East Durham's response to Board Staff Interrogatory No. 3(i) above, information collected through environmental and other studies of

the Project area was used by the East Durham design team to modify placement of Project infrastructure in order to minimize impacts to natural heritage features, such as significant woodlots, wetlands, wildlife habitat and waterbodies, as well as to archaeological sites. For example, based on the studies, the use of municipal road right of ways for the installation of Project collection lines was a preferred alternative to impacting existing natural heritage features and archaeological sites. Information collected through the consultation process was also used to modify placement of Project infrastructure to address any concerns raised by the public, private landowners and other stakeholders. By completing these studies and the consultation process, East Durham iteratively ruled out options for alternative Project layouts.

From an environmental perspective, a road right of way represents a previously disturbed area where sensitive features can be generally avoided; for this reason, road right of ways are typically used when siting utility infrastructure. Where crossing of watercourses or wetland features is required within a road right of way, trenchless technology can be employed to further minimize impacts. From a public stakeholder perspective, the use of road right of ways also represents an opportunity, through using East Durham's right under section 41 of the *Electricity Act, 1998*, to minimize impacts to private landowners.

v. A rationale for the proposed location and any supporting documentation, including technical constraints.

Please see East Durham response to Board Staff Interrogatory No. 3(iv).

vi. Please list all distribution facilities, indicate their expected functionality and state whether any of these facilities are non-essential in operating the East Durham Wind Energy Centre.

Please see table attached as Appendix 7 for a table of the Distribution Facilities that will be located within the Municipal Road Allowances.

vii. Please indicate which distribution facilities will be placed in the various segments of the municipal road allowances (including type and length) and their location in the municipal road allowances.

Please see table attached as Appendix 7.

Board Staff Interrogatory No. 4: Road Use Agreement

Reference:

a. Exhibit B/ Tab 4/ Schedule 1/ p.1

b. Exhibit B/ Tab 5/ Schedule 1/ p.5

c. Exhibit B/ Tab 5/ Schedule 1/ Appendix C/ Letter from East Durham to West Grey dated December 12, 2012

d. Exhibit B/ Tab 5/ Schedule 1/ Appendix E/ Letter from East Durham to West Grey dated April 26, 2013

Preamble:

At reference (a) indicates that the Municipality has to date not provided any specific comments on the proposed road use agreement.

In reference (b) East Durham indicates that the Municipality made certain demands that the applicant says are unreasonable. It states in part that:

> On June 4, 2013, the Municipal Clerk responded that Council had determined, on June 3, 2013, that a meeting is not warranted until East Durham identifies how it will meet the Municipality's requirements to encase the collector lines in concrete and conduct stray voltage testing across the site. The Clerk indicated that Council's new position was that East Durham must bore collector lines under the Saugeen River instead of locating them along the bridge as proposed by East Durham.
>
> [...]
>
> Instead, the Municipality has indicated that it will only engage in these discussions if East Durham agrees to certain other demands, noted above, which East Durham considers to be unreasonable. As a result, the parties have been unable to reach an agreement regarding the location of the Distribution System within the Road Allowances.

The letters at references (c) and (d) addressed matters that East Durham discussed with Municipal staff on December 3, 2012, and matters that were presented in municipal letter of April 8, 2013 respectively.

Question/Request:

i. Has the Municipality formally rejected the proposed road use agreement? If so, please provide evidence of the rejection.

As detailed in pages 2-5 of Exhibit B/ Tab 5/ Schedule 1 of East Durham's pre-filed evidence, East Durham first provided a copy of the proposed road use agreement to the Municipality on September 27, 2012 and has made repeated efforts since that time to discuss the proposed agreement with the Municipality. Although the Municipality has not formally rejected the proposed agreement, it has not responded constructively nor provided any specific comments in respect of the

proposed agreement. The Municipality has effectively refused to engage East Durham in discussions on where in the Road Allowances the Distribution System will be located, despite East Durham's good faith efforts to initiate those discussions. Instead, the Municipality has stated that it is an unwilling host for wind energy development and has indicated that it will only engage in these discussions if East Durham agrees to certain other demands.

ii. Please list all "unreasonable demands" referred to in (b) and the reason that each such demand is, in East Durham's view, unreasonable.

1. The Municipality has demanded that all buried cabling be enclosed in concrete conduit. As noted on page 2 of Exhibit B/ Tab 5/ Schedule 1/ Appendix E of East Durham's pre-filed evidence, it is not standard engineering practice to encase underground collection lines in concrete. Upon review of the local engineering code, East Durham has found no requirement to encase underground collection lines in concrete in the Municipality. In addition, East Durham understands that the Municipality does not require concrete encasement of similar-voltage, buried electric lines associated with other local development projects, including new residential developments as well as local distribution company infrastructure.

2. **The Municipality has demanded that East Durham conduct baseline stray voltage tests, prior to commencement of operations, at all residences near Project infrastructure. As discussed in pages 2-3 of Exhibit B/ Tab 5/ Schedule 1/ Appendix C and page 2 of Exhibit B/ Tab 5/ Schedule 1/ Appendix E of East Durham's pre-filed evidence, wind turbines do not specifically cause stray voltage. Stray voltage is related to power system faults and changes in the use pattern of the existing electrical system and is not specifically a consequence of wind energy or any other power generation source. Hydro One, the local distribution system operator, oversees stray voltage issues and has developed a protocol to proactively test for stray voltage and mitigate any concerns, if found, all at no cost to the landowner. East Durham will assist any concerned landowner in the Project area through this process with Hydro One. In addition, East Durham will adopt best industry practices at all times to minimize the risk of stray voltage and ensure the Project is built and maintained within acceptable levels as prescribed by the local safety code.**

3. The Municipality has demanded that East Durham bore collector lines under the Saugeen River instead of locating them along the bridge over the Saugeen River as proposed by East Durham. This demand was communicated by the Municipal Clerk to East Durham on June 4, 2013, despite the fact that, as noted at page 3, lines 26-28 and 34-36 and page 5, lines 12-13 of Exhibit B/ Tab 5/ Schedule 1 of East Durham's pre-filed evidence, East Durham had received feedback from the Municipal Director of Public Works on at least two occasions and as recently as March 15, 2013 that the Municipality was open to East Durham's preference to attach the relevant collector lines to the bridge over the Saugeen River. As noted on page 16 of the Project Description Report provided to the Municipality on January 29, 2013 and attached as Appendix 2, the Saugeen River

crossing is not a suitable location for underground cables due to the presence of bedrock in the location. The Municipality's demand would require the connection lines to be bored through solid bedrock beneath the Saugeen River, which among other concerns would have a much greater impact on the natural environment of the Saugeen River than East Durham's proposed approach. It is East Durham's position that locating the collector lines along the bridge over the Saugeen River would be a more appropriate balance of the relevant environmental, social, technical and economic considerations.

iii. Has East Durham provided an explanation to the Municipality for why each demand is unreasonable? And for each demand, has East Durham proposed a solution which would be acceptable to East Durham?

Yes, East Durham has addressed all concerns raised by the Municipality. Please see the Chronology of Events included as Exhibit B/ Tab 5/ Schedule 1 of East Durham's pre-filed evidence, particularly pages 2-3 of Appendix C and page 2 of Appendix E.

iv. Other than the facts presented in the letters at references (c) and (d), has East Durham addressed the Municipality's technical concerns referred to in reference (b)? If so, please submit evidence showing how these concerns have been addressed.

In addition to the letters at references (c) and (d), East Durham has addressed the Municipality's technical concerns during various conversations and meetings with Municipal representatives and presentations to Municipal Council. As noted on pages 2-3 of Exhibit B/ Tab 5/ Schedule 1 of East Durham's pre-filed evidence, such efforts to address the Municipality's technical concerns have included a presentation to Municipal Council on December 3, 2012 which covered a discussion of cabling requirements; a conversation with the Municipal Director of Public Works on December 11, 2012 to discuss project engineering; and a meeting with the Mayor of West Grey, Municipal councilors and staff members and the Municipal Director of Public Works on March 15, 2013. Prior to the March 15, 2013 meeting, East Durham provided the Municipality with technical drawings regarding the Saugeen River crossing (see Appendix 8).

In addition, as noted on page 20 of the East Durham Consultation Report attached as Appendix 9, East Durham discussed the engineering determination that it would not be possible to bore a collection line under the Saugeen River crossing on Concession Rode 4 with Municipality staff at a meeting on December 19, 2012.

v. Has East Durham provided details to the Municipality on the location of other buried utilities in the vicinity?

Since the March 15, 2013 meeting noted in East Durham's response to Board Staff Interrogatory No. 4(iv), East Durham has repeatedly attempted to meet with the Municipality to discuss additional technical considerations regarding laying collector lines in the municipal road right of way, and remains open to having such a meeting. Despite the attempts that East Durham has made to date, such a meeting has not yet taken place.

Board Staff Interrogatory No. 5: Current Consultations

Reference:

a. Exhibit B/ Tab 5/ Schedule 1/ Appendix G/ Letter from West Grey to East Durham dated May 23, 2013

b. Exhibit B/ Tab 5/ Schedule 1/ p.5

Preamble:

In the letter at reference (a) the Municipality states in part that:

> In Response to your response in the NextEra Energy Canada letter dated April 26, 2013, concerning the requirement of the Municipality to encase all collection lines in Municipal Right-of-way in concrete, please be advised that the Municipality does not dispute the right of generators/distributors to place distribution infrastructure in public streets or highways, however, the Municipality has specified conditions that are required to be met for placement of said distribution facilities in municipal roads. One such example, for safety reasons, includes the requirement specified in bylaw 59-2012 to encase all generation/distribution lines in municipal road allowances in concrete to a minimum depth of 1 metre with an increased depth in certain areas of road allowances as directed by the Public Works Department.
>
> [...]
>
> To reiterate the position of the Municipality of West Grey - it is not in the best interest of the Municipality for this project to proceed as Council has deemed the Municipality as not being a willing host for industrial wind turbine projects. Nevertheless, the Municipality is proceeding with negotiations with the "Economic, social and environmental well-being of the municipality", "Health, safety and well-being of persons" and "Protection of persons and property..." in mind. (Municipal Act — subsections 10. (2) 5., 6., & 8.)

In contrast, reference (b) states in part that:

> Effectively, the Municipality has refused to engage East Durham in discussions on where in the Road Allowances the Distribution System will be located, despite East Durham's good faith efforts to initiate those discussions. Instead, the Municipality has indicated that it will only engage in these discussions if East Durham agrees to certain other demands, noted above, which East Durham considers to be unreasonable. As a result, the parties have been unable to reach an agreement regarding the location of the Distribution System within the Road Allowances.

Question/Request:

i. Has the Municipality provided an alternate route for the Distribution Facilities?

No. Please see East Durham response to Board Staff Interrogatory No. 4(i).

ii. Please provide a complete and detailed update on the status of East Durham's discussion with the Municipality in respect of the proposed Distribution Facilities since June 4, 2013.

Since June 4, 2013, East Durham has expressed through its counsel a willingness to meet with the Municipality to discuss the location of the Distribution Facilities within the Road Allowances, and remains open to having such a meeting. However, despite East Durham's overtures to date, a meeting between East Durham and the Municipality has not yet taken place.

Board Staff Interrogatory No. 6: Municipal Bylaws

Reference:

a. Exhibit B/ Tab 5/ Schedule 1/ Appendix G/ Letter from West Grey to East Durham dated May 23, 2013

b. Exhibit B/ Tab 5/ Schedule 1/ Appendix E/ Letter from East Durham to West Grey dated April 26, 2013

Preamble:

At reference (a), the Municipality addresses the requirement specified in bylaw 59-2012 to encase all generation/distribution lines in municipal road allowances in concrete as directed by its Public Works Department.

In the same reference, the Municipality addresses bylaw 26-2013 (the "Fee Bylaw"), and indicates that the peer review deposit needs to be provided, and that the peer review is necessary in order to provide informed comments respecting the proposal.

In contrast, with respect to bylaw 26-2013, East Durham states in part at reference (b) that:

> As set forth in that certain letter dated March 15, 2013, from East Durham's counsel, Torys LLP, to the Municipality, it is East Durham's position that the Fee Bylaw (including any fees or deposits required thereby) is in conflict with or violates the *Green Energy and Green Economy Act, 2009,* the *Municipal Aci [sic], 2001* and the *Electricity Act, 1998,* and is therefore invalid. This remains East Durham's position and in no way does East Durham agree with any part of the Fee-Bylaw as it was written and adopted.

Question/Request:

i. With respect to bylaw 59-2012, has East Durham applied for Municipal Consent? If so, please submit all related evidence.

As noted in Schedule A to Bylaw 59-2012 (attached as Appendix 10), Bylaw 59-2012 applies to underground direct current electrical cables. The Distribution Facilities will only include alternating current electrical cables, and Bylaw 59-2012 therefore does not apply.

ii. Please provide a complete and detailed report on the status of negotiations and the current position of East Durham in respect of bylaw 59-2012.

Please see East Durham response to Board Interrogatory No. 6(i).

iii. Please submit to the Board a copy of the letter referenced at (b).

Please see Appendix 11.

iv. Have there been any developments with respect to the Fee Bylaw since the filing of this application? If so please submit related evidence to the Board.

The Fee Bylaw (Bylaw Number 26-2013) was rescinded by the Municipality pursuant to Bylaw 60-2013 (A Bylaw to repeal Bylaw Number 26-2013) on July 15, 2013. Please see pages 5-6 of the July 15, 2013 Municipal Council meeting minutes, attached as Appendix 12.

End of Document

Appendix 1

From: Colella, Nick (ENE) [mailto:Nick.Colella@ontario.ca]
Sent: Tuesday, May 14, 2013 4:13 PM
To: Bird, Thomas
Cc: Pat Becker (Pat.Becker@genivar.com)
Subject: NextEra - East Durham Wind Energy Centre - deemed complete

Afternoon,

The East Durham Wind Energy Centre has been deemed complete and is now posted on the Environmental Registry for a 45-day period (link is below).

http://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTE5NjIx&statusId=MTc4OTAx&language=en

Under Section 15.1 of O. Reg. 359/09, proponents are requested, within 10 days of the posting of the proposal notice on the Registry, to ensure that final copies of all submitted REA documents are posted on their website.

Under Section 15.2 of O. Reg. 359/09, proponents are requested, within 10 days of the posting of the proposal notice on the Registry, to publish a notice in a newspaper with general circulation in each local municipality in which the project location is situated. Details on what is to be included in the notice are provided in Section 15.2 of the Regulation.

I will likely be sending the official 'completeness letter' to you later this week.

If you have any questions, please do not hesitate to contact me.

Regards,
Nick

Nick Colella
Project Evaluator
Environmental Approvals Branch
Ministry of the Environment
2 St. Clair Ave. W., Floor 12A
Toronto, ON., M4V 1L5
T: 416-212-3691 | F: 416-314-8452 | nick.colella@ontario.ca

Appendix 2

NextEra Energy Canada, ULC

Project Description Report – East Durham Wind Energy Centre

Prepared by:

GENIVAR Inc.
500 – 600 Cochrane Drive 905-475-7270 tel
Markham, ON, Canada L3R 5K3 905-475-5994 fax
www.genivar.com

Project Number:

111-15446-00

Date:

January, 2013

Table of Contents

List of Figures

List of Tables

Glossary of Terms

DFO .....Federal Department of Fisheries and Oceans
GE.....General Electric
kV.....Kilovolt
MNR.....Ontario Ministry of Natural Resources
MTCS.....Ontario Ministry of Tourism, Culture and Sport
MTO.....Ontario Ministry of Transportation
MW.....Megawatt
NextEra .....NextEra Energy Canada, ULC
O.Reg. 359/09 .....Ontario Regulation 359/09
PDR .....Project Description Report
The Project.....East Durham Wind Energy Centre
REA.....Renewable Energy Approval
SVCA .....Saugeen Valley Conservation Authority
TC .....Transport Canada
V .....Volt

1. General Information

This Project Description Report (PDR) was prepared in accordance with the requirements of the Renewable Energy Approval Process outlined in Ontario Regulation 359/09 (O.Reg. 359/09) and the Technical Guide to Renewable Energy Approvals (Ministry of the Environment (MOE), 2011).

1.1 Name of Project and Applicant

East Durham Wind, Inc., a wholly owned subsidiary of NextEra Energy Canada, ULC (NextEra), is proposing to construct a wind energy project in the Municipality of West Grey, Grey County, Ontario. The Project will be referred to as the East Durham Wind Energy Centre (the "Project") and will be located on private lands east of the Community of Durham and west of the Village of Priceville.

The Project will be owned and operated by East Durham Wind, Inc., a subsidiary of NextEra. NextEra's parent company is NextEra Energy Resources, LLC, a global leader in wind energy generation with a current operating portfolio of 100 wind energy projects in North America. Wind farms currently owned and operated by NextEra Energy Canada include: Mount Copper and Mount Miller, (both 54 megawatts (MW) located in Murdochville, Quebec; Pubnico Point, (31 MW) located near Yarmouth, Nova Scotia; and Ghost Pine (82 MW), located in Kneehill County, Alberta.

1.2 Project Study Area

The proposed Project is located in the Municipality of West Grey, east of the Community of Durham and west of Village of Priceville within Grey County. The Project Study Area consists of the area being studied for the wind farm components (Wind Energy Centre Study Area). The Wind Energy Centre Study Area is generally bounded by:

- → Concession Road 6 to the north
- → Sideroad 40, Townline Artemesia-Glenelg and Sideroad 50 to the east
- → The West Grey – Southgate municipal boundary to the south
- → Baseline to the west

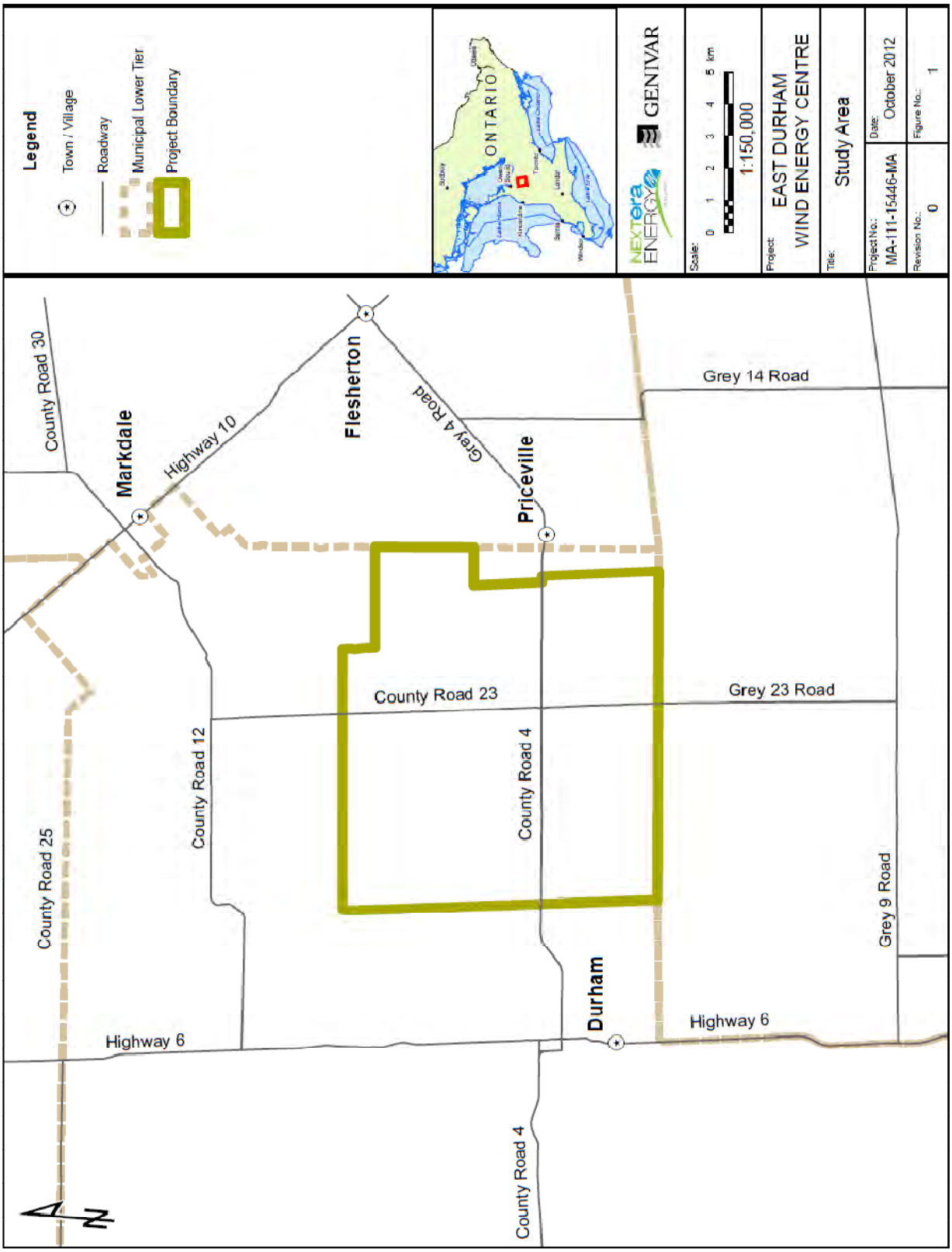
The location of the Project Study Area was defined early in the planning process for the proposed wind energy facility, based on the availability of wind resources, approximate area required for the proposed project, and availability of existing infrastructure for connection to the electrical grid. The Project Study Area was used to facilitate information collection.

The following co-ordinates define the external boundaries (corners) of the Project Study Area, as shown in **Figure 1-1**:

Study Area Corner	Easting NAD83 UTM17	Northing NAD83 UTM17
Northwest	517446	4898788
Northeast	528740	4899612
Southeast	529409	4890833
Southwest	519266	4889235

Some sections of electrical collection line are expected to be located in the municipal right-of-way. The electrical substation will be located on privately owned lands with lease arrangements.

Figure 1-1 Project Study Area



1.3 Land Ownership

The following table provides a legal description of the properties on which project infrastructure will be sited. All properties are privately owned and are under agreement with NextEra.

Infrastructure Type	Legal Description
T10, Collection Line, Access Road	PT LT 20 CON 1 SDR GLENELG; PT LT 19-20 CON 2 SDR GLENELG PT 1 & 2 17R2360 & PT 1 16R8532; S/T GS160110; WEST GREY
T2, Collection Line, Access Road	LT 28 CON 2 NDR GLENELG EXCEPT PT 1 17R3090 & PT 1 16R6477; PT LT 29-30 CON 2 NDR GLENELG PT 1 17R2968 & AS IN GS70768 EXCEPT PT 2 17R807 & PT 1 & 2 17R2787; S/T DEBTS IN GS70768; S/T INTEREST IN GS70768; WEST GREY
T4, T3, T5, Collection Line, Access Road	PT LT 21-27 CON 1 NDR GLENELG AS IN R428714; WEST GREY
T14, Collection Line, Access Road	LT 25 CON 4 NDR GLENELG; WEST GREY
T12, T15, Collection Line, Access Road	LT 24 CON 4 NDR GLENELG; PT LT 23 CPN 4 NDR GLENELG AS IN R502326; WEST GREY
T7, Collection Line, Access Road	PT LT 34 CON 1 NDR GLENELG AS IN R434625, PT 1 16R5178; WEST GREY
T6, Collection Line, Access Road	PT LT 31-33 CON 1 NDR GLENELG AS IN GS94959, PT 4 16R5177, EXCEPT GL3416 & GL12567 MUNICIPALITY OF WEST GREY
T11, Collection Line, Access Road	PT LT 35 CON 1 SDR GLENELG AS IN R508782, S/T INTEREST IN GS70896; WEST GREY
T13, Collection Line, Access Road	LT 48-49 CON 2 SDR GLENELG; WEST GREY
T16, T17, Collection Line, Access Road	PT LT 43-45 CON 1 SDR GLENELG AS IN GS128681; WEST GREY
MET 1, T1, Collection Line, Access Road	LT 21-23 CON 2 NDR GLENELG EXCEPT PT 1-8 17R2606; WEST GREY
T8, Collection Line, Access Road	LT 39-40 CON 1 NDR GLENELG; PT LT 37-38 CON 1 NDR GLENELG AS IN GS44871, EXCEPT R419249, PT 1 17R439, PT 2 17R945 LYING S OF PT 4 16R5178; WEST GREY
Laydown Area	PT LT 46 CON 1 NDR GLENELG PT 1 16R9271; WEST GREY
MET 2, Collection Line, Access Road	PT LT 46 CON 1 NDR GLENELG PT 1 16R9271; WEST GREY
Substation	PT LT 28 CON 1 NDR GLENELG AS IN R470379; WEST GREY

1.4 Description of Energy Source, Nameplate Capacity and Class of the Facility

This facility will convert wind energy into electricity to be fed into the Hydro One grid. The wind turbine technology proposed for this Project is the GE 1.6-100 model wind turbine. With a total maximum nameplate capacity of up to 23 MW, the Project is categorized as a Class 4 facility. The project consists of up to 16 GE model wind turbines (14 turbines are 1.6-100 models (1.62 MW), Turbine 6 is a 1.34-100 model (1.34 MW) and Turbine 2 is 1.39-100 model (1.39 MW); 16 wind turbine generator locations and pad mounted step-up transformers are proposed for permitting, though a maximum of 14 turbines and associated pad mounted step-up transformers will ultimately be constructed. The sound power level of the turbine model is expected to be greater than 102 dBA. The technical specifications for this model of turbine are detailed in Section 2.1.1 of this Project Description Report and in the Wind Turbine Specification Report (Appendix A).

1.5 Key Contacts

Project Proponent	Project Consultant
Derek Dudek Community Relations Consultant NextEra Energy Canada, ULC 390 Bay St, Suite 1720 Toronto, ON M5H 2Y2 Phone: 1-877-257-7330 Email: EastDurham.Wind@NextEraEnergy.com Website: www.NextEraEnergyCanada.com	Patricia Becker, MES Project Manager (Energy) GENIVAR Inc. 5th Floor, 600 Cochrane Drive Markham, Ontario, L3R 5K3 Phone: 905-713-2837 Email: pat.becker@genivar.com

1.6 Other Approvals Required

It is anticipated that in addition to the Renewable Energy Approval (REA), the East Durham Wind Energy Centre Project will need a Notice to Proceed from the Ontario Power Authority, building permits and road use / entrance permits from the Municipality of West Grey and Grey County, permits from the Electrical Safety Authority (ESA) and the Ontario Energy Board (OEB), an Oversize/Overweight Permit from the Ontario Ministry of Transportation (MTO); Archaeological Clearance and Heritage Clearance from the Ontario Ministry of Tourism, Culture and Sport (MTCS); Interference with Wetlands and Alterations to Shorelines and Watercourses Permits from the Saugeen Valley Conservation Authority (SVCA) and other permits or authorizations from the Ontario Ministry of Natural Resources (MNR) and Grey County.

1.7 Federal Involvement

There is no expectation for any federal environmental assessment under the Canadian Environmental Assessment Act. Nor is there any expectation for the requirement of federal permits or approvals under the Fisheries Act or Species at Risk Act or the Navigable Waters Protection Act. There will be a requirement for an Aeronautical Obstruction Clearance from Transport Canada for turbine lighting. In addition, a Land Use Clearance will be required from NAV CANADA for aeronautical safety.

1.8 Commitments for Future Studies

NextEra has identified future studies that will need to be followed through before and during the construction, operation, and decommissioning of the Project based on the results of the effects assessment. These studies are listed in **Table 1-1** below.

Table 1-1 Commitments for Future Studies

No.	Timing of Commitment	Location within the Project	REA Commitment	REA Report Reference
1	Pre-Construction	Disturbance Areas	Undertake surveys to locate all project infrastructure.	Construction Plan; Section 2.2.1
2	Pre-Construction	Turbine Foundation	Conduct geotechnical sampling for all turbine foundation locations.	Construction Plan; Section 2.2.1
3	Pre-Construction	Culvert	Determine specific culvert details and erosion control measures in conjunction with the Saugeen Valley Conservation Authority (SVCA).	Construction Plan; Section 2.2.2
4	Pre-Construction	Project Study Area	Develop a Traffic Management Plan and provide to	Construction Plan;

Table 1-1 Commitments for Future Studies

No.	Timing of Commitment	Location within the Project	REA Commitment	REA Report Reference
			Grey County and Municipality of West Grey.	Section 2.2.5/3.6.2
5	Pre-Construction	Project Study Area	Conduct a Stormwater Pollution Prevention Study to address potential effects of stormwater runoff decommissioning.	Decommissioning Plan; Section 2.4
6	Pre-Construction	Disturbance Areas	Complete Stage 3 Archaeological Assessment (and Stage 4 if necessary) to avoid displacement or disturbance of any archaeological resources identified in Stage 2 Archaeological Assessment by the construction of Project infrastructure.	Construction Plan; Section 3.1.2
8	Pre-Construction	Disturbance Areas	Develop an erosion and sediment control plan.	Construction Plan; Section 3.2.2.1/3.2.2.2
9	Pre-Construction	Disturbance Areas	Develop a Spill Response Plan.	Construction Plan; Section 3.2.2.1 Design & Operations; Section 6.2.1/6.3.2.1
10	Construction	Disturbance Areas	Undertake active nest surveys if clearing of vegetation cannot be avoided during breeding season for migratory birds.	Construction Plan; Section 3.2.2.1
11	Pre- and Post-Construction	Project Study Area	Undertake roads condition survey pre- and post-construction.	Construction Plan; Section 3.6.2
12	Pre- and Post-Construction	Disturbance Areas	Undertake bird and bat monitoring as required by MNR.	Construction Plan; Section 3 Design & Operations; Section 6 Appendix B

2. Project Information

2.1 Facility Components

As shown in Figure 2-1, the major components of the Project are proposed to be:

- Up to 16 GE model wind turbines (14 turbines are 1.6-100 models (1.62 MW), Turbine 6 is a 1.34-100 model (1.34 MW) and Turbine 2 is 1.39-100 model (1.39 MW); 16 wind turbine generator locations and pad mounted step-up transformers are proposed for permitting, though a maximum of 14 turbines and associated pad mounted step-up transformers will ultimately be constructed;
- Turbine laydown and storage areas (including temporary staging areas, crane pads and turnaround areas surrounding each wind turbine);
- Construction laydown area (including staging areas for construction materials, construction trailers and associated facilities and a temporary electrical service line to provide power to the construction trailers);
- Approximately 28.3 km of 34.5 kV underground electrical collection lines and ancillary equipment (e.g., above ground electrical junction boxes) to connect the turbines to the proposed transformer substation;
- Pad mounted 690 V/ 34.5 kV step up transformers located at or near the base of each turbine;
- A transformer substation to connect to the Hydro One distribution system;
- Overhead 44 kV line to connect the transformer substation to the Hydro One electrical grid;
- Approximately 13.8 km of turbine access roads;
- An operations and maintenance building (located outside the project location – shared use of land and building approved and currently operational for the Conestogo Wind Energy Centre); and
- One to two meteorological towers.

The major project components, in addition to the disturbance area, as shown on Figure 2-1, occupy approximately 122 hectares (300 acres) of land in the Municipality of West Grey.

2.1.1 Turbine Specifications

The wind turbine technology proposed for this Project is the GE 1.6-100 model with 14 turbines 1.62 MW, 1 1.34 MW and 1 1.39 MW for a total maximum nameplate capacity of up to 23 MW.

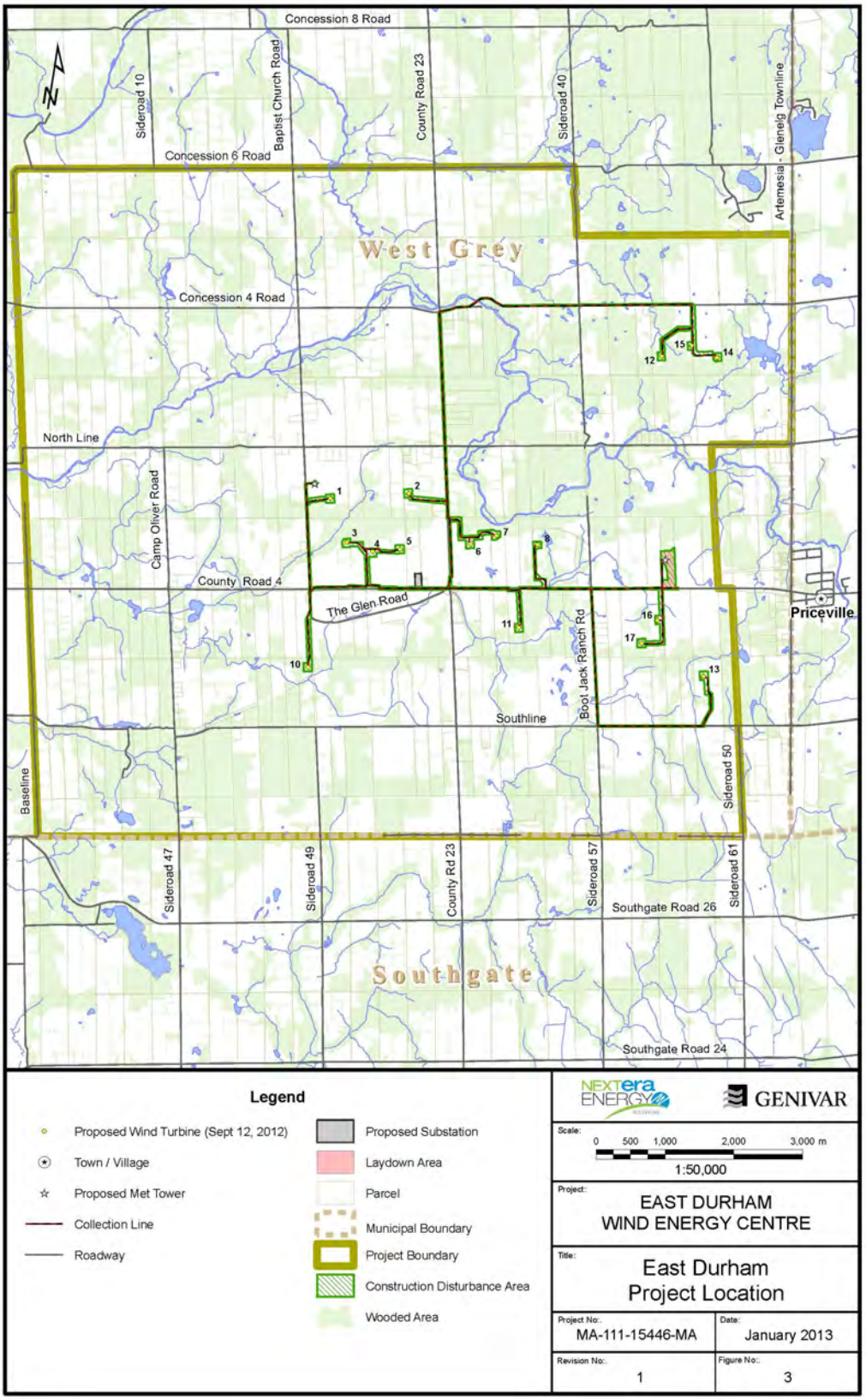
The wind turbines are 3-bladed, upwind, horizontal-axis wind turbines that are state of the art technology. The turbines have a 100 m rotor diameter with a swept area of 7,854 m^2; each blade is connected to the main shaft via the hub. The nacelle houses the main components of the wind turbine such as the rotor shaft, gear box, couplings, control panel, bearing brackets and the generator. The nacelle is equipped with sound-proofing, is ventilated and the interior is illuminated with electric lights. Some of the wind turbines will have external lighting in accordance with the requirements of Transport Canada (TC).

The following table provides a description of the GE 1.6-100 MW model wind turbine that will be used for the Project.

Summary of Technical Specifications

Specification	Turbine	Turbine	Turbine
Make	General Electric	General Electric	General Electric
Model	1.34-100	1.39-100	1.6-100
Name Plate Capacity	1.34 MW	1.39 MW	1.62 MW
Hub Height	80 m	80 m	80 m
Rotor Diameter	100 m	100 m	100 m
Minimum Rotational Speed	9.75 rpm	9.75 rpm	9.75 rpm
Maximum Rotational Speed	12.8 rpm	13.2 rpm	15.33 rpm

Figure 2-1 Project Location



2.1.2 Laydown and Storage Areas

A temporary laydown and storage area will be constructed on privately owned land for the purpose of staging and storing equipment during the construction phase. Activities on this site will include materials storage, equipment refuelling, and construction offices. In addition, a 122 m by 122 m square around each wind turbine will be established for the laydown and assembly of the wind turbine components.

An 8 hectare (22 acre) site will be constructed for the temporary storage of construction material and as a site for the construction office trailers. The Draft REA documents (October 2012) identified the laydown area in the same location however the size was 6 hectares. This has been increased to the 8 hectare size to include the land that was previously set aside for the substation at this location.

The Construction laydown area will include staging areas for construction materials, construction trailers and associated facilities and a temporary electrical service line to provide power to the construction trailers. Following clearing and grubbing of any vegetation, the topsoil at the temporary laydown area will be removed and approximately 600 mm of clean compacted crushed gravel will be imported as needed. The excavated topsoil will be re-used on site as feasible. A temporary electrical service line will be connected to the existing distribution line adjacent to the laydown area for the purpose of providing power to the construction office trailers. Typical equipment for the construction of the laydown area includes trucks, graders, and bulldozers. It is anticipated it will take 1 week to construct the laydown area by a crew of six people.

2.1.3 Electrical System

The electrical collection system from each turbine to the step-up transformer station will be buried on private property adjacent to the turbine access roads, where feasible; otherwise the collection lines will be buried in the municipal right-of-ways. The location of the underground cables and ancillary equipment (e.g., above ground electrical junction boxes) to connect the turbines to the proposed transformer station and access roads were determined in consultation with the landowners and also respect the setback requirements defined.

A 44 kV electrical line will connect the transformer substation to the existing Hydro One 44 kV line (which is located on the south side of Grey Road 4). This electrical line will extend from the substation A-frame pull-off structure to the 44 kV line located along the south side of the municipal road right-of-way. This will include a number of poles on the south side of Grey Road 4 that the conductor strings across Grey Road 4.

Temporary power (for electrical service to the construction trailers) will likely come from the corner of the substation, where the distribution line crosses Grey Road 4. It is likely that 11 m high wood poles will be constructed for the temporary power.

The interconnection plan for any wind energy centre is subject to study, design and engineering by the Integrated Electricity System Operator which manages the Province's electricity grid, Hydro One which owns the transmission lines, the local distribution company and the Ontario Energy Board, which regulates the industry through the Transmission System Code and the Distribution System Code.

2.1.4 Transformer Substation

The electricity collected via the 34.5 kV underground collection lines will converge at the transformer substation where it will be stepped up from 34.5 kV to 44 kV. A 44 kV electrical line (approximately 300 m in length) will connect the transformer to the Hydro One distribution system using standard poles within the municipal road right-of-way (as described above in sub-section 1.5.3). Above ground electrical junction boxes will be used to connect the

turbines to the proposed transformer station. An electrical service line will be connected to the local distribution lines in order to provide electrical power to the substation control housing.

Requiring approximately two hectares in size, the East Durham transformer substation will either be located on privately held lands through a lease agreement or on land purchased by East Durham Wind, Inc. The Draft REA documents (October 2012) located the substation on the same property as the laydown area on Grey Road 4. The substation has now been relocated farther west along Grey Road 4 (west of County Road 23) to be more central to the project infrastructure. Refer to Figure 2-1 for the modified location of the substation.

The substation equipment will include an isolation switch, a circuit breaker, a step-up power transformer (34.5 to 44 kV), switch gear, instrument transformers, grounding and metering equipment. All substation grounding equipment will meet the Ontario Electrical Safety Code. The substation will be surrounded by a chain link fence with a locked gate to permit authorized entry and required signage.

A secondary containment system will be installed to capture any leaks from the transformer. Water in the containment system will be visually inspected for any evidence of oil (as oil would float to the top). If oil is present, a tank truck will be brought to site to pump the water/oil mix into it. The water/oil mix will then be disposed of off-site at a licensed facility. If no oil is detected in the water, the water will be pumped out to an adjacent swale and then allowed to infiltrate into the ground.

2.1.5 Access Roads

On-site access roads to each turbine will be constructed to provide an access point to the properties for equipment during the construction phase and for maintenance activities during operation. Typically the access roads will be 11 m wide during the construction phase to accommodate the large cranes (with an additional 2 m clearance on each side for travel).

2.1.6 Operations and Maintenance Building

An operations building will be located outside of the project study area and will have the purpose of monitoring the day-to-day operations of the wind energy centre and supporting maintenance efforts. This Project will utilize the building developed and approved for the Conestogo Wind Energy Centre. The operations and maintenance building currently utilized by the Conestogo Wind Energy Centre has been sited and sized to also monitor the East Durham Wind Energy Centre.

2.1.7 Permanent Meteorological Towers

One to two permanent meteorological towers will be installed at the Project. These are typically up to 80 m in height and use either a monopole or lattice structure with support guy wires. No significant soil or vegetation disturbance is anticipated. The use of meteorological data is key to the safe and efficient operation of a wind energy centre. Some operational decisions made using meteorological data include:

- Cut-in wind speed;
- Cut-out wind speed;
- Turbine shut down during icing conditions; and
- Turbine shut down during extreme weather events.

The Draft REA documents (October 2012) identified the location of one of the proposed meteorological towers. The second proposed meteorological tower (if required) has now been sited on the north end of the property proposed for the laydown area (Grey Road 4). Refer to Figure 2-1 for the location of both proposed meteorological towers.

Permanent meteorological towers are an operational requirement of the Independent Electricity System Operator (IESO) as an electricity market participant (this includes all generators of electricity) and allow the IESO to operate the system reliably and safely. The decision on whether to construct one or two meteorological towers will be based on IESO requirements.

2.1.8 Communications and SCADA

A communication line connects each turbine to the Operations and Maintenance Centre, which closely monitors and, as required, controls the operation of each turbine. The wind turbine system will be integrated with the electric interconnection Supervisory Control and Data Acquisition (SCADA) to ensure that the Project critical controls, alarms and functions are properly co-ordinate for safe, secure and reliable operation.

2.1.9 Water Crossings

To the extent possible, Project infrastructure will be sited to minimize the number of water crossings. As most of the wind turbines are likely to be located on agricultural lands, most of the access roads and electrical cables will also be on agricultural fields where fewer watercourses will be encountered. The Water Assessment and Water Body Report, which has been developed as part of the REA, describes all water crossings and associated mitigation measures.

2.2 Project Activities

The Project will be composed of the following general activities:

1. Land acquisition
2. Planning and Resource Assessment
3. Permitting
4. Detailed Design
5. Construction
6. Operations
7. Decommissioning

Currently, the expected timeline for these activities are Fall 2013 for construction, March 2014 until Fall 2038 for Operation, and Winter and Spring 2039 for decommissioning.

The following sections outline the activities anticipated for the Construction, Operation and Decommissioning Phases of the Project.

2.2.1 Project Timing

Subject to the receipt of the necessary permits and approvals, site work for the East Durham Wind Energy Centre is expected to begin in approximately October 2013 and last for approximately 6 months. The proposed Project schedule sets the commercial operation date in March 2014.

Table 2-1 presents the anticipated construction schedule and approximate order of construction activities for the proposed Project.

Table 2-1 Construction Schedule

Activity		Timing of Activity	Duration
Surveying		Prior to construction	Less than 1 day per turbine location
Land Clearing and Construction of Access Roads		Summer, Fall or Winter	One to three days per access road to each turbine
Installation of Culverts		Simmer, Fall or Winter	One to two days per culvert
Construction Laydown Area		Summer, Fall or Winter	One week
Turbine Site and Crane Pad Construction		Summer Fall or Winter	Two to four days per turbine location
Delivery of Equipment		Throughout construction phase as needed, and in compliance with Traffic Management Plan	As needed throughout construction phase
Turbine Foundations		Summer, Fall or Winter	Three to four days (excluding curing)
Wind Turbine Assembly and Installation		Summer, Fall or Winter	Four to five days per turbine location
Electrical Collector System	**Pad Mount Transformers**	Summer, Fall or Winter	Four to six days
	Collection Lines	Summer, Fall or Winter	Dependent upon the required length of the lines; however, between 4 and 8 km of collector lines can be installed in a week
Transformer Substation Construction		Summer, Fall or Winter	15 – 20 weeks
Clean-up and Reclamation		Following turbine construction	Will be conducted as site is constructed
Turbine Commissioning		Summer, Fall or Winter	One to three days

2.2.2 Construction Activities

2.2.2.1 Surveying and Geotechnical Study Activities

Surveys will be required to locate the turbines, crane pads, access roads, temporary laydown areas, electrical lines and the substation. Crews will drive light trucks to reach sites primarily using existing roads. They will then walk the site for the surveying and mark the locations using stakes. For the wind farm site, the surveys will typically take 1 to 2 days per turbine location.

Existing buried infrastructure located on public property will be located using the Ontario One Call service and buried infrastructure located on private property will be located by private contractors prior to construction or geotechnical sampling and updated throughout construction, as required.

2.2.2.2 Land Clearing and Construction of Access Roads

No permanent paved roads will need to be constructed for the turbines. Municipal and provincial roads will be used for transportation of equipment to the construction sites. Any road damages will be repaired and any road improvements will be left in place.

On-site access to the turbines will require new access roads and following completion of the construction phase, the access roads will be used for maintenance activities (i.e., inspection of the turbines) at the turbines for the duration of the Project. There will be a 60 m wide area for construction of the access roads. The access road will be sited within this area of disturbance in consultation with the landowner and taking into consideration potential

environmental effects. Typically the access roads will be 11 metres wide during the construction phase for access by the large cranes (with an additional 2 metres clearance on each side for travel). The road length will be different for each turbine according to its location.

The construction of the access road typically requires clearing and grubbing of any vegetation, excavation of the topsoil layer and addition of a layer of compacted material to a typical thickness of 300 to 600 mm (depending upon site specific geotechnical conditions). Clean granular material (typically "A" or "B" gravel) will be brought to the site on an as need basis and will not be stockpiled onsite. The topsoil will be kept and re-used on site. The access road to each turbine will typically require one to three days of construction time. Depending on the length of the access roads, construction may require approximately 25 truckloads of gravel.

New steel culverts may be required to maintain drainage in ditches at junctions with roadways and these will be constructed to support the construction equipment and delivery trucks. The location of proposed water crossings is summarized in the **Water Assessment and Water Body Report (Appendix E)** and the potential effects are summarized below in Section 3. The exact details of culverts and their installation in addition to erosion control measures will be determined in conjunction with SVCA as part of their permitting process; however, the culverts are proposed to be open bottom and left in place following the operation phase.

Equipment will include, at a minimum, trucks, graders, and bulldozers. Municipal and provincial roads will also be used for transporting equipment, and minor modifications may be required to some of the existing roads (e.g., widening the turning radius) to handle the oversized loads. Any road damages will be repaired prior to the completion of the construction phase. The trucks and graders will be driven to the site and the bulldozers will be transported via trailers. The only chemicals required for this phase are oils, gasoline, and grease used to operate construction equipment. Fuel-handling will be conducted in compliance with the mitigation measures outlined in the Construction Plan Report.

2.2.2.3 Construction of Laydown Areas

An 8 hectare (22 acre) site will be constructed for the temporary storage of construction material. A portion of this site is proposed for the second Meteorological Tower (if required). The Construction laydown area will include staging areas for construction materials, construction trailers and associated facilities and a temporary electrical service line will be connected to the existing distribution line adjacent to the laydown area for the purpose of providing power to the construction trailers. Following clearing and grubbing of any vegetation, the topsoil at the Construction Laydown Area will be removed and approximately 600 mm of clean compacted crushed gravel will be imported as needed. The excavated topsoil will be re-used on site as feasible. Construction activities are expected to last approximately one week and will require approximately 100 loads of gravel, and a crew of six people. Following the construction phase, the gravel will be removed from the site or re-used, to be determined in consultation with the landowner. The stockpiled topsoil will then be redistributed throughout the Temporary Laydown Area.

Equipment will include, at a minimum, trucks, graders, and bulldozers. The trucks and graders will be driven to the site and the bulldozers will be transported via trailers. The only chemicals required for this phase are oils, gasoline, and grease used to operate construction equipment. Fuel-handling will be conducted in compliance with the mitigation measures outlined in the Construction Plan Report.

2.2.2.4 Turbine Site and Crane Pad Construction

Prior to construction, the construction area will be cleared and grubbed. In order to provide sufficient area for the laydown of the wind turbine components and its assembly, a 122 m by 122 m square around the wind turbine must be cleared, levelled, and be accessible during the construction phase. The topsoil is typically removed and some

soil stabilizing material (i.e. crushed gravel or clean back fill) may need to be added depending upon site specific geotechnical conditions. Where the site laydown areas are close to watercourses, erosion control measures will be implemented, as described in the Construction Plan Report.

Crane pads will be constructed at the same time as the road and will be located adjacent to the turbine locations. The crane pads will typically 15 m by 35 m in area. The topsoil at the crane pad will be removed and approximately 600 mm of clean compacted crushed gravel will be imported as needed. The excavated topsoil will be re-used on site as feasible. Once the turbine erection is complete, the crane pad will be removed and will be restored to prior use. The construction crew is anticipated to require four to six people and construction activities are expected to last for approximately one to two days.

Equipment will include, at a minimum, trucks, graders, and bulldozers. The trucks and graders will be driven to the site and the bulldozers will be transported via trailers. The only chemicals required for this phase are oils, gasoline, and grease used to operate construction equipment. Fuel-handling will be conducted in compliance with the mitigation measures outlined in the Construction Plan Report.

2.2.2.5 Delivery of Equipment

Equipment will be delivered by truck and trailer throughout the construction phase and stored at the temporary lay-down sites surrounding each turbine. A Traffic Management Plan will be developed and will be discussed with Grey County and the Municipality of West Grey. Alternative traffic routes will be prepared to address traffic congestion, as needed.

2.2.2.6 Construction of Turbine Foundations

A backhoe will be used to excavate an area approximately 3 m deep x 20 m x 20 m (precise size of excavation area to be determined by geotechnical analysis of the soil) with the material being stockpiled for future backfilling. Stockpiled material will have topsoil and subsoil separated out and surplus excavated material will be removed from the site for disposal in an approved manner. The foundation, with an approximate footprint of 400 m^2, will be constructed of poured concrete and reinforced with steel rebar to provide strength. The construction timeframe for turbine foundations is three to four days, excluding curing time. After construction the foundation will be backfilled and the surface will be landscaped for drainage. The only surface evidence of the foundation will be a small protrusion of concrete to which the tower is attached; as such land can be cultivated to within a few metres of the turbine. Any wood-waste generated will be removed from the site and recycled unless the landowner otherwise directs. Spent welding roads will be disposed of as hazardous waste by a licensed contractor.

Typical construction equipment, on a per turbine basis, will include:

- Excavator for removing material;
- Flatbed trucks (four to six) for delivery of rebar, turbine mounting assembly and forms;
- Truck mounted crane or rough terrain forklift for unloading and placement of rebar and forms;
- Concrete trucks for delivery of concrete (30 to 40 loads);
- Construction trucks (three to four vehicles with multiple visits); and
- Dozer, loader and trucks to backfill and compact foundation and remove surplus excavated materials.

The trucks and graders will be driven to the site and the bulldozers will be transported via trailers. The only chemicals required for this phase are oils, gasoline, and grease used to operate construction equipment. Fuel-handling will be conducted in compliance with the mitigation measures outlined in the Construction Plan Report.

2.2.2.7 Wind Turbine Assembly and Installation

Turbine components will arrive on-site using flat bed and other trucks and will be temporarily stored on-site in the immediate vicinity of the base prior to assembly. Typically two cranes will be used to install the turbines. The larger crane is usually a crawler type with a capacity of 400 tonnes or larger, and is used for the higher lifts.

Clearing and grubbing will be required for the erection area. The erection cranes and crew will follow the foundation crew and erect the wind turbines once the foundations are completed and the concrete has set. This will typically be in five lifts (three for the towers, one for the nacelle and one for the rotor) over a period of two to three days. The lower tower sections may be installed several days before the upper tower sections and the turbine to optimize installation sequence. The lower tower section will also include electrical and communications equipment. Total turbine assembly and installation will typically require four to five days for each turbine. Fifteen to twenty people may be required at the site during the turbine installation; they will be transported using light duty vehicles.

Packing frames for the turbine components are returned to the turbine vendor. Following commissioning, the surrounding area will be returned to its original use.

Equipment will include, at a minimum, trucks, two cranes, graders, and bulldozers. The trucks and graders will be driven to the site and the bulldozers will be transported via trailers. The larger track mounted crane can move from turbine site to turbine site; however, it will need to be disassembled to move it along roadways and from the Project site. Alternatively, cranes may be moved between turbine sites without disassembly along crane paths. The only chemicals required for this phase are oils, gasoline, and grease used to operate construction equipment. Fuel-handling will be conducted in compliance with the mitigation measures outlined in the Construction Plan Report.

2.2.2.8 Construction of Electrical Collector System

The electrical collector system will consist of pad mounted transformers, underground cabling for use on private property and a buried collection system running along turbine access roads and municipal road right-of-ways. These components are described below.

- Pad Mount Transformers: A concrete transformer pad, approximately 2.2 m by 2.5 m in size, will be installed adjacent to each turbine at the same time as the turbine base installation. The construction will consist of excavation, soil storage, installation of the buried electrical grounding grid, installation of the concrete pad, installation of the transformer, and electrical connections. Transformer installation and cabling between the turbine and transformer is expected to take three days per turbine. Equipment will include flatbed trucks to transport the equipment to site, and a truck-mounted crane for the installation. These activities will likely require four to six trucks, a work force of two people per vehicle per day, and will last between four to six days.
- Collection Lines: Underground cables and fibre optics lines (for communications) from each turbine to the transformer substation will be buried and will be located on private property adjacent to the turbine access roads, where feasible and in the road right-of-way when necessary. Above ground electrical junction boxes will be installed where necessary to connect sections of the underground cabling. The excavated soil will be stored temporarily and then reused as backfill. Power conductors will be approximately 0.9 m below grade and the location will be marked. Farming practices will not be affected by the underground cabling due to the depth of the cables and location of the cable beneath the access

roads. Equipment will include trenchers or diggers (depending on soil type) and construction will require a crew of six people. The construction timeframe is dependent upon the required length of the lines.

- The collection line will cross the Saugeen River on Concession 4. It was determined that the river crossing was not suitable for underground cables due to the presence of bedrock in the location. The collection line is now proposed to be connected to underside of the bridge structure. If the collection line cannot be attached to the bridge structure the alternative proposed is an overhead line with likely one pole on either side of the river (within the existing road right-of-way) with the collection line becoming an underground cable on either side of the crossing of the river. Horizontal Directional Drilling: Electrical cables may need to be installed using horizontal directional drilling to minimize effects to woodlots or watercourses. Erosion control devices will be installed at the drill location and drill cuttings will be collected and removed from the site for disposal in an approved and appropriate manner. An entrance and exit pit will be excavated on either side of the feature to be bored under. The directional drilling equipment will be set up at the entrance pit and a drill bit attached to rod segments is advanced until it reaches the exit pit. A slurry of bentonite and/or polymer mixed with water will be injected into the hole while drilling to help stabilize the bore hole and reduce friction. Once the drill bit has reached the exit pit the drill bit will be removed and a “reamer” attached and pulled back through the hole to enlarge the bore by 120-150%. The electrical cable will then be installed through the hole. Equipment will include a directional drilling rig and two to three support trucks to carry drilling rods, drilling supplies and cable.

The only chemicals required for this phase are oils, gasoline, and grease used to operate construction equipment, and the polymer used for directional drilling. Fuel-handling will be conducted in compliance with the mitigation measures outlined in the Construction Plan Report.

2.2.2.9 Construction of Transformer Substation

Approximately two hectares in size, the transformer substation will include an isolation switch, a circuit breaker, a step-up power transformer, transmission switch gear, instrument transformers, grounding and metering equipment and a control housing which will be supplied with power from the local distribution line. Substation grounding will meet the Ontario Electrical Safety Code. The substation area will be gravelled with clean material imported to the site on an as needed basis and sloped to facilitate drainage. A secondary containment system will be installed around the transformer in the event of an oil leak to prevent any soil contamination.

During construction of the substation, topsoil and subsoils will be stripped and stockpiled separately. Stripped topsoil and subsoil will be placed in the temporary storage facility area and topsoil stripped from the substation area will be distributed on other Project properties. An electrical service line of approximately 9 m and associated poles will likely be connected to the existing distribution line adjacent to the substation for the purpose of providing house service power to the substation control building. The construction crew will consist of approximately 25 to 40 people and construction is expected to last for about four months. Some packing-material waste may be generated. All recyclable materials will be separated from non-recyclable materials and both streams will be removed from the site and disposed of at an approved and licensed facility.

Construction equipment will include small trenchers, a small crane, forklifts, concrete trucks and a bulldozer. The trucks and graders will be driven to the site and the bulldozers will be transported via trailers. The only chemicals required for this phase are oils, gasoline, and grease used to operate construction equipment and transformer oil. Fuel-handling will be conducted in compliance with the mitigation measures outlined in the Construction Plan Report.

2.2.2.10 Construction of Permanent Meteorological Towers

One to two towers will be erected using winches and secured with three guy wires tied off to anchors or a small monopole foundation. No significant soil or vegetation disturbance is anticipated. Construction of the meteorological tower will take approximately two days and require a crew of six people.

2.2.2.11 Clean-up and Reclamation

Site clean-up will occur throughout the construction phase and site reclamation will occur after construction has been completed. Waste and debris generated during the construction activities will be collected by a licensed operator and disposed of at an approved facility. All reasonable efforts will be made to minimize waste generated and to recycle materials including returning packaging material to suppliers for reuse/recycling.

Stripped soil will be replaced and re-contoured in the construction areas and disturbed areas will be re-seeded, as appropriate. Erosion control equipment will be removed once inspections have determined that the threat of erosion has diminished to the original land use level or lower. High voltage warning signs will be installed at the transformer substation and elsewhere, as appropriate. At the conclusion of construction, vehicles and construction equipment will be removed from the site.

2.2.2.12 Turbine Commissioning

Turbine commissioning will occur once the wind turbines and substation are fully installed and Hydro One is ready to accept grid interconnection. The commissioning activities will consist of testing and inspection of electrical, mechanical and communications systems. Some packing-material waste may be generated. All recyclable materials will be separated from non-recyclable materials and both streams will be removed from the site and disposed of at an approved and licensed facility.

Temporary portable generator sets may be used to electrically commission the turbines prior to connection to the grid. The generators will be required for approximately one day per turbine. The generators may require an Environmental Compliance Approval. Following the commissioning phase, the portable generators will be removed from the site and returned to the owners.

Equipment will include support trucks which will be driven to the construction site. The only chemicals required for this phase are oils, gasoline, and grease used to operate construction equipment and portable generators, gearbox oil, and lubricants. Fuel-handling will be conducted in compliance with the mitigation measures outlined in the Construction Plan Report.

2.2.3 Operation Activities

2.2.3.1 General Operation

The wind energy centre will require full time technical and administrative staff to maintain and operate the facility. The primary workers will be wind technicians (i.e., technicians who carry out maintenance on the turbines) along with a site supervisor. The Project will be operated by a staff of two to three people who will work out of an Operations and Maintenance Building. The East Durham Wind Energy Centre plans to use the land and building for the Operations and Maintenance building that was already permitted under a separate REA and is now operational for the Conestogo Wind Energy Centre. This shared use of the building will have low use (approximately 2 people) and will not change or result in additional mitigation measures being required.

The wind turbines will be operating (i.e., in "Run" mode and generating electricity) when the wind speed is within the operating range for the turbine and there are no component malfunctions. Each turbine has a comprehensive control system that monitors the subsystems within the turbine and the local wind conditions to determine whether the conditions are suitable for operation. If an event occurs which is considered to be outside the normal operating range of the turbine (such as low hydraulic pressures, unusual vibrations or high generator temperatures), the wind turbine will immediately take itself out of service and report the condition to the Operations Centre, located in the operations and maintenance building. A communication line connects each turbine to the Operations Centre, which closely monitors and, as required, controls the operation of each turbine. The wind turbine system will be integrated with the electric interconnection Supervisory Control and Data Acquisition (SCADA) to ensure that the Project critical controls, alarms and functions are properly co-ordinated for safe, secure and reliable operation. The wind turbine will also report to NextEra's Central Operations Facility during non-working hours.

2.2.3.2 Use of Meteorological Data

The use of meteorological data is key to the safe and efficient operating of a wind farm. The East Durham Wind Energy Centre is proposing to have one permanent meteorological tower to provide real time data. This will be used to operate the turbines efficiently. Depending on the turbine technology used, some operational decisions made using meteorological data include:

- Cut-in wind speed Cut-out wind speed
- Turbine shut down during icing conditions
- Turbine shut down during extreme weather events

2.2.3.3 Routine Turbine Maintenance

Routine preventative maintenance activities will be scheduled at six month intervals with specific maintenance tasks scheduled for each interval. Maintenance involves removing the turbine from service and having two to three wind technicians climb the tower to spend a full day carrying out maintenance activities.

Consumables such as the various greases used to keep the mechanical components operating and oil filters for gearboxes and hydraulic systems will be used for routine maintenance tasks. Following all maintenance work on the turbine, the area is cleaned up. All surplus lubricants and grease-soaked rags are removed and disposed as required by applicable regulations. All maintenance activities will adhere to the same spill prevention protocols undertaken during the construction phase.

2.2.3.4 Unplanned Turbine Maintenance

Modern wind turbines are very reliable and the major components are designed to operate for approximately 30 years. However, there is a possibility that component failure may occur despite the high reliability of the turbines fleet-wide. Most commonly, the failure of small components such as switches, fans, or sensors will take the turbine out of service until the faulty component is replaced. These repairs can usually be carried out by a single crew visiting the turbine for several hours.

Events involving the replacement of a major component such as a gearbox or rotor are rare. If they do occur, the use of large equipment, sometimes as large as that used to install the turbines, may be required.

It is possible that an access road, built for construction and returned to farmland when the construction phase is completed, will need to be rebuilt to carry out repairs to a damaged turbine. Typically only a small percentage of turbines will need to be accessed with large equipment during their operating life.

2.2.3.5 Electrical System Maintenance

The collector lines and substation will require periodic preventative maintenance activities. Routine maintenance will include condition assessment for above-ground infrastructure and protective relay maintenance of the substation, in addition to monitoring of the secondary containment system for traces of oil.

2.2.3.6 Waste Management

Waste generated during the operations phase will be removed from the operations and maintenance building (located outside of the project location) by a licensed operator and disposed of at an approved facility. Any lubricants or oils resulting from turbine maintenance will be drummed on site and disposed of in accordance with applicable Provincial regulations. All reasonable efforts will be made to minimize waste generated and to recycle materials including returning packaging material to suppliers for reuse/recycling. The spill prevention protocols followed during construction will continue to be observed throughout the facility's operations and maintenance activities.

2.2.4 Decommissioning Activities

2.2.4.1 Procedures for Decommissioning

Decommissioning procedures will be similar to the construction phase. More detailed information on decommissioning is located in the Decommissioning Plan Report.

The procedures will include:

1. The creation of temporary work areas. In order to provide sufficient area for the lay-down of the disassembled wind turbine components and loading onto trucks, a 122 m by 122 m square must be cleared, levelled and made accessible to trucks. The topsoil will be removed and some material may need to be added.
2. The creation of crane pads. The crane pads will typically be 15 m x 35 m in size and will be located within the temporary work area around each wind turbine. The topsoil at the crane pad will be removed and approximately 600 mm of compacted crushed gravel will be added. Once the turbine disassembly is complete, the gravel area around each turbine will be removed and the area will be restored to prior use using stockpiled topsoil.
3. The use of cranes to remove the blades, hub and tower segments.
4. The use of trucks for the removal of turbines, towers and associated equipment.
5. The removal of the top 1.2 m of the turbine foundations and replacement with clean fill and stockpiled topsoil. The fill and topsoil will be contoured to allow cultivation in the case of agricultural lands.
6. Road bedding material will be removed and replaced with clean subsoil and topsoil for reuse by the landowner for agricultural purposes. It is proposed to leave culverts in place.
7. Cutting underground electrical lines, burying the ends to 1.2 m below grade, and leaving the lines in place with consent of the landowner. Above-ground lines and poles (that are not shared with another Distribution Operator) will be removed and the holes will be filled with clean fill.

8. The substation will be demolished. This will be decommissioned in a manner appropriate to and in accordance with the standards of the day. All materials will be recycled, where possible, or disposed off-site at an approved and appropriate facility.

2.2.4.2 Land and Water Restoration Activities

Once all of the turbines and ancillary facilities are removed, the remaining decommissioning work will consist of shaping and grading the areas to, as near as practical, the original contour prior to construction of the wind turbines and access roads. Existing agricultural capacity will be restored and the land re-contoured to maintain proper drainage. All areas, including the access roads, transformer pads and crane pads will be restored to, as near as practical, their original condition with native soils and seeding. If there is insufficient material onsite, topsoil and/or subsoil will be imported from a source acceptable to the landowner.

Although strict spill prevention procedures will be in place, there is the potential through the decommissioning process for small spills of solvents or fuels. The soil conditions of the turbine areas will be surveyed to determine if any impacts have occurred. Should soil impacts be noted, the affected soils will be identified, excavated, and removed to the applicable standards from the site for disposal at an approved and appropriate facility. The removed soils will be replaced with stockpiled subsoil and topsoil, if available. If none are available, clean fill and topsoil will be imported.

2.2.4.3 Procedures for Managing Waste Materials Generated

As discussed above, the waste generated by the decommissioning of the Project is minimal, and there are anticipated to be no toxic residues. Any waste generated will be disposed of according to the applicable standards with the emphasis on recycling materials whenever possible.

The major components of the wind turbines (tower, nacelle, blades) are modular items that allow for ease of construction and disassembly of the wind turbines during replacement or decommissioning. Dismantled wind turbines have a high salvage value due to the steel and copper components. These components are easily recyclable and there is a ready market for scrap metals. Transformers and collection lines are designed for a 50 year lifespan so these items could be refurbished and sold for reuse.

Based on the construction details for the GE wind turbines and associated tower and components, it is assumed that both the tower and nacelle will yield approximately 80% salvageable materials. Since the hub assembly and bedplate is manufactured steel, it is anticipated that the hub will yield 100% salvageable metallic materials. Copper salvage estimates were derived by assuming 5% of the total tower and nacelle weight consists of salvageable copper bearing materials. Since the rotor/blades are constructed of predominantly non-metallic materials (fiberglass reinforced epoxy and carbon fibres), no salvage for the rotor or blades is currently assumed.

It is assumed that 75% of the aggregate material from the decommissioning of the crane pads can be salvaged for future use as aggregate base course. The remaining materials would be viable for general fill on non-structural fill areas. The geotextile fabric cannot be salvaged.

3. Potential Environmental Effects

An effects assessment for the construction, operation and decommissioning phases of the Project has been completed in accordance with the requirements of O. Reg. 359/09. This section provides a summary of the potential effects and any residual effects of each phase as they relate to specific environmental conditions. For further detail on specific mitigation measures and monitoring plans, reference should be made to the Construction Plan Report and Design and Operations Report.

As outlined previously, the procedures for decommissioning will be similar to the construction phase. As such, the potential effects for each of these phases are also deemed to be similar.

3.1 Cultural Heritage

Construction and Decommissioning

The potential effects from construction and decommissioning activities are as follows:

- Disturbance or displacement of 3 archaeological sites (determined to be 19th century historic Euro-Canadian sites) identified through the Stage 2 Archaeological Assessment due to construction of project infrastructure.
- Visual impact on the McKechnie Cemetery due to use of the adjacent property as a temporary laydown area during construction.

There is a low likelihood of occurrence and limited magnitude of this effect due to the application of mitigation measures.

Operation

No effects to protected properties, archaeological resources or heritage resources are anticipated as a result of the operational phase of the Project.

3.2 Natural Heritage

3.2.1 Potential Effects to Generalized Candidate Significant Wildlife Habitat

Construction and Decommissioning

The potential effects from construction and decommissioning activities on generalized candidate significant wildlife habitat are as follows:

- Increased erosion, sedimentation and turbidity resulting in increased inputs of nutrients and contaminants to wetlands, woodlands and other significant natural features, resulting from:
  - clearing and grubbing for construction of turbines, access roads, temporary crane paths and pads/turnaround areas, collection lines and substation;
  - excavation and backfilling for construction of turbines, collection lines and substation;
  - directional drilling for construction of collection lines;

- Removal/disturbance of topsoil and increased soil compaction from manoeuvring of heavy machinery, excavation and backfilling of turbine foundation for construction of turbines, access roads, temporary crane paths and pads/turnaround areas, collection lines and substation;
- Disturbance and/or mortality to terrestrial wildlife, including barriers to wildlife movement from construction of turbines, access roads, temporary crane paths and pads/turnaround areas, collection lines and substation;
- Disturbance to or loss of wildlife habitat from construction of turbines, access roads, temporary crane paths and pads/turnaround areas, collection lines and substation;
- Damage to vegetation while operating equipment used in construction of turbines, access roads, temporary crane paths and pads/turnaround areas, collection lines and substation;
- Soil / water contamination by oils, gasoline, grease and other materials from:
  - construction equipment, material stockpiling and handling for construction of turbines, access roads, temporary crane paths and pads/turnaround areas, collection lines and substation; and
  - bentonite or polymer used during directional drilling of collection lines, resulting from the escape of drilling mud into the environment as a result of a spill, tunnel collapse or the rupture of mud to the surface in the event of a “frac-out”; and
- Changes in surface water drainage patterns (e.g. obstruction of lateral flows in surface water to wetlands) from construction of turbines, access roads, temporary crane paths and pads/turnaround areas, resulting in effects to soil moisture and species composition of vegetation.

There is a low likelihood of occurrence and limited magnitude of these effects due to the application of mitigation measures.

Operation

The potential effects from operational and maintenance activities on generalized candidate significant wildlife habitat are as follows:

- Disturbance and/or mortality to wildlife from operation of roads;
- Soil / water contamination by oils, gasoline, grease and other materials (e.g., turbine lubricant and maintenance personnel); and
- Changes in surface water drainage patterns resulting in effects to soil moisture and species composition of vegetation.

There is a low likelihood of occurrence and limited magnitude of these effects due to the application of mitigation measures.

3.2.2 Potential Effects to Significant Wetlands, Woodlands, Valleylands and Wildlife Habitat

Construction and Decommissioning

The potential effects from construction and decommissioning activities on significant wetlands, woodlands, valleylands and wildlife habitat are as follows:

- Disturbance to or loss of wildlife habitat and damage to vegetation while operating equipment within significant wetlands and / or woodlands.

There is no likelihood of occurrence of this effect due to the application of mitigation measures.

- Noise disturbance to bats during turbine construction.
- Sedimentation and erosion affecting function of significant wetland.
- Sedimentation and erosion affecting function of significant valleyland.
- Disruption of amphibians moving to breeding pools and home range from Amphibian Woodland Breeding Habitat Features and Amphibian Wetland Breeding Habitat Features and possible indirect threats by changes to surface water drainage patterns.
- Accidental intrusion into Features resulting in habitat damage, or possible mortality to reptiles within feature from construction equipment.
- Unplanned intrusion into significant woodlands in event of equipment malfunction due to directional drilling.

There is a low likelihood of occurrence and limited magnitude of these effects due to the application of mitigation measures.

- Sedimentation and erosion associated with directional drilling affecting function of significant Wetland Complexes.
- Sedimentation and erosion associated with collection line construction affecting function of significant Wetland Complexes.
- Removal of wetland habitat or encroachment into wetlands.
- Unplanned intrusion into significant wetlands in event of equipment malfunction due to directional drilling.
- Unintended damage to adjacent vegetation within significant wetlands and woodlands due to collection line construction.
- Vegetation removals in significant woodlands at Turbines 10 and 17.

There is a low likelihood of occurrence of these effects due to the application of mitigation measures; however, if accidental damage occurred, negative effects may be measurable but would represent a small change relative to existing conditions.

Operation

Potential effects from operational and maintenance activities on Significant Wetlands, Woodlands, Valleylands or Wildlife Habitat are as follows:

- Bats may be disturbed by noise from operations;
- Risk of bird collisions with turbines; and
- Risk of bat collisions with the turbine.

These effects will be minimized through the application of mitigation measures. The significance of any effects will be determined based on the results of the monitoring plans.

- Changes in surface water drainage patterns resulting in effects to soil moisture and species composition of vegetation; and
- Risk of mortality to amphibians moving between breeding pools and home range on the access roads related to amphibian woodland breeding habitat and amphibian wetland breeding habitat.

There is a low likelihood of occurrence and limited magnitude of these effects due to the application of mitigation measures.

3.3 Surface Water and Groundwater

3.3.1 Surface Water

Construction and Decommissioning

The potential effects from construction and decommissioning activities are as follows:

- Obstruction of lateral flows in watercourses from water crossings.

There is no likelihood of occurrence of this effect due to the application of mitigation measures.

- Reduced stream baseflows, groundwater upwelling areas and increase in water temperatures due to discharge from dewatering activities (if required) for excavation of foundation area at water body locations;
- Increased flows to watercourses from temporary groundwater dewatering (if required) discharges for excavation of foundation causing streambed and/or bank erosion and downstream sedimentation if not managed properly at water body locations;
- Increased erosion, sedimentation and turbidity from:
  - clearing and grubbing for construction of turbines, and pads/turnaround areas at water body locations;
  - clearing and grubbing for construction of access roads, temporary crane paths and pads/turnaround areas at water body locations for road crossings and for roads within a water body buffer; and
  - directional drilling activities at water body locations for collection line crossings and for collection lines within a water body buffer;
- Soil compaction, which may result in hardening of surfaces and increased runoff into watercourses from turbine construction at water body locations;
- Release or discharge of sediment laden surface water into the adjacent watercourse or drainage features transporting nutrients and contaminants into the watercourse from:
  - turbine construction at water body locations;
  - road crossings at water body locations and for roads within a water body buffer; and
  - collection line crossings at water body locations and for collection lines within a water body buffer;
- Increase sediment runoff and decrease bank stability from stream diversion for the installation of watercourse crossing resulting in changes in water chemistry and temperature; and
- Soil/water contamination by oils, grease and other materials from construction equipment at:
  - water body locations for road crossings and for roads within a water body buffer; and
  - water body locations for directional drilling of collection line crossings and for collection lines within a water body buffer.

There is a low likelihood of occurrence and limited magnitude of these effects due to the application of mitigation measures.

- Temporary disruption of substrates/habitat at locations where in-water work is required 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.

- Degradation of fish habitat for water crossings at water body locations.

The magnitude of this effect is limited due to the application of mitigation measures; however, there remains a moderate likelihood of occurrence 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.

Operation

The potential effects from operational and maintenance activities are as follows:

- Obstruction of lateral flows in watercourses and other waterbodies from water crossings.

There is no likelihood of occurrence of this effect due to the application of mitigation measures.

- Water contamination by oils, gasoline, grease and other materials (e.g., turbine lubricant and maintenance activities, use of access roads) at watercourses due to their proximity to the project; and,
- Increase in impervious surfaces from the presence of turbine foundation and access roads, resulting in increased water temperatures, increased surface runoff and stream peak flows.

There is a low likelihood of occurrence and limited magnitude of these effects due to the application of mitigation measures.

3.3.2 Geology and Groundwater

Construction and Decommissioning

The potential effects from construction and decommissioning activities are as follows:

- Formation of sinkholes during foundation construction.

There is no likelihood of occurrence of this effect due to the application of mitigation measures.

- Dewatering when excavating and constructing the turbine bases, resulting in a reduction in quality and quantity of groundwater.

There is a low likelihood of occurrence and negligible magnitude of this effect due to the application of mitigation measures.

- Increase in impervious area created by the turbine base and access roads resulting in reduced infiltration near to the noted groundwater recharge areas (beach ridge and glacial outwash deposits).

There is a low likelihood of occurrence and limited magnitude of this effect due to the application of mitigation measures.

Operation

The potential effects from operational and maintenance activities are as follows:

- Increase in impervious surfaces from presence of turbine foundations overlaying high permeability surficial materials (such as: sands, gravels and silty sands) and access roads, resulting in reduced infiltration to groundwater.
- Groundwater contamination by oil, gasoline, grease or other material from construction activities

There is a low likelihood of occurrence and limited magnitude of these effects due to the application of mitigation measures.

3.4 Emissions to Air

Construction and Decommissioning

The potential effects from construction and decommissioning activities are as follows:

- Emissions of contaminants from portable generator sets, truck traffic and other construction vehicles, including but not limited to, nitrogen dioxide, sulphur dioxide, suspended particulates, emissions of greenhouse gases (CO_2, methane).
- Dust as a result of vehicle traffic over gravel roads and/or cleared areas.

No odour emissions are anticipated.

There is a high likelihood of occurrence of these effects; however the magnitude of these effects will be limited due to the application of mitigation measures and the short-term nature of effects.

Operation

The potential effects from operational and maintenance activities are as follows:

- Emissions of contaminants from maintenance vehicles and portable generator sets, including but not limited to, nitrogen dioxide, sulphur dioxide, suspended particulates, emission of greenhouses gases (CO_2, methane).
- Dust as a result of vehicle traffic over gravel roads and/or cleared areas.

No odour emissions are anticipated.

There is a low likelihood of occurrence and limited magnitude of these effects due to the application of mitigation measures.

3.5 Noise

Construction and Decommissioning

The potential effects from construction and decommissioning activities are as follows:

- An increase in noise levels due to trucks, cranes and other equipment used to construct the turbines and ancillary infrastructure.

There is a high likelihood of occurrence of this effect; however, the magnitude of this effect will be limited due to the application of mitigation measures and the short-term nature of effects.

Operation
The potential effects from operational and maintenance activities include:

- An increase in noise levels due to the aerodynamic noise generated from wind turbine blades, and mechanical noise associated with each turbine and from the transformer located at the substation. Specifically, the noise modelling results show that the noise levels for all non-participating receptors are below 40 dBA.

There is a high likelihood of occurrence of this effect as these project components contribute to increased noise levels; however, the magnitude of this effect will be limited due to the application of mitigation measures and adherence to the 40 dBA threshold.

3.6 Local Interests, Land Use and Infrastructure

3.6.1 Existing Land Uses

Construction and Decommissioning

The potential effects from construction and decommissioning activities are as follows:

- Minor reduction in usable agricultural land.
- Increased congestion due to an increase in truck traffic and short-term lane closures on local roads during delivery of project components.

There is a high likelihood of occurrence; however the magnitude of these effects will be limited due to the application of mitigation measures.

- Disruption or damage to local infrastructure such as roads and water and/or sewage pipelines.

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 presence of oversize loads during the delivery/removal of turbine components.

Operation

The potential effects from operational and maintenance activities are as follows:

- Damage to crops or trees due to turbine malfunction or failure associated with 5 turbines that are located within 80 m of neighbouring property lines (refer to the Property Line Setback Assessment Report in the Appendix F).

There is no likelihood of occurrence of this effect due to the application of mitigation measures.

- A minor reduction in usable farmland as a single turbine, together with its access road, will take up, on average, only 1.0 to 1.5% of a typical 40 hectare farm parcel.

There is a high likelihood of occurrence of this effect; however, the magnitude of this effect will be limited due to the application of mitigation measures and size of the overall footprint in relation to the entire Project Study Area.

- Reduction in aesthetic quality of landscape which may affect the use and enjoyment of private property and recreational amenities.

The likelihood of occurrence and magnitude of this effect is dependent upon the perception of residents and visitors to the presence of turbines.

3.6.2 Stray Voltage and Effects to Livestock

Construction and Decommissioning

Potential effects from stray voltage are not anticipated during the construction or decommissioning phase of the Project.

Operation

The potential effects from operational and maintenance activities are as follows:

- Mild electric shocks to livestock, which may cause behavioural changes, and changes in production performance.

At a voltage difference above about 10 volts, people may detect a tingle. This is not a health hazard to humans.

There is a low likelihood of occurrence and limited magnitude of this effect due to the application of mitigation measures.

3.7 Other Resources

Construction and Decommissioning

No potential effects on aggregate resources or petroleum wells are anticipated as a result of the construction or decommissioning phase of the Project due to the distance between the Project and these resources. In addition, there are no effects on landfills or forest resources as none are present. There are three closed landfill sites located within the Project Boundary but none of them are within the Project Location and will not be impacted by construction or operation of the wind farm. Two are located on the south side of Concession (greater than 1 km from the Project Location) and the third one is on the west side of Baptist Church Road

south of North Line, approximately 50 m from the proposed collection line and approximately 400 m from the nearest proposed turbine to the landfill property boundary.

Operation

No potential effects on aggregate resources or petroleum resources are anticipated as a result of the operation of the Project due to the distance between Project components and these resources.

3.8 Public Health and Safety

Construction and Decommissioning

Effects on public health and safety have been described in previous sections, including Emissions to Air, Noise, and Local Interests, Land Use and Infrastructure.

Operation

The potential effects from operational and maintenance activities are as follows:

- Ice formation on turbine blades resulting in ice shed.
- Shadow flicker causing disturbance at nearby residences and businesses. Shadow flicker occurs when – at precise latitude, wind direction, and height of the sun – rotating wind turbine blades cast shadows upon stationary objects.

There is a low likelihood of occurrence and limited magnitude of these effects due to the application of mitigation measures.

3.9 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.

4. Summary and Conclusions

Field work and data collection were undertaken to determine the potential effects of this Project during the construction and installation operation and maintenance phase. Mitigation measures to manage these potential effects have been identified and monitoring and contingency plans proposed to ensure effects are minimized.

Significant adverse effects have been avoided through careful site selection, facility layout planning and strict adherence to all regulatory requirements. All turbines, access roads, and ancillary facilities have been sited with landowner consultation to minimize the impact to current agricultural operations.

The overall conclusion is that this project can be constructed, installed and operated without any significant adverse residual effects to the environment. Post-construction monitoring related to effects on wildlife, including birds and bats, will be undertaken to confirm this conclusion.

Appendix 3

NextEra Energy Canada, ULC

Draft Project Description Report – East Durham Wind Energy Centre

Prepared by:

GENIVAR Inc.
500 – 600 Cochrane Drive 905-475-7270 tel
Markham, ON, Canada L3R 5K3 905-475-5994 fax
www.genivar.com

Project Number:

111-15446-00

Date:

October, 2012

Table of Contents

List of Figures

List of Tables

Glossary of Terms

DFO .....Federal Department of Fisheries and Oceans
GE.....General Electric
kV.....Kilovolt
MNR.....Ontario Ministry of Natural Resources
MTCS.....Ontario Ministry of Tourism, Culture and Sport
MTO.....Ontario Ministry of Transportation
MW.....Megawatt
NextEra .....NextEra Energy Canada, ULC
O.Reg. 359/09 .....Ontario Regulation 359/09
PDR .....Project Description Report
The Project.....East Durham Wind Energy Centre
REA.....Renewable Energy Approval
SVCA .....Saugeen Valley Conservation Authority
TC .....Transport Canada
V .....Volt

1. General Information

This Project Description Report (PDR) was prepared in accordance with the requirements of the Renewable Energy Approval Process outlined in Ontario Regulation 359/09 (O.Reg. 359/09) and the Technical Guide to Renewable Energy Approvals (Ministry of the Environment (MOE), 2011).

1.1 Name of Project and Applicant

East Durham Wind, Inc., a wholly owned subsidiary of NextEra Energy Canada, ULC (NextEra), is proposing to construct a wind energy project in the Municipality of West Grey, Grey County, Ontario. The Project will be referred to as the East Durham Wind Energy Centre (the "Project") and will be located on private lands east of the Community of Durham and west of the Village of Priceville.

The Project will be owned and operated by East Durham Wind, Inc., a subsidiary of NextEra. NextEra's parent company is NextEra Energy Resources, LLC, a global leader in wind energy generation with a current operating portfolio of over 90 wind energy projects in North America. Wind farms currently owned and operated by NextEra Energy Canada include: Mount Copper and Mount Miller, (both 54 megawatts (MW) located in Murdochville, Quebec; Pubnico Point, (31 MW) located near Yarmouth, Nova Scotia; and Ghost Pine (82 MW), located in Kneehill County, Alberta.

1.2 Project Study Area

The proposed Project is located in the Municipality of West Grey, east of the Community of Durham and west of Village of Priceville within Grey County. The Project Study Area consists of the area being studied for the wind farm components (Wind Energy Centre Study Area). The Wind Energy Centre Study Area is generally bounded by:

- → Concession Road 6 to the north
- → Sideroad 40, Townline Artemesia-Glenelg and Sideroad 50 to the east
- → The West Grey – Southgate municipal boundary to the south
- → Baseline to the west

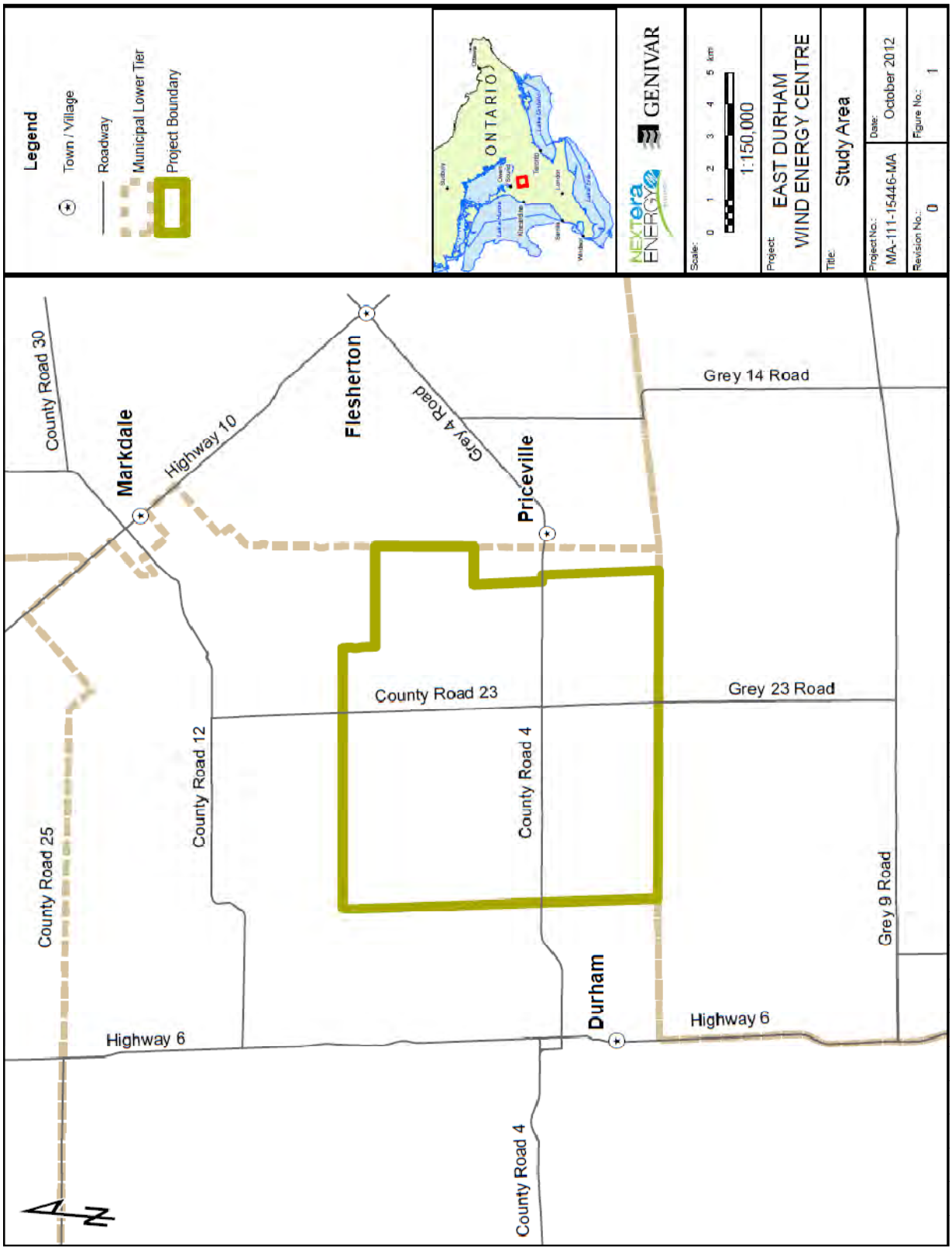
The location of the Project Study Area was defined early in the planning process for the proposed wind energy facility, based on the availability of wind resources, approximate area required for the proposed project, and availability of existing infrastructure for connection to the electrical grid. The Project Study Area was used to facilitate information collection.

The following co-ordinates define the external boundaries (corners) of the Project Study Area, as shown in **Figure 1-1**:

Study Area Corner	Easting NAD83 UTM17	Northing NAD83 UTM17
Northwest	517446	4898788
Northeast	528740	4899612
Southeast	529409	4890833
Southwest	519266	4889235

Some sections of electrical collection line are expected to be located in the municipal right-of-way. The electrical substation will be located on privately owned lands with lease arrangements.

Figure 1-1 Project Study Area



1.3 Land Ownership

The following table provides a legal description of the properties on which project infrastructure will be sited. All properties are privately owned and are under agreement with NextEra.

Infrastructure Type	Legal Description
T10, Collection Line, Access Road	PT LT 20 CON 1 SDR GLENELG; PT LT 19-20 CON 2 SDR GLENELG PT 1 & 2 17R2360 & PT 1 16R8532; S/T GS160110; WEST GREY
T2, Collection Line, Access Road	LT 28 CON 2 NDR GLENELG EXCEPT PT 1 17R3090 & PT 1 16R6477; PT LT 29-30 CON 2 NDR GLENELG PT 1 17R2968 & AS IN GS70768 EXCEPT PT 2 17R807 & PT 1 & 2 17R2787; S/T DEBTS IN GS70768; S/T INTEREST IN GS70768; WEST GREY
T4, T3, T5, Collection Line, Access Road	PT LT 21-27 CON 1 NDR GLENELG AS IN R428714; WEST GREY
T14, Collection Line, Access Road	LT 25 CON 4 NDR GLENELG; WEST GREY
T12, T15, Collection Line, Access Road	LT 24 CON 4 NDR GLENELG; PT LT 23 CPN 4 NDR GLENELG AS IN R502326; WEST GREY
T7, Collection Line, Access Road	PT LT 34 CON 1 NDR GLENELG AS IN R434625, PT 1 16R5178; WEST GREY
T6, Collection Line, Access Road	PT LT 31-33 CON 1 NDR GLENELG AS IN GS94959, PT 4 16R5177, EXCEPT GL3416 & GL12567 MUNICIPALITY OF WEST GREY
T11, Collection Line, Access Road	PT LT 35 CON 1 SDR GLENELG AS IN R508782, S/T INTEREST IN GS70896; WEST GREY
T13, Collection Line, Access Road	LT 48-49 CON 2 SDR GLENELG; WEST GREY
T16, T17, Collection Line, Access Road	PT LT 43-45 CON 1 SDR GLENELG AS IN GS128681; WEST GREY
MET, T1, Collection Line, Access Road	LT 21-23 CON 2 NDR GLENELG EXCEPT PT 1-8 17R2606; WEST GREY
T8, Collection Line, Access Road	LT 39-40 CON 1 NDR GLENELG; PT LT 37-38 CON 1 NDR GLENELG AS IN GS44871, EXCEPT R419249, PT 1 17R439, PT 2 17R945 LYING S OF PT 4 16R5178; WEST GREY
Substation, Laydown Area, Collection Line	PT LT 46 CON 1 NDR GLENELG PT 1 16R9271; WEST GREY

1.4 Description of Energy Source, Nameplate Capacity and Class of the Facility

This facility will convert wind energy into electricity to be fed into the Hydro One grid. The wind turbine technology proposed for this Project is the GE 1.6-100 model wind turbine. With a total maximum nameplate capacity of up to 23 MW, the Project is categorized as a Class 4 facility. The project consists of up to 16 GE model wind turbines with 14 turbines that are 1.6-100 (1.62 MW), Turbine 6 is 1.34-100 (1.34 MW) and Turbine 2 is 1.39-100 (1.39 MW) wind turbine generator locations and pad mounted step-up transformers are proposed for permitting (a maximum of 14 turbines will ultimately be constructed). The sound power level of the turbine model is expected to be greater than 102 dBA. The technical specifications for this model of turbine are detailed in Section 2.1.1 of this Project Description Report and in the Wind Turbine Specification Report (Appendix A).

1.5 Key Contacts

Project Proponent	Project Consultant
Derek Dudek Community Relations Consultant	Patricia Becker, MES Project Manager (Energy)

NextEra Energy Canada, ULC 390 Bay St, Suite 1720 Toronto, ON M5H 2Y2 Phone: 1-877-257-7330 Email: EastDurham.Wind@NextEraEnergy.com Website: www.NextEraEnergyCanada.com	GENIVAR Inc. 5th Floor, 600 Cochrane Drive Markham, Ontario, L3R 5K3 Phone: 905-713-2837 Email: pat.becker@genivar.com

1.6 Other Approvals Required

It is anticipated that in addition to the Renewable Energy Approval (REA), the East Durham Wind Energy Centre Project will need a Notice to Proceed from the Ontario Power Authority, building permits and road use / entrance permits from the Municipality of West Grey, permits from the Electrical Safety Authority (ESA) and the Ontario Energy Board (OEB), an Oversize/Overweight Permit from the Ontario Ministry of Transportation (MTO); Archaeological Clearance and Heritage Clearance from the Ontario Ministry of Tourism, Culture and Sport (MTCS); Interference with Wetlands and Alterations to Shorelines and Watercourses Permits from the Saugeen Valley Conservation Authority (SVCA) and other permits or authorizations from the Ontario Ministry of Natural Resources (MNR) and Grey County.

1.7 Federal Involvement

There is no expectation for any federal environmental assessment under the Canadian Environmental Assessment Act. Nor is there any expectation for the requirement of federal permits or approvals under the Fisheries Act or Species at Risk Act or the Navigable Waters Protection Act. There will be a requirement for an Aeronautical Obstruction Clearance from Transport Canada for turbine lighting. In addition, a Land Use Clearance will be required from NAV CANADA for aeronautical safety.

1.8 Commitments for Future Studies

NextEra has identified future studies that will need to be followed through before and during the construction, operation, and decommissioning of the Project based on the results of the effects assessment. These studies are listed in **Table 1-1** below.

Table 1-1 Commitments for Future Studies

No.	Timing of Commitment	Location within the Project	REA Commitment	REA Report Reference
1	Pre-Construction	Disturbance Areas	Undertake surveys to locate all project infrastructure.	Construction Plan; Section 2.2.1
2	Pre-Construction	Turbine Foundation	Conduct geotechnical sampling for all turbine foundation locations.	Construction Plan; Section 2.2.1
3	Pre-Construction	Culvert	Determine specific culvert details and erosion control measures in conjunction with the Saugeen Valley Conservation Authority (SVCA).	Construction Plan; Section 2.2.2
4	Pre-Construction	Project Study Area	Develop a Traffic Management Plan and provide to Grey County and Municipality of West Grey.	Construction Plan; Section 2.2.5/3.6.2
5	Pre-Construction	Project Study Area	Conduct a Stormwater Pollution Prevention Study to address potential effects of stormwater runoff decommissioning.	Decommissioning Plan; Section 2.4
6	Pre-Construction	Disturbance Areas	Complete Stage 3 Archaeological Assessment (and Stage 4 if necessary) to avoid displacement or	Construction Plan; Section 3.1.2

Table 1-1 Commitments for Future Studies

No.	Timing of Commitment	Location within the Project	REA Commitment	REA Report Reference
			disturbance of any archaeological resources identified in Stage 2 Archaeological Assessment by the construction of Project infrastructure.	
8	Pre-Construction	Disturbance Areas	Develop an erosion and sediment control plan.	Construction Plan; Section 3.2.2.1/3.2.2.2
9	Pre-Construction	Disturbance Areas	Develop a Spill Response Plan.	Construction Plan; Section 3.2.2.1 Design & Operations; Section 6.2.1/6.3.2.1
10	Construction	Disturbance Areas	Undertake active nest surveys if clearing of vegetation cannot be avoided during breeding season for migratory birds.	Construction Plan; Section 3.2.2.1
11	Pre- and Post-Construction	Project Study Area	Undertake roads condition survey pre- and post-construction.	Construction Plan; Section 3.6.2
12	Pre- and Post-Construction	Disturbance Areas	Undertake bird and bat monitoring as required by MNR.	Construction Plan; Section 3 Design & Operations; Section 6 Appendix B

2. Project Information

2.1 Facility Components

As shown in Figure 2-1, the major components of the Project are proposed to be:

- Up to 16 GE model wind turbines with 14 turbines that are 1.6-100 (1.62 MW), Turbine 6 is 1.34-100 (1.34 MW) and Turbine 2 is 1.39-100 (1.39 MW) wind turbine generator locations and pad mounted step-up transformers are proposed for permitting (a maximum of 14 turbines will ultimately be constructed);
- Turbine laydown and storage areas (including temporary staging areas, crane pads and turnaround areas surrounding each wind turbine);
- Construction laydown area (including staging areas for construction materials, construction trailers and associated facilities and a temporary electrical service line to provide power to the construction trailers);
- Approximately 28.3 km of 34.5 kV underground electrical collection lines and ancillary equipment (e.g., above ground electrical junction boxes) to connect the turbines to the proposed transformer substation;
- Pad mounted 690 V/ 34.5 kV step up transformers located at or near the base of each turbine;
- A transformer substation to connect to the Hydro One distribution system;
- Overhead 44 kV line to connect the transformer substation to the Hydro One electrical grid;
- Approximately 13.8 km of turbine access roads;
- An operations and maintenance building (located outside the project location – shared use of land and building approved for the Conestogo Wind Energy Centre); and
- One to two meteorological towers.

The major project components, in addition to the disturbance area, as shown on Figure 2-1, occupy approximately 122 hectares (300 acres) of land in the Municipality of West Grey.

2.1.1 Turbine Specifications

The wind turbine technology proposed for this Project is the GE 1.6-100 model with 14 turbines 1.62 MW, 1 NRO-101 1.34 MW and 1 NRO-101 1.39 MW for a total maximum nameplate capacity of up to 23 MW.

The wind turbines are 3-bladed, upwind, horizontal-axis wind turbines that are state of the art technology. The turbines have a 100 m rotor diameter with a swept area of 7,854 m^2; each blade is connected to the main shaft via the hub. The nacelle houses the main components of the wind turbine such as the rotor shaft, gear box, couplings, control panel, bearing brackets and the generator. The nacelle is equipped with sound-proofing, is ventilated and the interior is illuminated with electric lights. Some of the wind turbines will have external lighting in accordance with the requirements of Transport Canada (TC).

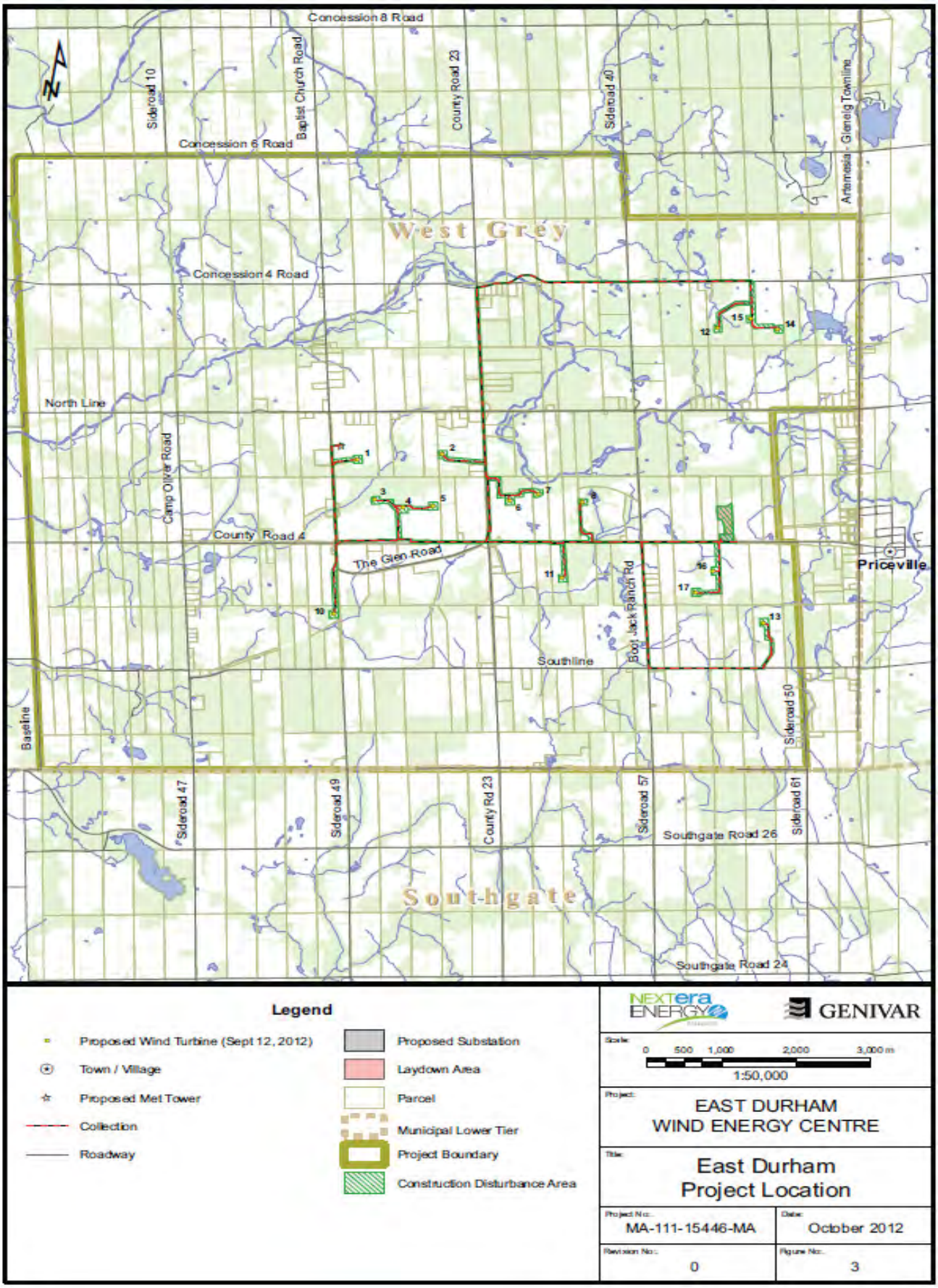
The following table provides a description of the GE 1.6-100 MW model wind turbine that will be used for the Project.

Summary of Technical Specifications

Specification	Turbine	Turbine	Turbine
Make	General Electric	General Electric	General Electric
Model	1.34-100	1.39-100	1.6-100
Name Plate Capacity	1.34 MW	1.39 MW	1.62 MW

Hub Height	80 m	80 m	80 m
Rotor Diameter	100 m	100 m	100 m
Minimum Rotational Speed	9.75 rpm	9.75 rpm	9.75 rpm
Maximum Rotational Speed	12.8 rpm	13.2 rpm	15.33 rpm

Figure 2-1 Project Location



2.1.2 Laydown and Storage Areas

A temporary laydown and storage area will be constructed on privately owned land for the purpose of staging and storing equipment during the construction phase. Activities on this site will include materials storage, equipment refuelling, and construction offices. In addition, a 122 m by 122 m square around each wind turbine will be established for the laydown and assembly of the wind turbine components.

A 6 hectare (15 acre) site will be constructed for the temporary storage of construction material and as a site for the construction office trailers.). The Construction laydown area will include staging areas for construction materials, construction trailers and associated facilities and a temporary electrical service line to provide power to the construction trailers. Following clearing and grubbing of any vegetation, the topsoil at the temporary laydown area will be removed and approximately 600 mm of clean compacted crushed gravel will be imported as needed. The excavated topsoil will be re-used on site as feasible. A temporary electrical service line will be connected to the existing distribution line adjacent to the laydown area for the purpose of providing power to the construction office trailers. Typical equipment for the construction of the laydown area includes trucks, graders, and bulldozers. It is anticipated it will take 1 week to construct the laydown area by a crew of six people.

2.1.3 Electrical System

The electrical collection system from each turbine to the step-up transformer station will be buried on private property adjacent to the turbine access roads, where feasible; otherwise the collection lines will be buried in the municipal right-of-ways. The location of the underground cables and ancillary equipment (e.g., above ground electrical junction boxes) to connect the turbines to the proposed transformer station and access roads were determined in consultation with the landowners and also respect the setback requirements defined.

A 44 kV electrical line will connect the transformer substation to the existing Hydro One 44 kV line (which is located on the south side of Grey Road 4). This electrical line will extend from the substation A-frame pull-off structure to the 44 kV line located along the south side of the municipal road right-of-way. This will include a number of poles on the south side of Grey Road 4 that the conductor strings across Grey Road 4.

Temporary power (for electrical service to the construction trailers) will likely come from the southeast corner of the substation, where the distribution line crosses Grey Road 4. It is likely that 11 m high wood poles will be constructed for the temporary power.

The interconnection plan for any wind energy centre is subject to study, design and engineering by the Integrated Electricity System Operator which manages the Province's electricity grid, Hydro One which owns the transmission lines, the local distribution company and the Ontario Energy Board, which regulates the industry through the Transmission System Code and the Distribution System Code.

2.1.4 Transformer Substation

The electricity collected via the 34.5 kV underground collection lines will converge at the transformer substation where it will be stepped up from 34.5 kV to 44 kV. A 44 kV electrical line (approximately 300 m in length) will connect the transformer to the Hydro One distribution system using standard poles within the municipal road right-of-way (as described above in sub-section 1.5.3). Above ground electrical junction boxes will be used to connect the turbines to the proposed transformer station. An electrical service line will be connected to the local distribution lines in order to provide electrical power to the substation control housing.

Requiring approximately two hectares in size, the East Durham transformer substation will either be located on privately held lands through a lease agreement or on land purchased by East Durham Wind, Inc. The substation equipment will include an isolation switch, a circuit breaker, a step-up power transformer (34.5 to 44 kV), switch gear, instrument transformers, grounding and metering equipment. All substation grounding equipment will meet the Ontario Electrical Safety Code. The substation will be surrounded by a chain link fence with a locked gate to permit authorized entry and required signage.

A secondary containment system will be installed to capture any leaks from the transformer. Water in the containment system will be visually inspected for any evidence of oil (as oil would float to the top). If oil is present, a tank truck will be brought to site to pump the water/oil mix into it. The water/oil mix will then be disposed of off-site at a licensed facility. If no oil is detected in the water, the water will be pumped out to an adjacent swale and then allowed to infiltrate into the ground.

2.1.5 Access Roads

On-site access roads to each turbine will be constructed to provide an access point to the properties for equipment during the construction phase and for maintenance activities during operation. Typically the access roads will be 11 m wide during the construction phase to accommodate the large cranes (with an additional 2 m clearance on each side for travel).

2.1.6 Operations and Maintenance Building

An operations building will be located outside of the project study area and will be on privately held lands or an existing suitable structure will be purchased/leased for the purpose of monitoring the day-to-day operations of the wind energy centre and supporting maintenance efforts. This Project will utilize the building developed and approved for the Conestogo Wind Energy Centre.

2.1.7 Permanent Meteorological Towers

One to two permanent meteorological towers will be installed at the Project. These are typically up to 80 m in height and use either a monopole or lattice structure with support guy wires. No significant soil or vegetation disturbance is anticipated. The use of meteorological data is key to the safe and efficient operation of a wind energy centre. Some operational decisions made using meteorological data include:

- Cut-in wind speed;
- Cut-out wind speed;
- Turbine shut down during icing conditions; and
- Turbine shut down during extreme weather events.

Permanent meteorological towers are an operational requirement of the Independent Electricity System Operator (IESO) as an electricity market participant (this includes all generators of electricity) and allow the IESO to operate the system reliably and safely.

2.1.8 Communications and SCADA

A communication line connects each turbine to the Operations Centre, which closely monitors and, as required, controls the operation of each turbine. The wind turbine system will be integrated with the electric interconnection

Supervisory Control and Data Acquisition (SCADA) to ensure that the Project critical controls, alarms and functions are properly co-ordinate for safe, secure and reliable operation.

2.1.9 Water Crossings

To the extent possible, Project infrastructure will be sited to minimize the number of water crossings. As most of the wind turbines are likely to be located on agricultural lands, most of the access roads and electrical cables will also be on agricultural fields where fewer watercourses will be encountered. The Water Assessment and Water Body Report, which has been developed as part of the REA, describes all water crossings and associated mitigation measures.

2.2 Project Activities

The Project will be composed of the following general activities:

1. Land acquisition
2. Planning and Resource Assessment
3. Permitting
4. Detailed Design
5. Construction
6. Operations
7. Decommissioning

Currently, the expected timeline for these activities are Fall 2013 for construction, January 2014 until Fall 2038 for Operation, and Winter and Spring 2039 for decommissioning.

The following sections outline the activities anticipated for the Construction, Operation and Decommissioning Phases of the Project.

2.2.1 Project Timing

Subject to the receipt of the necessary permits and approvals, site work for the East Durham Wind Energy Centre is expected to begin in approximately October 2013 and last for approximately 6 months. The proposed Project schedule sets the commercial operation date in March 2014.

Table 2-1 presents the anticipated construction schedule and approximate order of construction activities for the proposed Project.

Table 2-1 Construction Schedule

Activity	Timing of Activity	Duration
Surveying	Prior to construction	Less than 1 day per turbine location
Land Clearing and Construction of Access Roads	Fall	One to three days per access road to each turbine
Installation of Culverts	Fall or winter	One to two days per culvert
Construction Laydown Area	Fall	One week
Turbine Site and Crane Pad Construction	Fall	Two to four days per turbine location

Delivery of Equipment		Throughout construction phase as needed, and in compliance with Traffic Management Plan	As needed throughout construction phase
Turbine Foundations		Fall or winter	Three to four days (excluding curing)
Wind Turbine Assembly and Installation		Fall or winter	Four to five days per turbine location
Electrical Collector System	**Pad Mount Transformers**	Fall or winter	Four to six days
	Collection Lines	Fall or winter	Dependent upon the required length of the lines; however, between 4 and 8 km of collector lines can be installed in a week
Transformer Substation		Fall or winter	15 – 20 weeks
Clean-up and Reclamation		Following turbine construction	Will be conducted as site is constructed
Turbine Commissioning		Spring	One to three days

2.2.2 Construction Activities

2.2.2.1 Surveying and Geotechnical Study Activities

Surveys will be required to locate the turbines, crane pads, access roads, temporary laydown areas, electrical lines and the substation. Crews will drive light trucks to reach sites primarily using existing roads. They will then walk the site for the surveying and mark the locations using stakes. For the wind farm site, the surveys will typically take 1 to 2 days per turbine location.

Existing buried infrastructure located on public property will be located using the Ontario One Call service and buried infrastructure located on private property will be located by private contractors prior to construction or geotechnical sampling and updated throughout construction, as required.

2.2.2.2 Land Clearing and Construction of Access Roads

No permanent paved roads will need to be constructed for the turbines. Municipal and provincial roads will be used for transportation of equipment to the construction sites. Any road damages will be repaired and any road improvements will be left in place.

On-site access to the turbines will require new access roads and following completion of the construction phase, the access roads will be used for maintenance activities (i.e., inspection of the turbines) at the turbines for the duration of the Project. There will be a 60 m wide area for construction of the access roads. The access road will be sited within this area of disturbance in consultation with the landowner and taking into consideration potential environmental effects. Typically the access roads will be 11 metres wide during the construction phase for access by the large cranes (with an additional 2 metres clearance on each side for travel). The road length will be different for each turbine according to its location.

The construction of the access road typically requires clearing and grubbing of any vegetation, excavation of the topsoil layer and addition of a layer of compacted material to a typical thickness of 300 to 600 mm (depending upon site specific geotechnical conditions). Clean granular material (typically “A” or “B” gravel) will be brought to the site on an as need basis and will not be stockpiled onsite. The topsoil will be kept and re-used on site. The access road to each turbine will typically require one to three days of construction time. Depending on the length of the access roads, construction may require approximately 25 trucks of gravel.

New steel culverts may be required to maintain drainage in ditches at junctions with roadways and these will be constructed to support the construction equipment and delivery trucks. The location of proposed water crossings is summarized in the Water Assessment and Water Body Report and the potential effects are summarized below in Section 3. The exact details of culverts and their installation in addition to erosion control measures will be determined in conjunction with SVCA as part of their permitting process; however, the culverts are proposed to be open bottom and left in place following the operation phase.

Equipment will include, at a minimum, trucks, graders, and bulldozers. Municipal and provincial roads will also be used for transporting equipment, and minor modifications may be required to some of the existing roads (e.g., widening the turning radius) to handle the oversized loads. Any road damages will be repaired prior to the completion of the construction phase. The trucks and graders will be driven to the site and the bulldozers will be transported via trailers. The only chemicals required for this phase are oils, gasoline, and grease used to operate construction equipment. Fuel-handling will be conducted in compliance with the mitigation measures outlined in the Construction Plan Report.

2.2.2.3 Construction of Laydown Areas

A 6 hectare (15 acre) site will be constructed for the temporary storage of construction material. The Construction laydown area will include staging areas for construction materials, construction trailers and associated facilities and a temporary electrical service line will be connected to the existing distribution line adjacent to the laydown area for the purpose of providing power to the construction trailers. Following clearing and grubbing of any vegetation, the topsoil at the Construction Laydown Area will be removed and approximately 600 mm of clean compacted crushed gravel will be imported as needed. The excavated topsoil will be re-used on site as feasible. Construction activities are expected to last approximately one week and will require approximately 100 loads of gravel, and a crew of six people. Following the construction phase, the gravel will be removed from the site or re-used, to be determined in consultation with the landowner. The stockpiled topsoil will then be redistributed throughout the Temporary Laydown Area.

Equipment will include, at a minimum, trucks, graders, and bulldozers. The trucks and graders will be driven to the site and the bulldozers will be transported via trailers. The only chemicals required for this phase are oils, gasoline, and grease used to operate construction equipment. Fuel-handling will be conducted in compliance with the mitigation measures outlined in the Construction Plan Report.

2.2.2.4 Turbine Site and Crane Pad Construction

Prior to construction, the construction area will be cleared and grubbed. In order to provide sufficient area for the laydown of the wind turbine components and its assembly, a 122 m by 122 m square around the wind turbine must be cleared, levelled, and be accessible during the construction phase. The topsoil is typically removed and some soil stabilizing material (i.e. crushed gravel or clean back fill) may need to be added depending upon site specific geotechnical conditions. Where the site laydown areas are close to watercourses, erosion control measures will be implemented, as described in the Construction Plan Report.

Crane pads will be constructed at the same time as the road and will be located adjacent to the turbine locations. The crane pads will typically 15 m by 35 m in area. The topsoil at the crane pad will be removed and approximately 600 mm of clean compacted crushed gravel will be imported as needed. The excavated topsoil will be re-used on site as feasible. Once the turbine erection is complete, the crane pad will be removed and will be restored to prior use. The construction crew is anticipated to require four to six people and construction activities are expected to last for approximately one to two days.

Equipment will include, at a minimum, trucks, graders, and bulldozers. The trucks and graders will be driven to the site and the bulldozers will be transported via trailers. The only chemicals required for this phase are oils, gasoline, and grease used to operate construction equipment. Fuel-handling will be conducted in compliance with the mitigation measures outlined in the Construction Plan Report.

2.2.2.5 Delivery of Equipment

Equipment will be delivered by truck and trailer throughout the construction phase and stored at the temporary lay-down sites surrounding each turbine. A Traffic Management Plan will be developed and will be discussed with Grey County and the Municipality of West Grey. Alternative traffic routes will be prepared to address traffic congestion, as needed.

2.2.2.6 Construction of Turbine Foundations

A backhoe will be used to excavate an area approximately 3 m deep x 20 m x 20 m (precise size of excavation area to be determined by geotechnical analysis of the soil) with the material being stockpiled for future backfilling. Stockpiled material will have topsoil and subsoil separated out and surplus excavated material will be removed from the site for disposal in an approved manner. The foundation, with an approximate footprint of 400 m^2, will be constructed of poured concrete and reinforced with steel rebar to provide strength. The construction timeframe for turbine foundations is three to four days, excluding curing time. After construction the foundation will be backfilled and the surface will be landscaped for drainage. The only surface evidence of the foundation will be a small protrusion of concrete to which the tower is attached; as such land can be cultivated to within a few metres of the turbine. Any wood-waste generated will be removed from the site and recycled unless the landowner otherwise directs. Spent welding roads will be disposed of as hazardous waste by a licensed contractor.

Typical construction equipment, on a per turbine basis, will include:

- Excavator for removing material;
- Flatbed trucks (four to six) for delivery of rebar, turbine mounting assembly and forms;
- Truck mounted crane or rough terrain forklift for unloading and placement of rebar and forms;
- Concrete trucks for delivery of concrete (30 to 40 loads);
- Construction trucks (three to four vehicles with multiple visits); and
- Dozer, loader and trucks to backfill and compact foundation and remove surplus excavated materials.

The trucks and graders will be driven to the site and the bulldozers will be transported via trailers. The only chemicals required for this phase are oils, gasoline, and grease used to operate construction equipment. Fuel-handling will be conducted in compliance with the mitigation measures outlined in the Construction Plan Report.

2.2.2.7 Wind Turbine Assembly and Installation

Turbine components will arrive on-site using flat bed and other trucks and will be temporarily stored on-site in the immediate vicinity of the base prior to assembly. Typically two cranes will be used to install the turbines. The larger crane is usually a crawler type with a capacity of 400 tonnes or larger, and is used for the higher lifts.

Clearing and grubbing will be required for the erection area. The erection cranes and crew will follow the foundation crew and erect the wind turbines once the foundations are completed and the concrete has set. This will typically be in five lifts (three for the towers, one for the nacelle and one for the rotor) over a period of two to three days. The lower tower sections may be installed several days before the upper tower sections and the turbine to optimize installation sequence. The lower tower section will also include electrical and communications equipment. Total turbine assembly and installation will typically require four to five days for each turbine. Fifteen to twenty people may be required at the site during the turbine installation; they will be transported using light duty vehicles.

Packing frames for the turbine components are returned to the turbine vendor. Following commissioning, the surrounding area will be returned to its original use.

Equipment will include, at a minimum, trucks, two cranes, graders, and bulldozers. The trucks and graders will be driven to the site and the bulldozers will be transported via trailers. The larger track mounted crane can move from turbine site to turbine site; however, it will need to be disassembled to move it along roadways and from the Project site. Alternatively, cranes may be moved between turbine sites without disassembly along crane paths. The only chemicals required for this phase are oils, gasoline, and grease used to operate construction equipment. Fuel-handling will be conducted in compliance with the mitigation measures outlined in the Construction Plan Report.

2.2.2.8 Construction of Electrical Collector System

The electrical collector system will consist of pad mounted transformers, underground cabling for use on private property and a buried collection system running along turbine access roads and municipal road right-of-ways. These components are described below.

- Pad Mount Transformers: A concrete transformer pad, approximately 2.2 m by 2.5 m in size, will be installed adjacent to each turbine at the same time as the turbine base installation. The construction will consist of excavation, soil storage, installation of the buried electrical grounding grid, installation of the concrete pad, installation of the transformer, and electrical connections. Transformer installation and cabling between the turbine and transformer is expected to take three days per turbine. Equipment will include flatbed trucks to transport the equipment to site, and a truck-mounted crane for the installation. These activities will likely require four to six trucks, a work force of two people per vehicle per day, and will last between four to six days.
- Collection Lines: Underground cables and fibre optics lines (for communications) from each turbine to the transformer substation will be buried and will be located on private property adjacent to the turbine access roads, where feasible and in the road right-of-way when necessary. Above ground electrical junction boxes will be installed where necessary to connect sections of the underground cabling. The excavated soil will be stored temporarily and then reused as backfill. Power conductors will be approximately 0.9 m below grade and the location will be marked. Farming practices will not be affected by the underground cabling due to the depth of the cables and location of the cable beneath the access roads. Equipment will include trenchers or diggers (depending on soil type) and construction will require a crew of six people. The construction timeframe is dependent upon the required length of the lines.
- Horizontal Directional Drilling: Electrical cables may need to be installed using horizontal directional drilling to minimize effects to woodlots or watercourses. Erosion control devices will be installed at the drill location and drill cuttings will be collected and removed from the site for disposal in an approved and appropriate manner. An entrance and exit pit will be excavated on either side of the feature to be bored under. The directional drilling equipment will be set up at the entrance pit and a drill bit attached to rod segments is advanced until it reaches the exit pit. A slurry of bentonite and/or polymer mixed with water will be injected into the hole while drilling to help stabilize the bore hole and reduce friction. Once the drill bit has reached the exit pit the drill bit will be removed and a “reamer” attached and pulled back through the hole to enlarge the bore by 120-150%. The electrical cable will then be installed through the hole. Equipment will include a directional drilling rig and two to three support trucks to carry drilling rods, drilling supplies and cable.

The only chemicals required for this phase are oils, gasoline, and grease used to operate construction equipment, and the polymer used for directional drilling. Fuel-handling will be conducted in compliance with the mitigation measures outlined in the Construction Plan Report.

2.2.2.9 Construction of Transformer Substation

Approximately two hectares in size, the transformer substation will include an isolation switch, a circuit breaker, a step-up power transformer, transmission switch gear, instrument transformers, grounding and metering equipment and a control housing which will be supplied with power from the local distribution line. Substation grounding will meet the Ontario Electrical Safety Code. The substation area will be gravelled with clean material imported to the site on an as needed basis and sloped to facilitate drainage. A secondary containment system will be installed around the transformer in the event of an oil leak to prevent any soil contamination.

During construction of the substation, topsoil and subsoils will be stripped and stockpiled separately. Stripped topsoil and subsoil will be placed in the temporary storage facility area and topsoil stripped from the substation area will be distributed on other Project properties. An electrical service line of approximately 9 m and associated poles will likely be connected to the existing distribution line adjacent to the substation for the purpose of providing house service power to the substation control building. The construction crew will consist of approximately 25 to 40 people and construction is expected to last for about four months. Some packing-material waste may be generated. All recyclable materials will be separated from non-recyclable materials and both streams will be removed from the site and disposed of at an approved and licensed facility.

Construction equipment will include small trenchers, a small crane, forklifts, concrete trucks and a bulldozer. The trucks and graders will be driven to the site and the bulldozers will be transported via trailers. The only chemicals required for this phase are oils, gasoline, and grease used to operate construction equipment and transformer oil. Fuel-handling will be conducted in compliance with the mitigation measures outlined in the Construction Plan Report.

2.2.2.10 Construction of Permanent Meteorological Towers

One to two towers will be erected using winches and secured with three guy wires tied off to anchors or a small monopole foundation. No significant soil or vegetation disturbance is anticipated. Construction of the meteorological tower will take approximately two days and require a crew of six people.

2.2.2.11 Clean-up and Reclamation

Site clean-up will occur throughout the construction phase and site reclamation will occur after construction has been completed. Waste and debris generated during the construction activities will be collected by a licensed operator and disposed of at an approved facility. All reasonable efforts will be made to minimize waste generated and to recycle materials including returning packaging material to suppliers for reuse/recycling.

Stripped soil will be replaced and re-contoured in the construction areas and disturbed areas will be re-seeded, as appropriate. Erosion control equipment will be removed once inspections have determined that the threat of erosion has diminished to the original land use level or lower. High voltage warning signs will be installed at the transformer substation and elsewhere, as appropriate. At the conclusion of construction, vehicles and construction equipment will be removed from the site.

2.2.2.12 Turbine Commissioning

Turbine commissioning will occur once the wind turbines and substation are fully installed and Hydro One is ready to accept grid interconnection. The commissioning activities will consist of testing and inspection of electrical, mechanical and communications systems. Some packing-material waste may be generated. All recyclable materials will be separated from non-recyclable materials and both streams will be removed from the site and disposed of at an approved and licensed facility.

Temporary portable generator sets may be used to electrically commission the turbines prior to connection to the grid. The generators will be required for approximately one day per turbine. The generators may require an Environmental Compliance Approval. Following the commissioning phase, the portable generators will be removed from the site and returned to the owners.

Equipment will include support trucks which will be driven to the construction site. The only chemicals required for this phase are oils, gasoline, and grease used to operate construction equipment and portable generators, gearbox oil, and lubricants. Fuel-handling will be conducted in compliance with the mitigation measures outlined in the Construction Plan Report.

2.2.3 Operation Activities

2.2.3.1 General Operation

The wind energy centre will require full time technical and administrative staff to maintain and operate the facility. The primary workers will be wind technicians (i.e., technicians who carry out maintenance on the turbines) along with a site supervisor. The Project will be operated by a staff of two to three people who will work out of an Operations and Maintenance Building. The East Durham Wind Energy Centre plans to use the land and building for the Operations and Maintenance building that has already been permitted under a separate REA for the Conestogo Wind Energy Centre. This shared use of the building will have low use (approximately 2 people) and will not change or result in additional mitigation measures being required.

The wind turbines will be operating (i.e., in “Run” mode and generating electricity) when the wind speed is within the operating range for the turbine and there are no component malfunctions. Each turbine has a comprehensive control system that monitors the subsystems within the turbine and the local wind conditions to determine whether the conditions are suitable for operation. If an event occurs which is considered to be outside the normal operating range of the turbine (such as low hydraulic pressures, unusual vibrations or high generator temperatures), the wind turbine will immediately take itself out of service and report the condition to the Operations Centre, located in the operations and maintenance building. A communication line connects each turbine to the Operations Centre, which closely monitors and, as required, controls the operation of each turbine. The wind turbine system will be integrated with the electric interconnection Supervisory Control and Data Acquisition (SCADA) to ensure that the Project critical controls, alarms and functions are properly co-ordinated for safe, secure and reliable operation. The wind turbine will also report to NextEra’s Central Operations Facility during non-working hours.

2.2.3.2 Use of Meteorological Data

The use of meteorological data is key to the safe and efficient operating of a wind farm. The East Durham Wind Energy Centre is proposing to have one permanent meteorological tower to provide real time data. This will be used to operate the turbines efficiently. Depending on the turbine technology used, some operational decisions made using meteorological data include:

- Cut-in wind speed Cut-out wind speed
- Turbine shut down during icing conditions
- Turbine shut down during extreme weather events

2.2.3.3 Routine Turbine Maintenance

Routine preventative maintenance activities will be scheduled at six month intervals with specific maintenance tasks scheduled for each interval. Maintenance involves removing the turbine from service and having two to three wind technicians climb the tower to spend a full day carrying out maintenance activities.

Consumables such as the various greases used to keep the mechanical components operating and oil filters for gearboxes and hydraulic systems will be used for routine maintenance tasks. Following all maintenance work on the turbine, the area is cleaned up. All surplus lubricants and grease-soaked rags are removed and disposed as required by applicable regulations. All maintenance activities will adhere to the same spill prevention protocols undertaken during the construction phase.

2.2.3.4 Unplanned Turbine Maintenance

Modern wind turbines are very reliable and the major components are designed to operate for approximately 30 years. However, there is a possibility that component failure may occur despite the high reliability of the turbines fleet-wide. Most commonly, the failure of small components such as switches, fans, or sensors will take the turbine out of service until the faulty component is replaced. These repairs can usually be carried out by a single crew visiting the turbine for several hours.

Events involving the replacement of a major component such as a gearbox or rotor are rare. If they do occur, the use of large equipment, sometimes as large as that used to install the turbines, may be required.

It is possible that an access road, built for construction and returned to farmland when the construction phase is completed, will need to be rebuilt to carry out repairs to a damaged turbine. Typically only a small percentage of turbines will need to be accessed with large equipment during their operating life.

2.2.3.5 Electrical System Maintenance

The collector lines and substation will require periodic preventative maintenance activities. Routine maintenance will include condition assessment for above-ground infrastructure and protective relay maintenance of the substation, in addition to monitoring of the secondary containment system for traces of oil.

2.2.3.6 Waste Management

Waste generated during the operations phase will be removed from the operations and maintenance building (located outside of the project location) by a licensed operator and disposed of at an approved facility. Any lubricants or oils resulting from turbine maintenance will be drummed on site and disposed of in accordance with applicable Provincial regulations. All reasonable efforts will be made to minimize waste generated and to recycle materials including returning packaging material to suppliers for reuse/recycling. The spill prevention protocols followed during construction will continue to be observed throughout the facility's operations and maintenance activities.

2.2.4 Decommissioning Activities

2.2.4.1 Procedures for Decommissioning

Decommissioning procedures will be similar to the construction phase. More detailed information on decommissioning is located in the Decommissioning Plan Report.

The procedures will include:

1. The creation of temporary work areas. In order to provide sufficient area for the lay-down of the disassembled wind turbine components and loading onto trucks, a 122 m by 122 m square must be cleared, levelled and made accessible to trucks. The topsoil will be removed and some material may need to be added.
2. The creation of crane pads. The crane pads will typically be 15 m x 35 m in size and will be located within the temporary work area around each wind turbine. The topsoil at the crane pad will be removed and approximately 600 mm of compacted crushed gravel will be added. Once the turbine disassembly is complete, the gravel area around each turbine will be removed and the area will be restored to prior use using stockpiled topsoil.
3. The use of cranes to remove the blades, hub and tower segments.
4. The use of trucks for the removal of turbines, towers and associated equipment.
5. The removal of the top 1 m of the turbine foundations and replacement with clean fill and stockpiled topsoil. The fill and topsoil will be contoured to allow cultivation in the case of agricultural lands.
6. Road bedding material will be removed and replaced with clean subsoil and topsoil for reuse by the landowner for agricultural purposes. It is proposed to leave culverts in place.
7. Cutting underground electrical lines, burying the ends to 1 m below grade, and leaving the lines in place with consent of the landowner. Above-ground lines and poles (that are not shared with another Distribution Operator) will be removed and the holes will be filled with clean fill.
8. The substation will be demolished. This will be decommissioned in a manner appropriate to and in accordance with the standards of the day. All materials will be recycled, where possible, or disposed off-site at an approved and appropriate facility.

2.2.4.2 Land and Water Restoration Activities

Once all of the turbines and ancillary facilities are removed, the remaining decommissioning work will consist of shaping and grading the areas to, as near as practical, the original contour prior to construction of the wind turbines and access roads. Existing agricultural capacity will be restored and the land re-contoured to maintain proper drainage. All areas, including the access roads, transformer pads and crane pads will be restored to, as near as practical, their original condition with native soils and seeding. If there is insufficient material onsite, topsoil and/or subsoil will be imported from a source acceptable to the landowner.

Although strict spill prevention procedures will be in place, there is the potential through the decommissioning process for small spills of solvents or fuels. The soil conditions of the turbine areas will be surveyed to determine if any impacts have occurred. Should soil impacts be noted, the affected soils will be identified, excavated, and removed to the applicable standards from the site for disposal at an approved and appropriate facility. The removed soils will be replaced with stockpiled subsoil and topsoil, if available. If none are available, clean fill and topsoil will be imported.

2.2.4.3 Procedures for Managing Waste Materials Generated

As discussed above, the waste generated by the decommissioning of the Project is minimal, and there are anticipated to be no toxic residues. Any waste generated will be disposed of according to the applicable standards with the emphasis on recycling materials whenever possible.

The major components of the wind turbines (tower, nacelle, blades) are modular items that allow for ease of construction and disassembly of the wind turbines during replacement or decommissioning. Dismantled wind turbines have a high salvage value due to the steel and copper components. These components are easily recyclable and there is a ready market for scrap metals. Transformers and collection lines are designed for a 50 year lifespan so these items could be refurbished and sold for reuse.

Based on the construction details for the GE wind turbines and associated tower and components, it is assumed that both the tower and nacelle will yield approximately 80% salvageable materials. Since the hub assembly and bedplate is manufactured steel, it is anticipated that the hub will yield 100% salvageable metallic materials. Copper salvage estimates were derived by assuming 5% of the total tower and nacelle weight consists of salvageable copper bearing materials. Since the rotor/blades are constructed of predominantly non-metallic materials (fiberglass reinforced epoxy and carbon fibres), no salvage for the rotor or blades is currently assumed.

It is assumed that 75% of the aggregate material from the decommissioning of the crane pads can be salvaged for future use as aggregate base course. The remaining materials would be viable for general fill on non-structural fill areas. The geotextile fabric cannot be salvaged.

3. Potential Environmental Effects

An effects assessment for the construction, operation and decommissioning phases of the Project has been completed in accordance with the requirements of O. Reg. 359/09. This section provides a summary of the potential effects and any residual effects of each phase as they relate to specific environmental conditions. For further detail on specific mitigation measures and monitoring plans, reference should be made to the Construction Plan Report and Design and Operations Report.

As outlined previously, the procedures for decommissioning will be similar to the construction phase. As such, the potential effects for each of these phases are also deemed to be similar.

3.1 Cultural Heritage

Construction and Decommissioning

The potential effects from construction and decommissioning activities are as follows:

- Disturbance or displacement of 3 archaeological sites (determined to be 19th century historic Euro-Canadian sites) identified through the Stage 2 Archaeological Assessment due to construction of project infrastructure.
- Visual impact on heritage values of the McKechnie Cemetery due to construction of the substation on the adjacent property.

There is a low likelihood of occurrence and limited magnitude of this effect due to the application of mitigation measures.

Operation

No effects to protected properties, archaeological resources or heritage resources are anticipated as a result of the operational phase of the Project.

3.2 Natural Heritage

3.2.1 Potential Effects to Generalized Candidate Significant Wildlife Habitat

Construction and Decommissioning

The potential effects from construction and decommissioning activities on generalized candidate significant wildlife habitat are as follows:

- Increased erosion, sedimentation and turbidity resulting in increased inputs of nutrients and contaminants to wetlands, woodlands and other significant natural features, resulting from:
  - clearing and grubbing for construction of turbines, access roads, temporary crane paths and pads/turnaround areas, collection lines and substation;
  - excavation and backfilling for construction of turbines, collection lines and substation;
  - directional drilling for construction of collection lines;

- Removal/disturbance of topsoil and increased soil compaction from manoeuvring of heavy machinery, excavation and backfilling of turbine foundation for construction of turbines, access roads, temporary crane paths and pads/turnaround areas, collection lines and substation;
- Disturbance and/or mortality to terrestrial wildlife, including barriers to wildlife movement from construction of turbines, access roads, temporary crane paths and pads/turnaround areas, collection lines and substation;
- Disturbance to or loss of wildlife habitat from construction of turbines, access roads, temporary crane paths and pads/turnaround areas, collection lines and substation;
- Damage to vegetation while operating equipment used in construction of turbines, access roads, temporary crane paths and pads/turnaround areas, collection lines and substation;
- Soil / water contamination by oils, gasoline, grease and other materials from:
  - construction equipment, material stockpiling and handling for construction of turbines, access roads, temporary crane paths and pads/turnaround areas, collection lines and substation; and
  - bentonite or polymer used during directional drilling of collection lines, resulting from the escape of drilling mud into the environment as a result of a spill, tunnel collapse or the rupture of mud to the surface in the event of a “frac-out”; and
- Changes in surface water drainage patterns (e.g. obstruction of lateral flows in surface water to wetlands) from construction of turbines, access roads, temporary crane paths and pads/turnaround areas, resulting in effects to soil moisture and species composition of vegetation.

There is a low likelihood of occurrence and limited magnitude of these effects due to the application of mitigation measures.

Operation

The potential effects from operational and maintenance activities on generalized candidate significant wildlife habitat are as follows:

- Disturbance and/or mortality to wildlife from operation of roads;
- Soil / water contamination by oils, gasoline, grease and other materials (e.g., turbine lubricant and maintenance personnel); and
- Changes in surface water drainage patterns resulting in effects to soil moisture and species composition of vegetation.

There is a low likelihood of occurrence and limited magnitude of these effects due to the application of mitigation measures.

3.2.2 Potential Effects to Significant Wetlands, Woodlands, Valleylands and Wildlife Habitat

Construction and Decommissioning

The potential effects from construction and decommissioning activities on significant wetlands, woodlands, valleylands and wildlife habitat are as follows:

- Disturbance to or loss of wildlife habitat and damage to vegetation while operating equipment within significant wetlands and / or woodlands.

There is no likelihood of occurrence of this effect due to the application of mitigation measures.

- Noise disturbance to bats during turbine construction.
- Sedimentation and erosion affecting function of significant wetland.
- Sedimentation and erosion affecting function of significant valleyland.
- Disruption of amphibians moving to breeding pools and home range from Amphibian Woodland Breeding Habitat Features and Amphibian Wetland Breeding Habitat Features and possible indirect threats by changes to surface water drainage patterns.
- Accidental intrusion into Features resulting in habitat damage, or possible mortality to reptiles within feature from construction equipment.
- Unplanned intrusion into significant woodlands in event of equipment malfunction due to directional drilling.

There is a low likelihood of occurrence and limited magnitude of these effects due to the application of mitigation measures.

- Sedimentation and erosion associated with directional drilling affecting function of significant Wetland Complexes.
- Sedimentation and erosion associated with collection line construction affecting function of significant Wetland Complexes.
- Unplanned intrusion into significant wetlands in event of equipment malfunction due to directional drilling.
- Unintended damage to adjacent vegetation within significant wetlands and woodlands due to collection line construction.

There is a low likelihood of occurrence of these effects due to the application of mitigation measures; however, if accidental damage occurred, negative effects may be measurable but would represent a small change relative to existing conditions.

Operation

Potential effects from operational and maintenance activities on Significant Wetlands, Woodlands, Valleylands or Wildlife Habitat are as follows:

- Bats may be disturbed by noise from operations;
- Risk of bird collisions with turbines; and
- Risk of bat collisions with the turbine.

These effects will be minimized through the application of mitigation measures. The significance of any effects will be determined based on the results of the monitoring plans.

- Changes in surface water drainage patterns resulting in effects to soil moisture and species composition of vegetation; and
- Risk of mortality to amphibians moving between breeding pools and home range on the access roads related to amphibian woodland breeding habitat and amphibian wetland breeding habitat.

There is a low likelihood of occurrence and limited magnitude of these effects due to the application of mitigation measures.

3.3 Surface Water and Groundwater

3.3.1 Surface Water

Construction and Decommissioning

The potential effects from construction and decommissioning activities are as follows:

- Obstruction of lateral flows in watercourses from water crossings.

There is no likelihood of occurrence of this effect due to the application of mitigation measures.

- Reduced stream baseflows, groundwater upwelling areas and increase in water temperatures due to discharge from dewatering activities (if required) for excavation of foundation area at water body locations;
- Increased flows to watercourses from temporary groundwater dewatering (if required) discharges for excavation of foundation causing streambed and/or bank erosion and downstream sedimentation if not managed properly at water body locations;
- Increased erosion, sedimentation and turbidity from:
  - clearing and grubbing for construction of turbines, and pads/turnaround areas at water body locations;
  - clearing and grubbing for construction of access roads, temporary crane paths and pads/turnaround areas at water body locations for road crossings and for roads within a water body buffer; and
  - directional drilling activities at water body locations for collection line crossings and for collection lines within a water body buffer;
- Soil compaction, which may result in hardening of surfaces and increased runoff into watercourses from turbine construction at water body locations;
- Release or discharge of sediment laden surface water into the adjacent watercourse or drainage features transporting nutrients and contaminants into the watercourse from:
  - turbine construction at water body locations;
  - road crossings at water body locations and for roads within a water body buffer; and
  - collection line crossings at water body locations and for collection lines within a water body buffer;
- Increase sediment runoff and decrease bank stability from stream diversion for the installation of watercourse crossing resulting in changes in water chemistry and temperature; and
- Soil/water contamination by oils, grease and other materials from construction equipment at:
  - water body locations for road crossings and for roads within a water body buffer; and
  - water body locations for directional drilling of collection line crossings and for collection lines within a water body buffer.

There is a low likelihood of occurrence and limited magnitude of these effects due to the application of mitigation measures.

- Temporary disruption of substrates/habitat at locations where in-water work is required 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.

- Degradation of fish habitat for water crossings at water body locations.

The magnitude of this effect is limited due to the application of mitigation measures; however, there remains a moderate likelihood of occurrence 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.

Operation

The potential effects from operational and maintenance activities are as follows:

- Obstruction of lateral flows in watercourses and other waterbodies from water crossings.

There is no likelihood of occurrence of this effect due to the application of mitigation measures.

- Water contamination by oils, gasoline, grease and other materials (e.g., turbine lubricant and maintenance activities, use of access roads) at watercourses due to their proximity to the project; and,
- Increase in impervious surfaces from the presence of turbine foundation and access roads, resulting in increased water temperatures, increased surface runoff and stream peak flows.

There is a low likelihood of occurrence and limited magnitude of these effects due to the application of mitigation measures.

3.3.2 Geology and Groundwater

Construction and Decommissioning

The potential effects from construction and decommissioning activities are as follows:

- Formation of sinkholes during foundation construction.

There is no likelihood of occurrence of this effect due to the application of mitigation measures.

- Dewatering when excavating and constructing the turbine bases, resulting in a reduction in quality and quantity of groundwater.

There is a low likelihood of occurrence and negligible magnitude of this effect due to the application of mitigation measures.

- Increase in impervious area created by the turbine base and access roads resulting in reduced infiltration near to the noted groundwater recharge areas (beach ridge and glacial outwash deposits).

There is a low likelihood of occurrence and limited magnitude of this effect due to the application of mitigation measures.

Operation

The potential effects from operational and maintenance activities are as follows:

- Increase in impervious surfaces from presence of turbine foundations overlaying high permeability surficial materials (such as: sands, gravels and silty sands) and access roads, resulting in reduced infiltration to groundwater.
- Groundwater contamination by oil, gasoline, grease or other material from construction activities

There is a low likelihood of occurrence and limited magnitude of these effects due to the application of mitigation measures.

3.4 Emissions to Air

Construction and Decommissioning

The potential effects from construction and decommissioning activities are as follows:

- Emissions of contaminants from portable generator sets, truck traffic and other construction vehicles, including but not limited to, nitrogen dioxide, sulphur dioxide, suspended particulates, emissions of greenhouse gases (CO2, methane).
- Dust as a result of vehicle traffic over gravel roads and/or cleared areas.

No odour emissions are anticipated.

There is a high likelihood of occurrence of these effects; however the magnitude of these effects will be limited due to the application of mitigation measures and the short-term nature of effects.

Operation

The potential effects from operational and maintenance activities are as follows:

- Emissions of contaminants from maintenance vehicles and portable generator sets, including but not limited to, nitrogen dioxide, sulphur dioxide, suspended particulates, emission of greenhouses gases (CO2, methane).
- Dust as a result of vehicle traffic over gravel roads and/or cleared areas.

No odour emissions are anticipated.

There is a low likelihood of occurrence and limited magnitude of these effects due to the application of mitigation measures.

3.5 Noise

Construction and Decommissioning

The potential effects from construction and decommissioning activities are as follows:

- An increase in noise levels due to trucks, cranes and other equipment used to construct the turbines and ancillary infrastructure.

There is a high likelihood of occurrence of this effect; however, the magnitude of this effect will be limited due to the application of mitigation measures and the short-term nature of effects.

Operation
The potential effects from operational and maintenance activities include:

- An increase in noise levels due to the aerodynamic noise generated from wind turbine blades, and mechanical noise associated with each turbine and from the transformer located at the substation. Specifically, the noise modelling results show that the noise levels for all non-participating receptors are below 40 dBA.

There is a high likelihood of occurrence of this effect as these project components contribute to increased noise levels; however, the magnitude of this effect will be limited due to the application of mitigation measures and adherence to the 40 dBA threshold.

3.6 Local Interests, Land Use and Infrastructure

3.6.1 Existing Land Uses

Construction and Decommissioning

The potential effects from construction and decommissioning activities are as follows:

- Minor reduction in usable agricultural land.
- Increased congestion due to an increase in truck traffic and short-term lane closures on local roads during delivery of project components.

There is a high likelihood of occurrence; however the magnitude of these effects will be limited due to the application of mitigation measures.

- Disruption or damage to local infrastructure such as roads and water and/or sewage pipelines.

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 presence of oversize loads during the delivery/removal of turbine components.

Operation

The potential effects from operational and maintenance activities are as follows:

- Damage to crops or trees due to turbine malfunction or failure associated with 5 turbines that are located within 80 m of neighbouring property lines (refer to the Property Line Setback Assessment Report in the Appendix F).

There is no likelihood of occurrence of this effect due to the application of mitigation measures.

- A minor reduction in usable farmland as a single turbine, together with its access road, will take up, on average, only 1.0 to 1.5% of a typical 40 hectare farm parcel.

There is a high likelihood of occurrence of this effect; however, the magnitude of this effect will be limited due to the application of mitigation measures and size of the overall footprint in relation to the entire Project Study Area.

- Reduction in aesthetic quality of landscape which may affect the use and enjoyment of private property and recreational amenities.

The likelihood of occurrence and magnitude of this effect is dependent upon the perception of residents and visitors to the presence of turbines.

3.6.2 Stray Voltage and Effects to Livestock

Construction and Decommissioning

Potential effects from stray voltage are not anticipated during the construction or decommissioning phase of the Project.

Operation

The potential effects from operational and maintenance activities are as follows:

- Mild electric shocks to livestock, which may cause behavioural changes, and changes in production performance.

At a voltage difference above about 10 volts, people may detect a tingle. This is not a health hazard to humans.

There is a low likelihood of occurrence and limited magnitude of this effect due to the application of mitigation measures.

3.7 Other Resources

Construction and Decommissioning

No potential effects on aggregate resources or petroleum wells are anticipated as a result of the construction or decommissioning phase of the Project due to the distance between the Project and these resources. In addition, there are no effects on landfills or forest resources as none are present.

Operation

No potential effects on aggregate resources or petroleum resources are anticipated as a result of the operation of the Project due to the distance between Project components and these resources.

3.8 Public Health and Safety

Construction and Decommissioning

Effects on public health and safety have been described in previous sections, including Emissions to Air, Noise, and Local Interests, Land Use and Infrastructure.

Operation

The potential effects from operational and maintenance activities are as follows:

- Ice formation on turbine blades resulting in ice shed.
- Shadow flicker causing disturbance at nearby residences and businesses. Shadow flicker occurs when – at precise latitude, wind direction, and height of the sun – rotating wind turbine blades cast shadows upon stationary objects.

There is a low likelihood of occurrence and limited magnitude of these effects due to the application of mitigation measures.

3.9 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.

4. Summary and Conclusions

Field work and data collection were undertaken to determine the potential effects of this Project during the construction and installation operation and maintenance phase. Mitigation measures to manage these potential effects have been identified and monitoring and contingency plans proposed to ensure effects are minimized.

Significant adverse effects have been avoided through careful site selection, facility layout planning and strict adherence to all regulatory requirements. All turbines, access roads, and ancillary facilities have been sited with landowner consultation to minimize the impact to current agricultural operations.

The overall conclusion is that this project can be constructed, installed and operated without any significant adverse residual effects to the environment. Post-construction monitoring related to effects on wildlife, including birds and bats, will be undertaken to confirm this conclusion.

Appendix 4

October 29, 2012

Mark Turner
Clerk
Municipality of West Grey
402813 Grey Rd. 4, RR 2
Durham, Ontario
N0G 1R0

Subject: NextEra Energy Canada, East Durham Wind Energy Project

Dear Mr. Turner:

East Durham Wind, Inc., a wholly owned subsidiary of NextEra Energy Canada, ULC (NextEra) is proposing to construct a wind energy project in the Municipality of West Grey in Grey County, Ontario. The Project will be referred to as the East Durham Wind Energy Centre and will be located on private lands south of Concession 6, west of Sideroad 40, Artemesia-Glenelg Townline and Sideroad 50, east of Baseline Road and north of West-Grey Southgate municipal boundary. With a total maximum name plate capacity of up to 23-megawatts (MW), the Project is categorized as a Class 4 facility. Although NextEra is seeking a Renewable Energy Approval (REA) for 16 wind turbines, up to a total of 14 are proposed to be constructed for the Project.

NextEra is pleased to submit the enclosed DRAFT REA documents (listed below) and Plain Language Summaries. We ask that you make them available at the municipal office for public review on October 31, 2012. This initiates the Public Review Period under Ontario Regulation 359/09.

Please also find enclosed a Notice for the upcoming Public Meeting to take place at the Durham Community Centre on January 15th, 2013.

Please do not hesitate to contact myself or Derek Dudek (Derek.Dudek@nexteraenergy.com) should you have any questions.

Yours very truly,

Thomas Bird,
Environmental Services Project Manager

c.c. Adam Rickel, NextEra Energy Canada
Derek Dudek, NextEra Energy Canada

Enclosures:

- One Hard Copy of the following REA Reports:
    - Project Description Report
    - Construction Plan Report
    - Design and Operations Report
    - Decommissioning Plan Report
    - Wind Turbine Specification Report
    - Natural Heritage Assessment Report
    - Water Assessment and Water Body Report
    - Heritage Assessment Report
    - Stage 1 and Stage 2 Archaeological Assessment Report
- Two copies of the Plain Language Summaries (one to be made available to the public and one for municipal review)
- Public Meeting Notice

Appendix 5

January 24, 2013

Mark Turner
Clerk
Municipality of West Grey
402813 Grey Rd. 4, RR 2
Durham, Ontario
N0G 1R0

Subject: NextEra Energy Canada, East Durham Wind Energy Project

Dear Mr. Turner:

East Durham Wind, Inc., a wholly owned subsidiary of NextEra Energy Canada, ULC (NextEra) is proposing to construct a wind energy project in the Municipality of West Grey in Grey County, Ontario. The project consists of up to 16 GE model wind turbines (14 turbines are 1.6-100 models (1.62 MW), Turbine 6 is a 1.34-100 model (1.34 MW) and Turbine 2 is a 1.39-100 model (1.39 MW)); 16 wind turbine generator locations and pad mounted step-up transformers are proposed for permitting, though a maximum of 14 turbines and associated pad mounted step-up transformers will ultimately be constructed.

NextEra is pleased to provide you with a copy of the Final REA documents (listed below). We ask that you make them available at the municipal office for public review. Although making the Final REA documents available in the municipality is not a requirement of Ontario Regulation 359/09, NextEra wanted to provide these to assist interested member of the public to review the documents.

Please do not hesitate to contact myself or Derek Dudek (Derek.Dudek@nexteraenergy.com) should you have any questions.

Yours very truly,

Thomas Bird,
Environmental Services Project Manager

c.c. Adam Rickel, NextEra Energy Canada
Derek Dudek, NextEra Energy Canada

Enclosures:

- One Hard Copy of the following REA Reports:
    - Project Description Report
    - Construction Plan Report
    - Consultation Report
    - Design and Operations Report
    - Decommissioning Plan Report
    - Wind Turbine Specification Report
    - Natural Heritage Assessment Report
    - Water Assessment and Water Body Report
    - Heritage Assessment Report
    - Stage 1 and Stage 2 Archaeological Assessment Report

Appendix 6


Segment Length: 1043 Meters
Segment Length: 167 Meters
Segment Length: 851 Meters
Segment Length: 347 Meters
Grey Road 4
Grey Road 23
The Glen Road
PIN: 372390075
PIN: 372390161
PIN: 372390077
PIN: 372390078
PIN: 372290142
PIN: 372290143
PIN: 372290194
PIN: 372390092
PIN: 372390090
Legend
East Durham
Turbine Location
Collection - ROW
Collection - Private
Other Road
County Road
Provincial Road
Parcel Boundaries
N
S
E
W
NEXTera ENERGY CANADA
Date: 8/21/2013
PROPRIETARY AND CONFIDENTIAL
Projection: NAD_1983_UTM_Zone_17N
Datum: NAD 83
Provided for general visual reference
0
100
200
Meters


Legend
East Durham
Turbine Location
Collection - ROW
Collection - Private
Other Road
County Road
Provincial Road
Parcel Boundaries
NEXTera ENERGY CANADA
N
S
E
W
0
100
200
Meters
Date: 8/21/2013
PROPRIETARY AND CONFIDENTIAL
Projection: NAD_1983_UTM_Zone_17N
Datum: NAD 83
Provided for general visual reference

Date: 8/21/2013

PROPRIETARY AND CONFIDENTIAL

Projection: NAD_1983_UTM_Zone_17N
Datum: NAD 83
Provided for general visual reference


East Durham
Legend
Turbine Location
Collection - ROW
Collection - Private
Other Road
County Road
Provincial Road
Parcel Boundaries
Date: 8/21/2013
PROPRIETARY AND CONFIDENTIAL
Projection: NAD_1983_UTM_Zone_17N
Datum: NAD 83
Provided for general visual reference
0
100
200
Meters
Concession 4
Segment Length: 1500 Meters
Segment Length: 1670 Meters
PIN: 372380150
PIN: 372380202
PIN: 372380171
PIN: 372380239
PIN: 372380200

Appendix 7

*All Distribution Facilities contain one (1) 34.5 kV, three phased undergound cable…..

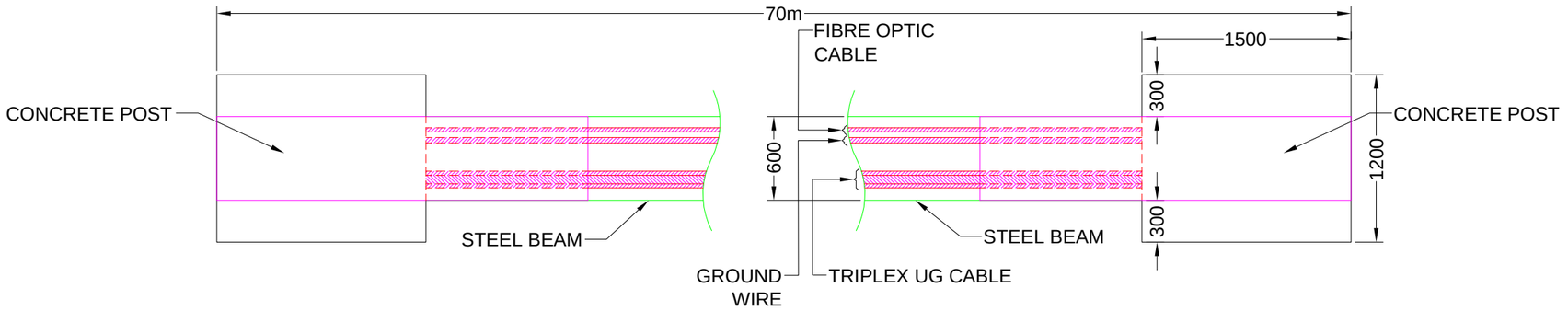
Distribution Facility	Functionality	Degree of Necessity	Relevant Road Allowance	Side of road allowance	Length of line segment
Segment 1	Transmit Wind Energy Centre generation to Connection Point	Essential	Boot Jack Ranch Road	Western	2006m
Segment 1	Transmit Wind Energy Centre generation to Connection Point	Essential	Southline	Southern	1507m
Segment 1	Transmit Wind Energy Centre generation to Connection Point	Essential	The Glen Road	Eastern	347m
Segment 1	Transmit Wind Energy Centre generation to Connection Point	Essential	Grey Road 4	Northern	1043m
Segment 2	Transmit Wind Energy Centre generation to Connection Point	Essential	Grey Road 4	Northern	851m
Segment 3	Transmit Wind Energy Centre generation to Connection Point	Essential	Grey Road 4	Northern	1049m
Segment 4	Transmit Wind Energy Centre generation to Connection Point	Essential	Grey Road 4	Northern	982m
Segment 1	Transmit Wind Energy Centre generation to Connection Point	Essential	Glenelg Road 23	Eastern	167m
Segment 2	Transmit Wind Energy Centre generation to Connection Point	Essential	Glenelg Road 23	Eastern	772m
Segment 3	Transmit Wind Energy Centre generation to Connection Point	Essential	Glenelg Road 23	Western	290m
Segment 4	Transmit Wind Energy Centre generation to Connection Point	Essential	Glenelg Road 23	Western	1286m
Segment 5	Transmit Wind Energy Centre generation to Connection Point	Essential	Glenelg Road 23	Eastern	658m
Segment 1	Transmit Wind Energy Centre generation to Connection Point	Essential	Concession 4	Southern	1670m
Segment 2	Transmit Wind Energy Centre generation to Connection Point	Essential	Concession 4	Southern	1500m
Segment 3	Transmit Wind Energy Centre generation to Connection Point	Essential	Concession 4	Southern	147m
Segment 4	Transmit Wind Energy Centre generation to Connection Point	Essential	Concession 4	Northern	446m

Appendix 8

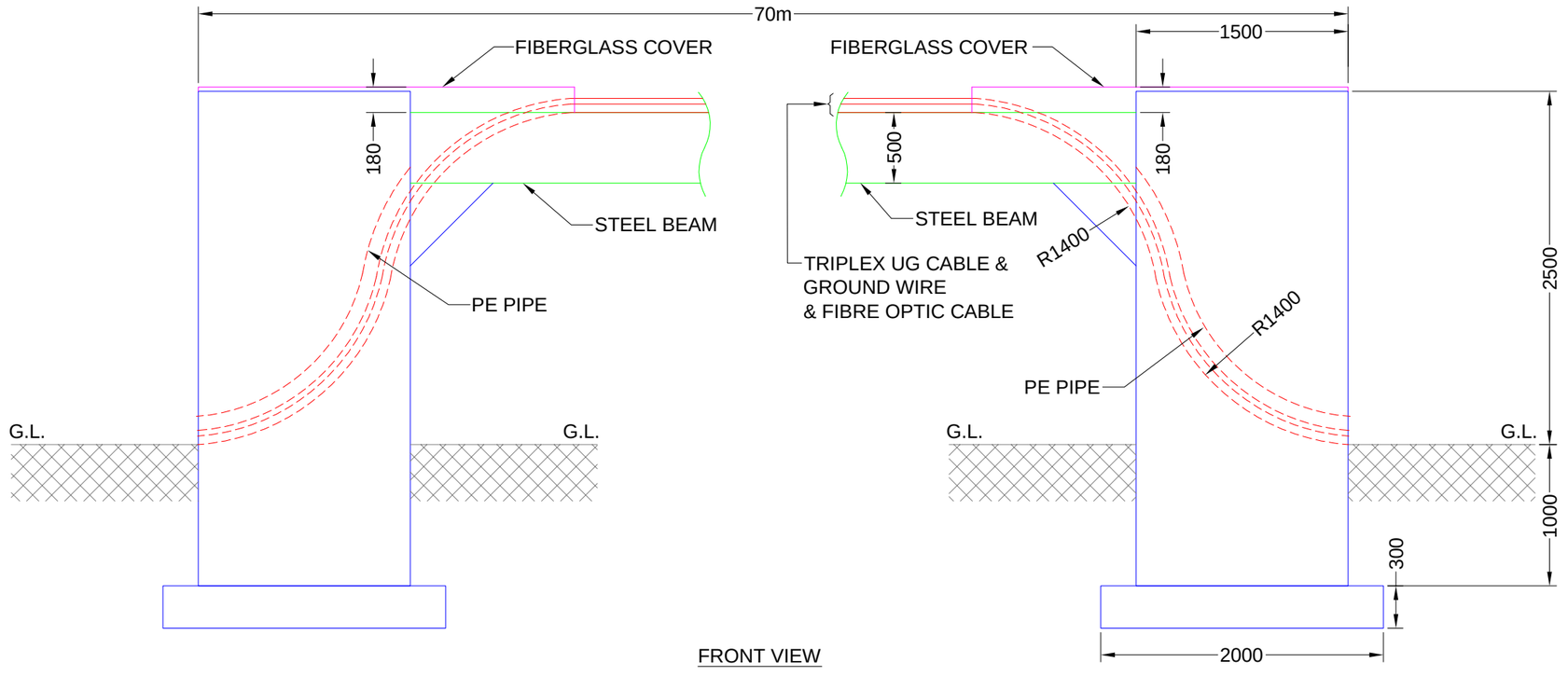
From: Dudek, Derek [mailto:Derek.Dudek@nexteraenergy.com]
Sent: March-11-13 10:57 AM
To: kgould@westgrey.com; mturner@westgrey.com
Subject: FW: Saugeen River crossing - prelim

Hi again,
See additional attached drawings for Friday's meeting. These are regarding the Saugeen River crossings specifically.

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



TOP VIEW



FRONT VIEW

PRELIMINARY DRAWING

NOT TO BE USED FOR CONSTRUCTION

NO.	DATE	DESCRIPTION
REVISIONS/ISSUE		

PREPARED	REVIEW	DESIGN	AUTHORIZE
DRAFTING		ENGINEERING	

AUTHORIZED BY:
DATE: 2012/11/14
CLIENT DRAWING NO.

TETRA TECH

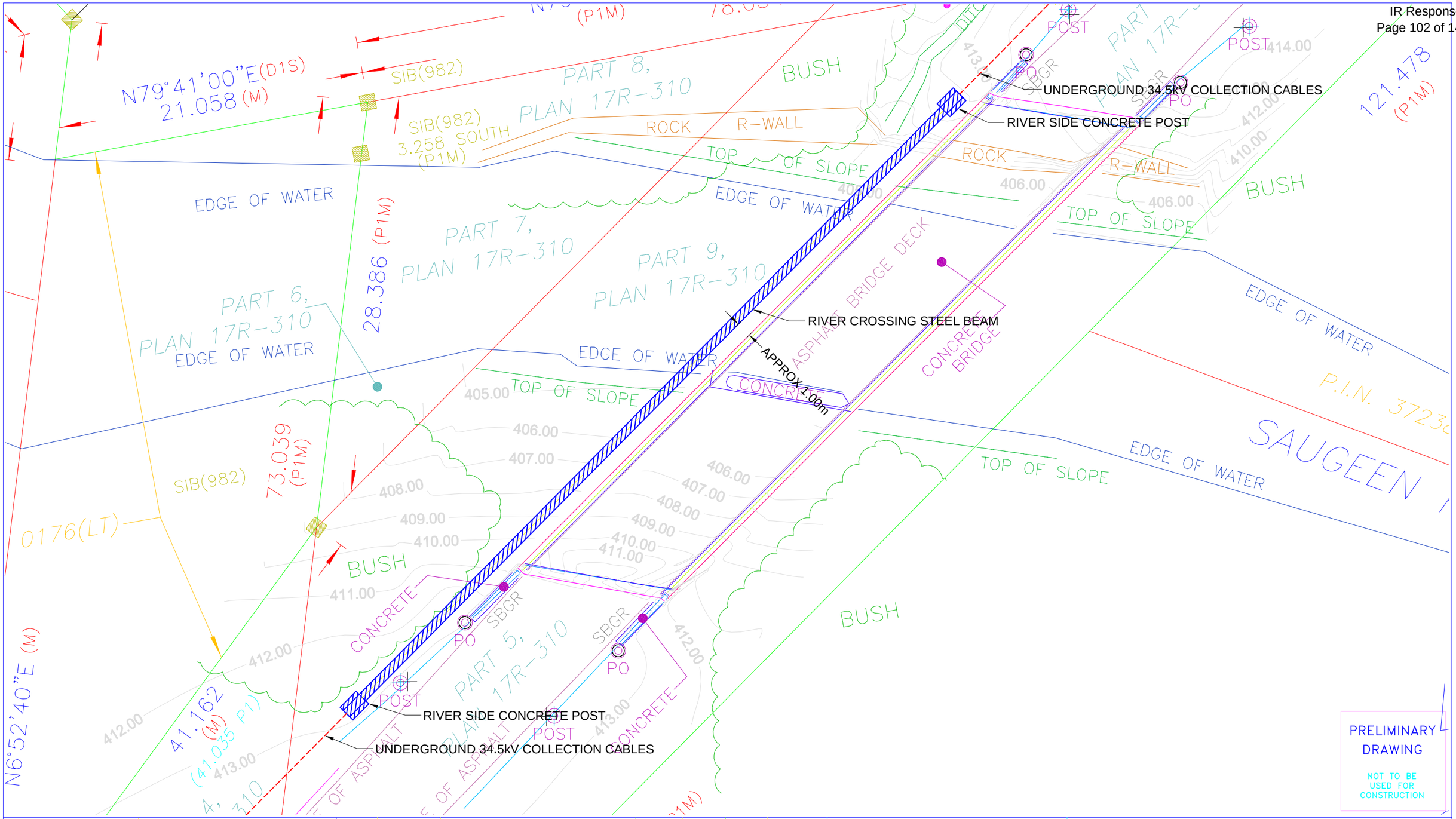
NO.	DESCRIPTION
REFERENCE DRAWINGS	

CLIENT: NEXTERA EAST DURHAM WINDFARM

DRAWING DESCRIPTION:
34.5kV COLLECTION SYSTEM
SAUGEEN AERIAL RIVER CROSSING (UG CABLE)

DESIGNED BY:	DRAWN BY:	DRAWING NO.	REV.
AF	DB	1291651205-SKT-E0001	A
REVIEWED BY: RE	SCALE: NTS		

B (17" x 11")



PRELIMINARY DRAWING

NOT TO BE USED FOR CONSTRUCTION

NO.	DATE	DESCRIPTION
REVISIONS/ISSUE		

PREPARED	REVIEW	DESIGN	AUTHORIZE
DRAFTING		ENGINEERING	

AUTHORIZED BY:
DATE: 2012/11/14
CLIENT DRAWING NO.

NO.	DESCRIPTION
REFERENCE DRAWINGS	

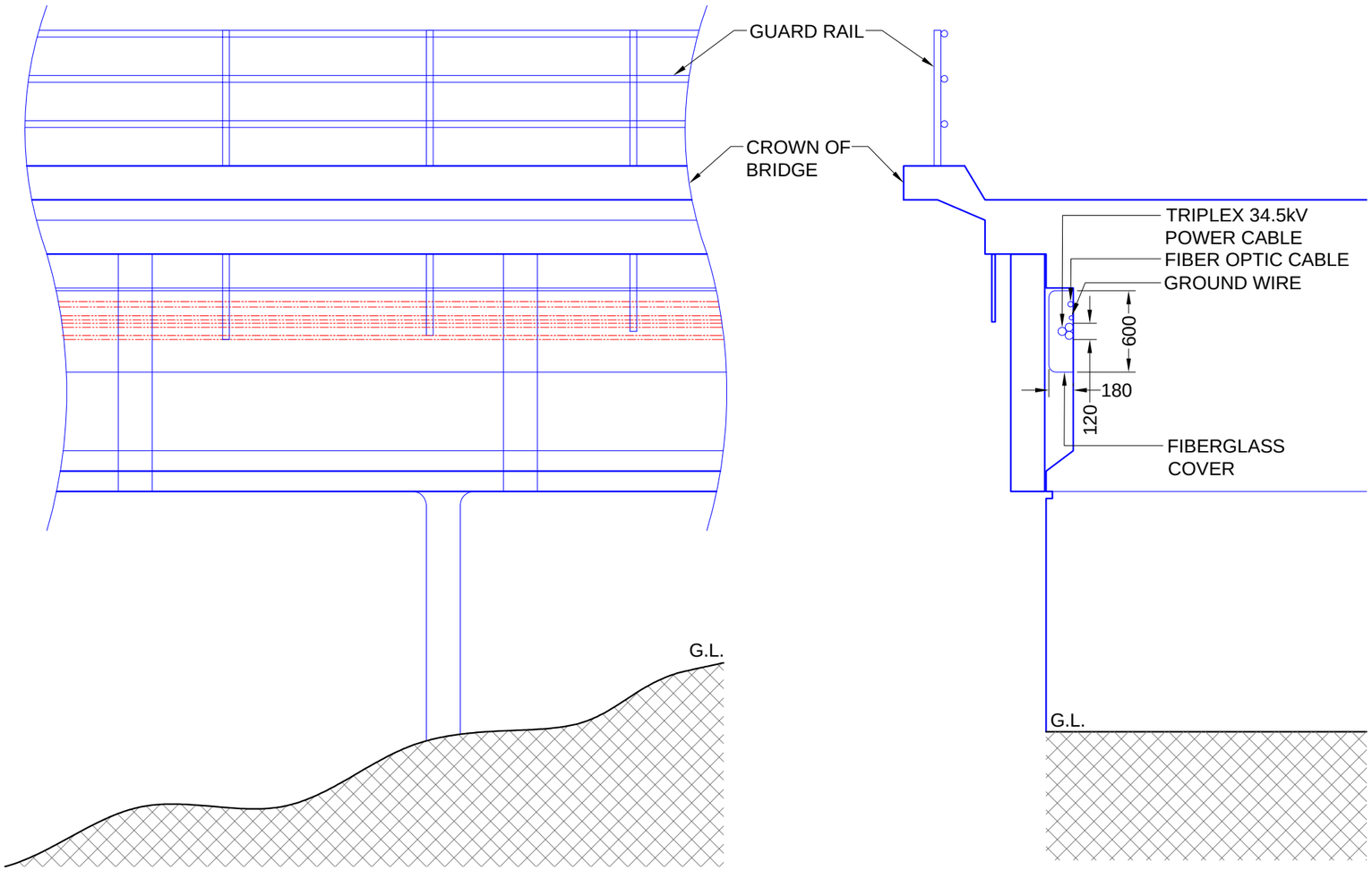
TETRA TECH

CLIENT: NEXTERA EAST DURHAM WINDFARM

DRAWING DESCRIPTION
34.5kV COLLECTION SYSTEM
SAUGEEN AERIAL RIVER CROSSING PLAN VIEW
(UG CABLE)

DESIGNED BY:	DRAWN BY:	DRAWING NO.	REV.
AF	DB	1291651205-SKT-E0002	A
REVIEWED BY: RE	SCALE: NTS		

B (17" x 11")



PRELIMINARY DRAWING

NOT TO BE USED FOR CONSTRUCTION

NO.	DESCRIPTION
	REFERENCE DRAWINGS

NO.	DATE	DESCRIPTION	PREPARED	REVIEW	DESIGN	AUTHORIZE
		REVISIONS/ISSUE	DRAFTING		ENGINEERING	

TETRA TECH

AUTHORIZED BY:
DATE: 2012/11/14

CLIENT DRAWING NO.

CLIENT: NEXTERA EAST DURHAM WINDFARM

DRAWING DESCRIPTION:
34.5kV COLLECTION SYSTEM
SAUGEEN RIVER CROSSING
CABLE ATTACHMENT TO THE BRIDGE

DESIGNED BY:	DRAWN BY:	DRAWING NO.	REV.
AF	DB	1291651205-SKT-E0003	A
REVIEWED BY: RE	SCALE: NTS		

B (17" x 11")

Appendix 9

NextEra Energy Canada, ULC

Consultation Report – East Durham Wind Energy Centre

Prepared by:

GENIVAR Inc.
500 – 600 Cochrane Drive 905-475-7270 tel
Markham, ON, Canada L3R 5K3 905-475-5994 fax
www.genivar.com

Project Number:

111-15446-00

Date:

January 2013

Table of Contents

List of Figures

List of Tables

Glossary of Terms

APRD ..... Approvals and Permitting Requirements Document
ANSI ..... Area of Natural and Scientific Interest
CWS ..... Canadian Wildlife Service
FIT ..... Feed in Tariff
GIS ..... Geographic Information System
Hz ..... Hertz
MOE ..... Ontario Ministry of the Environment
MNR ..... Ontario Ministry of Natural Resources
MTCS ..... Ontario Ministry of Tourism, Culture and Sport
MW ..... Megawatts
NextEra ..... NextEra Energy Canada, ULC
NHIC ..... Natural Heritage Information Centre
NRVIS ..... Natural Resources and Values Information System
O.Reg. 359/09 .... Ontario Regulation 359/09
PDR ..... Project Description Report
REA ..... Renewable Energy Approval
SAR ..... Species at Risk
The Project ..... East Durham Wind Energy Centre
ULC ..... Unlimited Liability Corporation

1. Introduction

East Durham Wind, Inc., a wholly owned subsidiary of NextEra Energy Canada, ULC (NextEra), is proposing to construct a wind energy project in the Municipality of West Grey, Grey County, Ontario. The Project will be referred to as the East Durham Wind Energy Centre (the "Project") and will be located on private lands east of the Community of Durham and west of the Village of Priceville. The wind turbine technology proposed for this Project is the GE 1.6-100 model wind turbine. With a total maximum nameplate capacity of up to 23 MW, the Project is categorized as a Class 4 facility. Although NextEra has identified 16 locations for wind turbine siting, up to a total of 14 turbines are proposed to be constructed for the Project.

This *Consultation Report* was prepared in accordance with the requirements of the Renewable Energy Approvals (REA) process outlined in Ontario Regulation 359/09 (O. Reg. 359/09) and the Technical Guide to Renewable Energy Approvals (Ontario Ministry of the Environment (MOE), 2011).

The following sections outline the consultation activities undertaken and the input received regarding the East Durham Wind Energy Centre to date. NextEra has maintained continuous communication with stakeholders through the planning process and will continue this dialogue throughout the lifecycle of the Project.

2. Summary of Consultation Activities

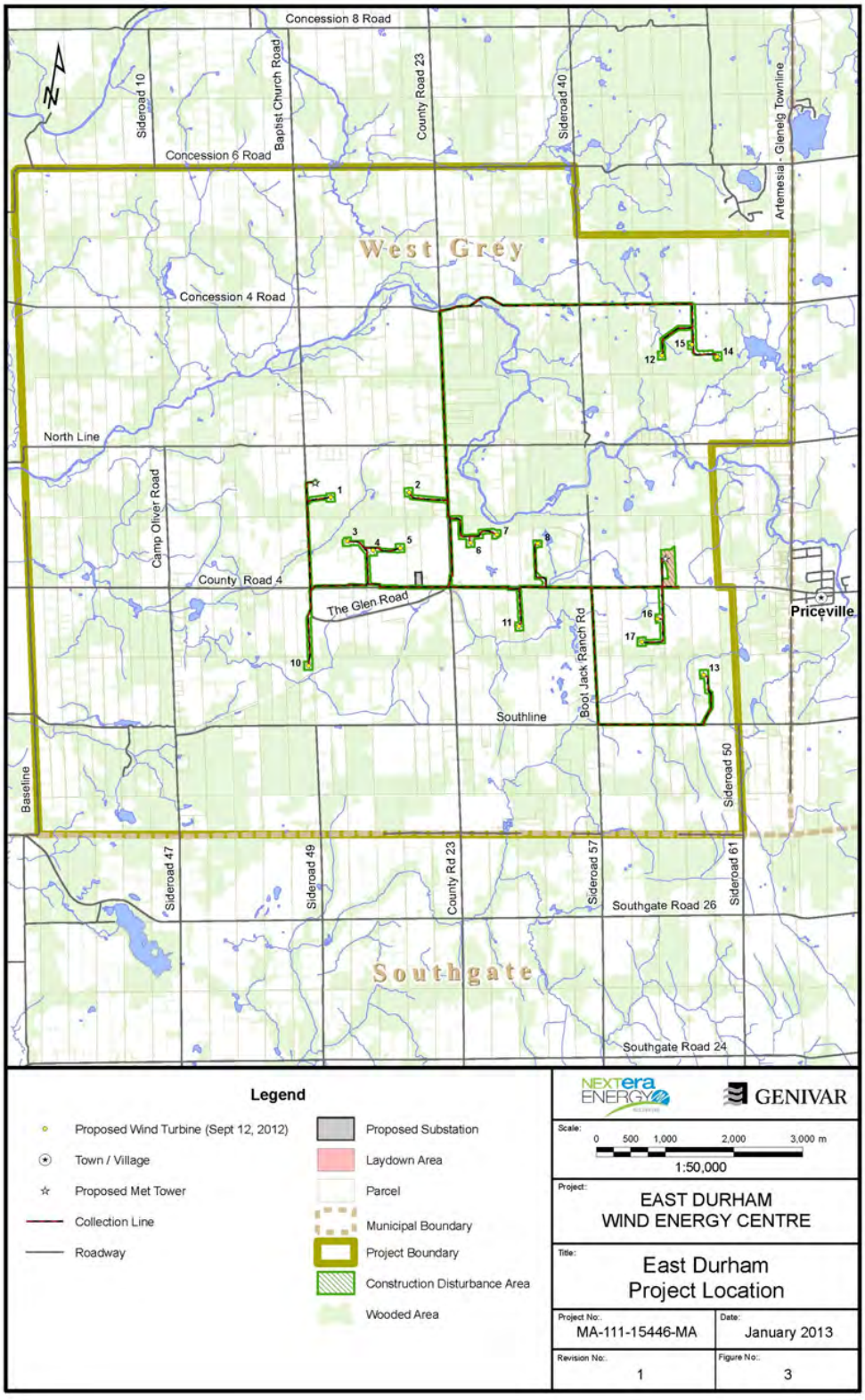
NextEra has undertaken a thorough public consultation program which meets and exceeds the requirements of *O.Reg. 359/09*. Table 2-1, below, provides a list of the required and additional consultation activities undertaken, in addition to the dates that NextEra completed these requirements. For a detailed account of consultation activities, please refer to Section 3.

Table 2-1 Summary of Mandatory and Additional Consultation Activities

Consultation Requirement	Date Completed	Required as per O.Reg 359/09
Release of Initial Project Description Report (PDR)	November 2009	Additional
Notice of Initial Public Meeting (pre-REA)	December 2009	Additional
Initial Pre-REA Public Meeting	December 7, 2009	Additional
Notice of Proposal Sent to Identified Aboriginal Communities	June 13, 2012	Required
Notice of Proposal to Engage in a Project and of First Public Meeting – Municipality of West Grey and Grey County	June 13, 2012	Required
Municipal Consultation Form and Draft PDR to Municipalities* – Municipality of West Grey and Grey County	June 13, 2012	Required
Draft PDR made Available to the Public*	June 15, 2012	Required
Project Newsletter Spring 2012	June, 2012	Additional
First Public Meeting – Municipality of West Grey and Grey County	July 18, 2012	Required
First Public Meeting – Municipality of West Grey and Grey County	July 18, 2012	Required
Notice of Draft Site Plan /Draft Site Plan Release	August 13, 2012	Additional
Telephone Town Hall	September 13, 2012	Additional
Notice of Final Meeting – Municipality of West Grey and Grey County	October 11, 2012	Required
Distribution of Draft Documents for Review and Updated Municipal Consultation Form - Municipality of West Grey and Grey County	October 11, 2012	Required
Distribution of Draft REA Documents for Review - Public	October 12, 2012	Required
Distribution of Draft Documents for Review – Aboriginal Communities	October 29, 2012	Required
Notice of Final REA Public Meeting – Municipality of West Grey and Grey County	October 29, 2012	Required
Notice of Final REA Public Meeting to Aboriginal Communities	October 29, 2012	Required
Project Newsletter Winter 2013	January, 2013	Additional
Final Public Meeting – Municipality of West Grey and Grey County	January 15, 2013	Required

*Note: * Note that the initial Public Meeting was held prior to the Amendment to O.Reg. 359/09 stating that the PDR must be made available and Municipal Consultation Form must be submitted to the Municipalities 30 days before the first Public Meeting. A Change in the study area boundary required re-issuance of PDR and the Amendments to O. Reg. 359/09 were then adhered to.*

Figure 1-1 Project Location



3. Public Consultation Activities

This section highlights the Project notices and associated meetings, in addition to newsletters provided to stakeholders over the course of the Project. Please refer to **Appendix F-1 to F-10 and F-16** for copies of the notices and newsletters as well as public meeting materials including display panels, comment sheets and response letters. Note that all activities relating to Aboriginal consultation are described in **Appendix F-14** – Aboriginal Consultation Report.

3.1 Initial Pre-REA Public Meeting

An initial public meeting was held on December 7, 2009 at the Durham Community Centre from 5:00 p.m. to 8:00 p.m. The initial meeting was held to inform the public about the company, the proposed project and the Renewable Energy Approval process. In addition, the meeting was held to obtain public input on the proposed project. The study area proposed extended from Concession Road 4 to Concession Road 22 and from Artemesia-Glenelg Townline to Camp Oliver Road.

The public meeting was an informal open house format with representatives from the company and their consultants available to answer questions or to discuss the project in general. One hundred and thirty people registered their attendance at the meeting and twenty comment sheets were submitted.

3.2 First REA Public Meeting Notice – Municipality of West Grey

The initially proposed project was on hold since it did not receive a Feed-In-Tariff contract until 2010. Following the first public meeting the REA process was amended and the requirements for consultation were modified. In addition, the project boundary or study area was increased in size to the current areal extent. Based on these two factors and the time that had lapsed since the initial meeting, it was determined by the Project Team that another first public meeting should be held to initiate the amended REA process. This first REA public meeting was held to meet the requirements of O. Reg. 359/09.

The Notice of Proposal and Notice of First Public Meeting informed the local community of NextEra's plans to engage in a renewable energy project and to host the first public meeting in the Municipality of West Grey on July 18, 2012 at the Durham Community Centre, in Durham, Ontario from 5:00 pm to 8:00 pm. 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 interested Aboriginal Communities. The Notice was also published in the five (5) newspapers that were available locally. The requirements for publishing notices in Reg. 359/09 have been met since the notice was published twice at least 30 days prior to the public meeting. The following table shows the newspapers and publication dates of the notice.

Newspaper Name	Initial Publication Date (30+ days prior to Meeting)	2nd Publication Date
Owen Sound Sun Times	18-Jun-2012	11-Jul-2012
The Markdale Standard	18-Jun-2012	11-Jul-2012
The Flesherton Advance	13-Jun-2012	11-Jul-2012
The Dundalk Herald	13-Jun-2012	11-Jul-2012
The Hanover Post	15-Jun-2012	13-Jul-2012

In addition, the Notice was mailed to relevant Federal and Provincial agency contacts, local municipalities and potentially interested Aboriginal Communities.

The Notice was distributed to the Director's List of Aboriginal Communities and to other communities who expressed an interest in the Project. Finally, the Notice was distributed via Canada Post Admail throughout the Project Study Area and hand-delivered to addresses for which Canada Post Admail did not cover. Finally, the Notice was also posted on the Project's website on June 18, 2012.

3.3 Draft Project Description Report

The Project Description Report (PDR) is a summary document that highlights the key aspects of the Project, including a description of Project components, the construction, operation and decommissioning phases, as well as any potential negative effects. The PDR is intended to be a "living" document, and is updated throughout the planning process.

The first draft of the PDR was made available for public review at the first public meeting on July 18, 2012. A copy of the PDR was sent to the Municipality of West Grey and Grey County and was posted on the project website on June 13, 2012 (greater than 30 days prior to the meeting). The meeting notice, PDR and the Municipal Consultation Form were all submitted to the Municipality of West Grey and Grey County on June 13, 2012 (more than 30 days before the first public meeting).

The revised Draft PDR, along with the Draft REA Reports, were provided for public review on October 11, 2012, more than 60 days prior to the final public meeting.

3.4 Project Newsletter - Spring 2012

A project newsletter was published in the Spring of 2012 to provide stakeholders with information on the Project status, highlighting key updates since the initial public meeting that was held in December 2009. The newsletter provided a brief description of the project (including a map showing the increased project boundary), frequently asked questions and answers, the renewable energy approval process and an explanation on wind as a renewable project. The newsletter was distributed via Canada Post Admail throughout the Project Study Area and posted on the Project's website.

3.5 First REA Public Meeting – Municipality of West Grey

A community update meeting/first public meeting in the Municipality of West Grey was held on July 18, 2012 at the Durham Community Centre, in Durham, Ontario, from 5:00 p.m. and 8:00 p.m. The general purpose of the meeting was to provide an overview of the proposed Project to the community. Display panels were set up along the periphery of the room with several Project team members available to discuss the proposed Project and answer questions with stakeholders. Fifty-four individuals registered their attendance at the meeting and 32 comment sheets were submitted.

3.6 Draft Site Plan Release

The Notice of Draft Site Plan informs stakeholders about the release of the turbine layout and crystallization of noise receptors. The 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 interested Aboriginal Communities. Furthermore, the Notice was published in the newspapers listed in the chart below. The

Draft Site Plan Report was sent, with the Notice, to the MOE, the Municipality of West Grey and Grey County, in addition to Aboriginal Communities, for review and for public inspection on August 16, 2012. Finally, the Draft Site Plan Report was also published on the Project's website on August 16, 2012.

Newspaper Name	Publish Date
Owen Sound Sun Times	14-Aug-2012
The Markdale Standard	14-Aug-2012
The Flesherton Advance	15-Aug-2012
The Dundalk Herald	15-Aug-2012
The Hanover Post	17-Aug-2012
Turtle Island News	15-Aug-2012

3.7 Project Newsletter - Winter 2013

A project newsletter was published in Winter 2013 to provide stakeholders with a Project update. The newsletter described the FIT process, provided additional frequently asked questions and answers and described the public consultation process. Finally, the newsletter described the environmental field work and work required to select preferred sites for the wind turbines. The newsletter was mailed to relevant Federal and Provincial agency contacts, the local municipalities and public stakeholders. In addition, the newsletter was distributed via Canada Post Admail throughout the Project Study Area and posted on the Project's website.

3.8 Telephone Town Hall

On the evening of Thursday, September 13, 2012 NextEra Energy Canada conducted a live telephone town hall regarding the East Durham Wind Energy Centre project.

With use of a professional third party moderator, a telephone town hall involved proactively contacting community members by phone to inform, educate and invite participants to engage in debate with a panel of company, project and renewable energy experts. Participants were invited to ask questions and to listen to questions that other local community members asked, and the answers given by the panel. As an initiative that is in addition to the regulated communications requirements, NextEra Energy Canada held the live telephone town hall to offer access to all community members within their proposed East Durham project. This allowed people to inquire as to any possible concerns, offer a forum to educate with accurate information, inform and update all community members, and offer each community member direct contact information for future follow up.

On September 13th, 2012, every available phone number in Priceville and Durham was called and community members were invited to participate in a live telephone town hall with experts representing NextEra Energy Canada. This call was also advertised in advance via direct phone message.

The panel for the live telephone town hall included local representatives from the NextEra Wind Development Team (including Project Director, Project Manager, Project Engineering Manager, Environmental Services Manager) and an environmental health issues expert.
In total, 2,450 outbound calls were placed in the four above mentioned communities making up the geographic area of the East Durham Wind Energy Centre application. 552 community members participated and stayed on the line for one minute or longer. The peak participation was 162 participants and the average length of stay on the phone for telephone town hall participants was 25 minutes.

During the 60 minute telephone town hall, 33 participants opted to enter the queue to be screened to ask a live question. 30 people were screened and 15 participants went live to ask a question of the panel. Call statistics include:

Total attendees	Average attendance	Peak attendance	Entered queue	Screened	Asked live question
552	25 minutes	162	33	30	15

During the call, live community participants asked 15 questions, many of them multi questions, and were given answers in real time. As well, fourteen people left voice messages and were contacted after the telephone town hall with answers to their questions.

This event sought to supplement to the existing public meetings as well as provide community members with the opportunity to participate in a group forum if they were otherwise unable to attend the public meeting in person.

3.9 Distribution of Draft Documents for Review - Public

As per *O. Reg. 359/09*, the required draft REA documents were provided to members of the public for review and comment 60 days prior to the final public meeting. These documents were made available to stakeholders at the Municipality of West Grey and Grey County Municipal offices as well as on the Project website on October 12, 2012. Interested parties were encouraged to submit questions and comments to the Project team during the review period. Stakeholders were advised that the draft documents were available for review via the Notices for the final public meeting.

3.10 Final REA Public Meeting Notice – Municipality of West Grey

The final public meeting was held on January 15, 2013 at the Durham Community Centre (Municipality of West Grey) from 5:00 p.m. and 8:00 p.m. The 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 interested Aboriginal Communities. Furthermore, the Notice was published in the newspapers listed in the chart below. Finally, the Notice was posted on the Project's website on October 30, 2012 and mailed to relevant Federal and Provincial agency contacts, local municipalities and stakeholders on the Project's Master Consultation Database.

Newspaper Name	Initial Publication Date (60+ days prior to Meeting)	2nd Publication Date
Owen Sound Sun Times	30-Oct-2012	8-Jan-2013
The Flesherton Advance	31-Oct-2012	9-Jan-2013
The Dundalk Herald	31-Oct-2012	9-Jan-2013
The Hanover Post	1-Nov-2012	10-Jan-2013
West Grey Progress	(This is a quarterly publication.)	14-Dec-2012
Turtle Island News	31-Oct-2012	9-Jan-2013

3.11 Final REA Public Meeting – Municipality of West Grey

The general purpose of the meetings was to present the results of the effects assessments, including mitigation measures and possible residual effects, in addition to presenting the final turbine and transmission line layouts. Display panels were set up along the periphery of the room and Project team members were available to discuss the proposed Project and answer questions with stakeholders. In addition, the draft REA reports and report summaries were made available for public review. Approximately sixty-three individuals registered their attendance. Three comment sheets were submitted after the January 15, 2013 meeting. There were over one hundred people that participated in the Question and Answer portion of the meeting and we received ninety-seven comment cards and/or emails with questions for the meeting.

At the request of the Municipality of West Grey, the public meeting was divided into two parts to provide a formal Question and Answer period. The first one and a half hours was held as a typical public meeting done in an open house format with presentation boards and members of the Project Team available to answer questions one-on-one. The second one and a half hours was held as a Question and Answer (Q&A) period.

The Q&A format was moderated by Sheila Willis (as requested by the Municipality of West Grey). The panel consisted of (from the left side of the stage to the right) the following members:

1. Ray Dewaepenaere, Operations Manager, NextEra Energy Canada
2. Jeff Damen, Construction Manager, Borea Construction
3. Roland Verkaik, Noise and Acoustics consultant, GENIVAR
4. Chris Ollson, Health Consultant, Intrinsik
5. Nicole Geneau, Director, Development, NextEra Energy Canada
6. Adam Rickel, Project Manager, Development, NextEra Energy Canada
7. Pat Becker, Environmental Services Consultant, GENIVAR
8. Tom Bird, Environmental Services Manager, NextEra Energy Canada
9. Lynette Renzetti, Biologist, GENIVAR (LGL Limited)

Comment cards were provided at the start of the public meeting and participants were requested to provide written comments that would be read out during the Q&A and addressed by the panel. Any questions that could not be addressed during the timeline were added to the table (included in **Appendix F-8**) and a written response has been provided. The Table of all questions and answers will be forwarded to those attending the meeting and/or who filled provided an address on their comment card or comment sheet.

It should be noted that the table does not represent a complete transcript of the discussions but is intended to be a summary of the discussions, with additional information/clarifications provided where possible.

3.12 Summary of Public Comments

The following table presented a summary of comments received over the course of the Project. Copies of the correspondence, with personal information redacted, is available in **Appendix F-2, F-5 and F-9**.

Table 3-1 Summary of Public Comments Received

Theme	Topic	Response
Turbine Siting	*Number of Turbines*	*The turbine locations were crystallized when the Draft Site Plan was released on August 13, 2012.* • Up to 16 wind turbines are being permitted for this project; however, only 14 turbines will be constructed. • The number of turbines for this Project depends on several factors. These include the wind resource, siting restrictions, such as setback distances, socio-economic or natural environment constraints, the capacity of the electrical grid, and interest shown by local landowners. • In addition, the type of turbine technology selected can also affect the number of turbines as different turbine models have differing capacities to generate electricity, and therefore increase or reduce the number of turbines required to achieve the same overall project output.
	Turbine Locations and the Siting Process	• Siting wind turbines involves balancing the wind resource with environmental, socio-economic and engineering constraints, while at the same time adhering to the setback distances prescribed by the Province and outlined in *O. Reg. 359/09*. This regulation stipulates specific setback distances to various features such as houses and schools, as well as wetlands and environmentally sensitive areas. • In addition, detailed turbine siting on individual properties was conducted by engineering and construction professionals, in consultation with landowners, and in compliance with all provincial and federal requirements.
Certain Members of the Community Do Not Want a Wind Project	*Public Opinion*	• The province of Ontario has a policy to move from fossil fuels towards a greener energy source. There are people in the local area that do want this, including around 15-16 landowners decided they wanted green energy as well. • The Ontario government has put a call out for greener energy production. We all have a responsibility to assist the government and this is one project that can help to achieve this.
Effects on the Socio-economic Environment	*Community Benefits*	Some of the potential community benefits include: • Landowners benefit from having a guaranteed source of revenue in addition to agriculture-based, seasonal revenue for hosting a wind turbine or associated infrastructure. This helps stabilize the overall economic prosperity of the community, while allowing traditional land-use practices to continue undisturbed. • Municipal governments benefit as wind projects contribute to the municipal tax base while not requiring any municipal services such as water, sewer, road clearing, etc. In addition, the Project will create between 2 and 3 full-time jobs. • In addition to property taxes and the spinoff economic activity generated by these projects, NextEra Energy Canada, ULC (through its project subsidiaries) will establish “Community Vibrancy Funds” in host communities as part of our broader commitment to community engagement. Through this fund, NextEra’s project companies will contribute funds to projects that will benefit local residents, supporting community initiatives that would otherwise not be financially feasible through the local tax base. • The Green Energy Act requires that wind projects which generate greater than 10 kW of power include a specified amount of goods and services from Ontario. This is a mandatory requirement issued to the project’s developer as part of receiving a Feed-in Tariff Contract from the Ontario Power Authority. The exact amount is based on the year the project will reach commercial operation; projects that enter commercial operation in 2012 or after require a minimum of 50 points for domestic content activities. These points are obtained from discrete activities selected by the Province and set out in a publically-available grid that developers use as guidance. The minimum domestic content requirements are intended to provide a positive economic stimulus to the local economy and to increase local jobs associated with the green energy industry. • Additionally, NextEra has agreed to hire local suppliers of labour and materials, to the extent available and where competitive for the construction and operation of the Project.
	Landowner Compensation	• It is common practice for wind energy developers to compensate landowners for hosting a wind turbine and associated infrastructure (i.e., access roads and electrical collection lines) for the duration of a project. This compensation is generally in the form of a fixed annual payment dependent upon the number of turbines installed on the landowners’ property. These payments are intended to compensate for the small loss of acreage resulting from hosting the project on their property.
	Property Values	• Numerous studies have been conducted that indicate that wind farms do not have a negative impact on property values. For links to these studies, please see: www.NextEraEnergyCanada.com
	Visual effects	*Visualizations are available for review in **Appendix F-7*** • Visualizations of the proposed turbines within the existing landscape were presented at the final public meetings. These visualizations show the relative size of the turbines in relation to local landscapes. Visual effects are ultimately dependent on the perception of residents and visitors to the presence of turbines.

Table 3-1 Summary of Public Comments Received

Theme	Topic	Response
	Noise	*Results of the Noise Assessment are presented in **Appendix D** - **Noise Study Report**.* • Wind projects must show that they meet the sound limit requirements prescribed by the MOE. 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. NextEra takes great care to ensure that it meets or exceeds the provincially-mandated noise requirements. For most houses, the sound levels will be well below the 40 dBA limit. Importantly, sound from a wind turbine diminishes over distance. NextEra commits to quickly addressing any concerns that arise regarding sound from their wind energy centres.
	Vibration	• With regard to vibration, no potential effects beyond those which would typically be associated with construction activities (for example construction traffic on roads and drilling turbine foundations) are anticipated.
Effects to Wildlife	*Effects on Birds and Bats*	*Effects to wildlife are assessed in the **Natural Heritage Assessment and Environmental Impact Study Report**, which was submitted to and received sign-off from the Ministry of Natural Resources.* • When properly sited, wind turbines present less of a danger to birds than other structures common to the environment, such as buildings or roads. The location of turbines, as well as numerous other decisions associated with developing wind projects, is carefully designed to minimize any effects. As part of Ontario's REA process, NextEra is working with experts to assess the potential effects on local wildlife, including birds and bats. • As part of the facility siting and pre-construction activities, studies were completed to identify potential issues related to birds, bats and the selected site. The work plans and results were reviewed by the MNR as part of the approval of the REA application. • Biologists collect the following information on birds and bats in relation to the Project through field studies and interviews with agencies and environmental organizations: ▪ Current use of the area, including important seasonal or specialized wildlife habitats such as migratory bird stopover and staging areas; ▪ Threatened and endangered species present in the area; ▪ Existing records of species in the area; ▪ Potential habitat; and, ▪ Potential effects. • In addition, biologists assess any nearby wetlands and determine local permitting requirements relating to environmental protection. NextEra avoids or minimizes impacts to wetlands, a common habitat for many species of birds, and other environmentally sensitive areas during siting and layout of the Project. • Through these efforts, biologists can identify the: ▪ Number and type of birds/bats present in the area; ▪ Behaviour of birds/bats while they are present in the area; and, ▪ Possible risk to birds/bats due to turbine collisions. • If issues are identified during the evaluation phase, NextEra takes corrective action, such as: ▪ Moving proposed turbine locations to avoid significant bird habitats or to reduce potential strikes; ▪ Establishing setbacks between turbines and wetlands; and, ▪ Avoiding inter-waterway flight paths or sensitive contiguous habitats for grassland birds. • NextEra will meet all of the requirements for conducting baseline wildlife, bird and bat studies, as described in *O. Reg. 359/09* and set out in guidelines prepared by the Ministry of Natural Resources. • Finally, the Design and Operations Report includes an Environmental Effects Monitoring Plan (EEMP) to monitor potential impacts on bird and bat species during commercial operation as per MNR requirements. The EEMP summarizes potential negative effects; identifies performance objectives with respect to the potential negative effects; describes mitigation measures to achieve the performance objectives; and commits to future monitoring to ensure the mitigation measures meet the performance objectives. NextEra will provide the monitoring results to the Ministry of Environment, Ministry of Natural Resources and any other relevant agency.
	Effects on Salamanders	• Amphibian surveys were done for the project and Figures 5 and 21 in the Natural Heritage Assessment Report (**Appendix B**) show the area determined to be significant wildlife habitat for amphibians and there are mitigation measures identified in the Construction Plan Report to minimize potential impacts. • The Spotted Salamander is not 'rare' provincially and is documented as locally common throughout southern and central Ontario. The primary concern where wind energy is concerned is mortality associated with roads. Greatest impact to amphibians is during construction - during operations access roads to turbines are used infrequently and mitigation/contingency includes monitoring and

Table 3-1 Summary of Public Comments Received

Theme	Topic	Response
		limiting access during spring migration if monitoring suggests reduced use of habitat.
	Effects on Livestock and Agricultural Production	• Wind turbines occupy only a small fraction of the land they are sited on. As such, farming and grazing may continue undisturbed. A turbine, in a typical wind farm, including foundation and access roads will use 1.0 – 1.5% of a 40 hectare (approximately 99 acres) farm parcel. • NextEra Energy Resources, which includes NextEra Energy Canada, operates 100 wind farms amidst a variety of agricultural uses and livestock operations. It has not been NextEra's experience that wind turbine operations have any negative impact on livestock or crops associated with their projects. Many landowners find that the guaranteed income from hosting a wind turbine helps to stabilize the economics of their operations, and, in some cases, enables a family farm to remain in the family.
	Stray Voltage and its Potential Effects on Livestock	*Stray* voltage *is addressed in the* ***Project Description Report*** *and the* ***Design and Operations Report****.* • NextEra will ensure that the Project is built and maintained according to the standards in place as prescribed by the Distribution System Code and the Electrical Safety Authority • The Project is not proposing to connect to the local distribution system that serves barns and houses in the area, so it will not directly impact that service. However, NextEra will continue to work closely with Hydro One to mitigate any potential impact on local distribution customers should a situation arise. Hydro One, as required in the interconnection process, has completed a Customer Impact Analysis and no issues were identified. • Most cases of stray voltage occur when there is either: ▪ Improper grounding of on-site equipment (in which case it is an issue with on-site wiring); or, ▪ A change in current patterns on the distribution line, from generation or load that exposes a pre-existing condition (in which case it is an issue with the distribution utility, not with the generator or load). • It is important to understand that stray voltage is not a consequence of wind energy, but rather of any project that changes the use pattern of the existing system. • The turbines are therefore not the root of the problem, but like any change to the system, may expose faults in that system. All types of generation (electricity generation using wind turbines included) must fully comply with utility requirements to ensure that the electricity they supply is compliant with grid and electrical code standards. • Stray voltage problems require on-site inspection for grounding problems, or examination of power quality issues with the distribution utility. • For additional information on the potential effects of stray voltage on livestock, see the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) website: www.omafra.gov.on.ca/english/livestock/dairy/facts/strayvol.htm
Public Health and Safety	*Effect of Turbines on Human Health*	• NextEra takes concerns about human health very seriously. Although much has been written about health effects associated with wind turbines, NextEra has found no credible, scientifically peer-reviewed study that demonstrates a causal link between wind turbines and negative health effects. On the contrary, the study "Wind Turbine Sound and Health Effects: An Expert Panel Review" had the following key conclusions: 1. Sound from wind turbines does not pose a risk of hearing loss or any other adverse health effect in humans. 2. Subaudible, low frequency sound and infrasound from wind turbines do not present a risk to human health. 3. Some people may be annoyed at the presence of sound from wind turbines. Annoyance is not a pathological entity. 4. A major cause of concern about wind turbine sound is its fluctuating nature. Some may find this sound annoying, a reaction that depends primarily on personal characteristics as opposed to the intensity of the sound level. • The full report can be found in the Canadian Wind Energy Association's website: www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects.pdf and on www.NextEraEnergyCanada.com . • In their decision on the Kent Breeze Wind project in Chatham-Kent, the Ontario Ministry of Environment stated: *"The Chief Medical Officer of Health agreed to undertake a review of existing information and to consult with the Ontario Agency for Health Protection and Promotion and local medical officers of health on health effects related to wind turbines. The results of the review and consultation were published on May 20, 2010 and released in a report titled "The Potential Health Impacts of Wind Turbines". The review concluded that scientific evidence available to date does not demonstrate a direct causal link between wind turbine*

Table 3-1 Summary of Public Comments Received

Theme	Topic	Response
		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, and there is no scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects, although some people may find it annoying. *Regarding shadow flicker, a common concern is its possible relationship to epilepsy. The Chatham-Kent Board of Health reviewed potential impacts in their report dated June 2008 and stated that 'The frequency of wind turbines is well below the current known documented threshold for triggering epilepsy symptoms."* • The American Epilepsy Foundation indicated that flashing lights most likely to trigger a seizure occur at frequencies between 5 to 30 Hertz (Hz). Shadow flicker generated by wind turbines, however, has a frequency well below that level, and ranges from 0.5 to 1.25 Hz. • The Massachusetts Department of Environmental Protection convened an expert panel in collaboration with the Massachusetts Department of Public Health to investigate potential human health effects associated with proximity to wind turbines. The panel, comprised of physicians and scientists, reviewed existing information within their areas of expertise and recently released a report titled Wind Turbine Health Impact Study: Report of Independent Expert Panel. Some of the key findings are summarized below: ▪ "There is no evidence for a set of health effects from exposure to wind turbines that could be characterised as "Wind Turbine Syndrome"." ▪ "Available evidence shows that the infrasound levels near wind turbines cannot impact the vestibular system" [i.e. the system responsible for balance]. ▪ "None of the limited epidemiological evidence reviewed suggests an association between noise from wind turbines and pain and stiffness, diabetes, high blood pressure, tinnitus, hearing impairment, cardiovascular disease, and headache/migraine." • Finally, NextEra will have a Complaint Resolution Process in place to address any concerns related to the Project, should they arise. This process outlines the steps to be taken to resolve the issue including: contacting the complainant within 24 hours of receiving the complaint to understand and seek a resolution, notifying the MOE of the complaint and filing a Complaint Record, and finally, proposing a face-to-face meeting if the issue cannot be resolved through a phone call.
	Wind Turbines Distracting Vehicle Drivers	• NextEra is unaware of any issues regarding our wind turbines causing any distraction to drivers. The Project will follow the guidelines put in place by the Ministry of the Environment regarding setbacks from roads.
Consultation Process	*Format of the Public Meeting*	• It is NextEra's experience that meetings structured in an open house format are the most effective way to communicate a large amount of information to members of the community. This provides local stakeholders with an opportunity to speak face-to-face with Project representatives and to ask the questions that are within their areas of interest. In addition, not all members of the public are comfortable asking questions in front of a large audience; as such, one-on-one discussions are an effective tool to encourage all interested parties to participate in a discussion. There are many subject matter experts involved in the planning, design, engineering, construction, permitting and development of a wind energy project. An open house format allows attendees to draw on the full range of expertise of these professionals • The Municipality of West Grey requested that NextEra hold the public meeting in a different format and they specifically requested a Question and Answer format. In addition, the Municipality also requested that Sheila Willis be used as the moderator for this type of meeting. To address this request, the public meeting in January 2013 was a combined format of open house followed by a Question and Answer period, with Sheila Willis as the moderator.
Construction, Operation/ Maintenance and Decommissioning	*Construction and Operation/ Maintenance Reports and Turbine Maintenance*	*The construction and operation/maintenance phases of the Project are described in the **Construction Plan and Design and Operations Reports**.* • Modern wind turbines are very reliable and the major components are designed to operate for approximately 25 years. Wind turbines are large and complex electromechanical devices with rotating equipment and many components. With large numbers of turbines it is inevitable that component failures will occur despite the high reliability of the turbines fleet-wide. These repairs can usually be carried out within a few hours. • NextEra's state-of-the-art operations command centre is one of a few in the wind industry and has a major role in remotely managing wind turbine operation. The Fleet Performance and Diagnostic Centre maintains continuous oversight of wind turbines at NextEra's sites. When site personnel have gone home for the evening, the command centre staff is monitoring the wind turbines and can run diagnostic tests on turbines or adjust operations as needed. The centre collects data that

Table 3-1 Summary of Public Comments Received

Theme	Topic	Response
		enable NextEra to schedule predictive maintenance to help ensure efficient operation.
	Cost of Decommissioning	*Decommissioning is addressed in the **Project Description Report** and the **Decommissioning Plan Report**.* • The cost of decommissioning, which involves dismantling turbines, above-ground electricity poles and the substation, is the responsibility of the Project owner and not the local municipality or landowners. • The plan to address decommissioning becomes part of the REA for the Project under *O.Reg. 359/09*. It is a specific report required that was released in draft for public comment and subsequently filed with the MOE as part of the Project's REA application.

Table 3-1 Summary of Public Comments Received

Theme	Topic	Response
Costs associated with Wind Energy	*Electricity Costs*	• On November 23, 2010, the Government of Ontario released its Long-Term Energy Plan, which is a 20-year plan to guide the Province's electricity system. This plan outlines the goals for Ontario's electricity system, as well as its future supply mix. The Plan is available for review on the Ontario Ministry of Energy and Infrastructure's website: http://www.mei.gov.on.ca/en/energy/ . • The cost of wind power generation is competitive with other newly-installed power sources. Once turbines are installed, the cost of generating wind power will remain steady for decades. The fuel (wind) is free. By contrast, electricity prices have risen steadily across Canada over time. Regulations to make polluters pay for their emissions will mean that the cost of power from fossil fuels will continue to rise, on top of normal market fluctuations. Under the terms of our contract with the Ontario Power Authority, any economic benefits from future pollution regulation will flow to the government. • Comparing the cost of new generation, such as wind, to the cost of power from existing and legacy generation, such as coal and hydro, is an unfair comparison. The comparison of cost should be between different types of generation if they were to be built today. The majority of Ontario's current energy mix and resulting spot price is a result of old assets, whose capital costs were financed and accounted for years ago. Therefore, their operating costs are much lower. Additionally, power prices in Ontario are still heavily regulated and do not reflect the true cost of power in the market. • The Government of Ontario's Long Term Energy Plan is to displace coal-fired generation with renewable energy. Other forms of electricity have hidden costs related to health. A 2005 study prepared for the government of Ontario found that the average annual health-related damages due to coal could top $3 billion (DSS Management Consultants Inc., RWDI Air Inc. 2005. Cost Benefit Analysis: Replacing Ontario's Coal-Fired Electricity Generation). • A study out of Harvard found that if one adds in the hidden costs of coal then its actual price is more like 9-27 cents higher per kilowatt hour (Epstein *et al.* 2011. Full Cost Accounting for the Life Cycle of Coal in *Ecological Economics Reviews*). The authors write: *"Each stage in the life cycle of coal—extraction, transport, processing, and combustion—generates a waste stream and carries multiple hazards for health and the environment. These costs are external to the coal industry and are thus often considered externalities. We estimate that the life cycle effects of coal and the waste stream generated are costing the U.S. public a third to over one-half of a trillion dollars annually. Many of these so-called externalities are, moreover, cumulative. Accounting for the damages conservatively doubles to triples the price of electricity from coal per kWh generated, making wind, solar, and other forms of non-fossil fuel power generation, along with investments in efficiency and electricity conservation methods, economically competitive."*
Other	*Trespassing Using Turbine Right of Ways*	• As the turbines and access roads will be located on private properties, any unauthorized access will be considered trespassing. In order to discourage trespassing, NextEra will work with landowners to ensure that the access roads are gated, and/or that the appropriate signage is put in place.

4. Agency Consultation

NextEra and GENIVAR consulted with the agencies listed below over the course of the project. Agency meetings are described throughout Section 4.1 and key pieces of correspondence are summarized in **Table 4-1 – Summary of Key Agency Correspondence** below and in **Appendix F-15**.

4.1 Summary of Key Agency Meetings

4.1.1 Saugeen Valley Conservation Authority

GENIVAR met with the Saugeen Conservation Authority (SVCA) in late 2011 to introduce the proposed project and discuss information sharing requirements.

GENIVAR had follow-up telephone calls with the SVCA in summer 2012 to obtain relevant maps and to discuss the project layout. In November 2012 SVCA conducted field investigations of the properties identified in the project layout. Key comments from SVCA included:

- September 2012 layout has the turbines and associated buffers avoiding Regulated Areas;
- SVCA will review the watercourses and determine those that may require additional work and potentially a permit; and,
- Greater effects to watercourses could result from associated infrastructure, rather than the turbines themselves.

GENIVAR and NextEra will continue consultation with the SVCA throughout the permitting process.

4.1.2 Ontario Ministry of Natural Resources

LGL Limited (sub-consultant to GENIVAR) have held numerous telephone discussions with the MidHurst District office of the Ontario Ministry of Natural Resources (MNR) to discuss MNR's requirements for the REA process, natural heritage information, post-construction monitoring and information relating to Approvals and Permitting Requirements Document (APRD) requirements.

The initial stages of the application process have been initiated for the APRD requirements and to address Species at Risk concerns.

LGL Limited continued consultation with the MNR throughout the preparation of the Natural Heritage Assessment (NHA), Environmental Impact Study (EIS) Report and the Addendum to address minor project modifications that occurred since October 2012. The final reports were submitted to the MNR for review and sign off. The MNR issued a confirmation letter regarding the NHA and EIS on December 10, 2012 and sign off for the Addendum on January 8, 2013. The letter is provided in **Appendix B** for review.

4.1.2.1 Confirmation on the Natural Heritage Assessment Report and Environmental Impact Study

The following confirmations and recommendations were made in the MNR's sign off letters regarding the Final NHA and EIS and the Addendum:

- The existence of natural features and the boundaries of natural features were established using applicable criteria or procedures accepted by the MNR;
- Site investigations and records review were conducted using applicable criteria or procedures accepted by the MNR;
- Evaluation of significance and provincial significance were conducted using applicable criteria or procedures accepted by the MNR;
- The project location is not in a Provincial Park or conservation reserve;
- The environmental impact assessment report was prepared in accordance with procedures established by the MNR;
- The MNR expects the appropriate mitigation measures to be implemented for bat maternity habitats;
- The Environmental Effects Monitoring Plans that address post-construction monitoring and mitigation for birds and bats must be prepared and implemented. These plans should be reviewed by the MNR ahead of submission to the MOE; and
- Should any changes be made to the project that might alter the NHA, additional review by the MNR may be required.

4.1.3 Ministry of Tourism, Culture and Sport

NextEra consulted with the Ministry of Tourism, Culture and Sport (MTCS) throughout the planning process on matters relating to archaeological and cultural heritage impacts. Stage 1 and 2 Archaeological Assessments in addition to a Heritage Assessment were conducted to identify any potential effects relating to these resources. The final Archaeological Assessment and Heritage Assessment Reports are available for review in the REA package. The following sections summarize the letters of confirmation received from the MTCS regarding these reports. Copies of the letters are available for review in **Appendix B**.

4.1.3.1 Confirmation on the Stage 1 and 2 Archaeological Assessment Reports

The MTCS responded to the Stage 1 and Stage 2 Archaeological Assessment Reports submitted to the Ministry and provided the following comments and recommendations:

- **Stage 1 Archaeological Assessment** – the MTCS entered the archaeological assessment into the register on January 14, 2011. Based on the reported findings, it was recommended that a Stage 2 archaeological assessment be carried out for potential wind turbine sites and their associated infrastructure.
- **Stage 2 Archaeological Assessment** - the MTCS entered the archaeological assessment into the register on December 20, 2012 for the additional lands and January 22, 2013 for the original Stage 2. The Stage 2 assessment identified 3 archaeological sites that are Euro-Canadian. The 3 sites were recommended for a Stage 3 archaeological assessment.

4.1.3.2 Confirmation on the Heritage Assessment Report

The MTCS responded with a letter of confirmation on September 19, 2012 to the initial report and on December 4, 2012 for the amended Heritage Assessment Report and provided the following comments and recommendations:

- Due to the typical nature of the landscape, cultural heritage value or interest was not identified according to Ontario Regulation 9/06.
- No further mitigation is recommended as it was determined that there are no anticipated direct or indirect impacts as a result of the undertaking.

4.2 Summary of Key Agency Correspondence

Table 4-1 Summary of Other Key Agency Correspondence

Date	Agency	Questions/Comments	Response
Saugeen Valley Conservation Authority (SVCA)			
November, 2012	SVCA	GENIVAR had a phone conversation and emails with SVCA regarding the project layout. Key comments include: • For some sites, a 30 m setback may not be enough to ensure there will be no flooding/ erosion issues caused by the development. • A site visit SVCA was conducted and there are no issues with the turbine layout for SVCA but they are still reviewing the access roads and underground cables and this will be completed in early 2013 to determine if additional permits are necessary for SVCA	N/A

Table 4-1 Summary of Other Key Agency Correspondence

Date	Agency	Questions/Comments	Response
Nav Canada			
August 16, 2012	NavCanada	Notice of release of the Draft Site Plan Report.	Requested coordinates for turbines when available and completion of their land use clearance form.
October 30, 3012	NavCanada	Notice of Final REA Public Meeting.	Requested coordinates for turbines when available and completion of their land use clearance form.
November 13, 2012	NavCanada	Forwarded Land Use Clearance Form	Under review.
Transport Canada			
November 13, 2012	Transport Canada	Forwarded Lighting Plan.	
November 16, 2012	Transport Canada		Received confirmation that Plan was received and that a response will be forthcoming.
DND			
November 15, 2012	DND Air Defense, Navigational Aid, Major Military Installations	NextEra sent in the Telecommunications Review.	
November 16, 2012	DND Air Defense, Navigational Aid, Major Military Installations		Received approval.
DND			
November 15, 2012	DND – Military Radio communication	Sent in the Telecommunications Review.	
November 16, 2012	DND – Military Radio communication		Received Approval
Transport Canada – Coast Guard			
November 15, 2012	Coast Guard	NextEra sent in the Telecommunications Review.	No response to date. There are no proposed impacts to navigable waters and thus a response from the Coast Guard (Transport Canada) is not anticipated.
iServ			
November 15, 2012	iServ – Public Safety Mobile Radio System	NextEra sent in the Telecommunications Review.	Received confirmation of receipt but no due date specified.
November 27, 2012	iServ – Public Safety Mobile Radio System		Requested NextEra contact directly any regional, local public safety radio mangers (fire, police, etc.).
Environment Canada			
November 20, 2012	Environment Canada – weather radars	NextEra sent in the Telecommunications Review.	
November 22, 2012	Environment Canada – weather radars		Requested additional information on turbine coordinates and base diameter. Information sent November 26, 2012.
November 26, 2012	Environment Canada – weather radars		Requested information sent.

5. Aboriginal Consultation

The Aboriginal Consultation Report, found in **Appendix F-14**, describes NextEra's consultation with First Nation and Métis in detail. Consultation has been ongoing throughout the project planning process, and is conducted in accordance with the following principles:

1. Fostering a collaborative working relationship with potentially impacted First Nation and Métis communities as early as practicable.
2. Understanding and recognizing applicable aboriginal and treaty rights and interests.
3. Understanding and respecting the cultural integrity of First Nation and Métis communities potentially impacted by NextEra Energy Canada's projects.
4. Fulfilling all delegated obligations to consult and (where applicable) accommodate First Nation and Métis communities.
5. Being open to discuss a broader relationship with potentially impacted First Nation and Métis communities and host First Nation and Métis communities.

A copy of NextEra's "First Nation and Métis Relationship Policy" can be found in **Appendix F-14**.

The following Aboriginal Communities were identified by the Director of the Ministry of the Environment letter dated April 5, 2011) and were engaged in consultation initiatives:

- Saugeen Ojibway Nation
- Saugeen First Nation
- Chippewas of Nawash Unceded First Nation
- Historic Saugeen Métis
- Great Lakes Métis Council
- Métis Nation of Ontario

Additional groups were also identified for consultation by NextEra based on proximity of a project to a traditional territory or traditional Métis harvest territory. These groups are identified in the Aboriginal Consultation Report (**Appendix F-14**) and listed below.

- Haudenosaunee Confederacy Chiefs Council
- Oneida Council of Chiefs
- Six Nations of the Grand River Elected Council

The results of the program indicate there will be no impacts to Aboriginal or treaty rights or other environmental impacts that may be of concern to Aboriginal Communities, if the Project is approved and implemented with the mitigation measures outlined in the reports and studies that have been submitted in accordance with *O.Reg. 359/09*. Additionally, no concerns have been expressed to date, or other information brought forward by Aboriginal Communities that resulted in a need to make changes to the Project. NextEra has complied with all requirements to provide notices and information as set out in Ontario Regulation 359/09 to Aboriginal Communities, and evidence of such compliance can also be found in **Appendix F-14**.

6. Municipal Consultation

The following section details consultation efforts with the Municipality of West Grey and Grey County. **Table 6-1 – Summary of Key Municipal Correspondence** provides details of key municipal consultation activities while **Appendix F-12** provides copies of correspondence and the municipal consultation form provided to the municipalities. Note that at the time of submitting this report, a completed municipal consultation form had not been received from the Municipality of West Grey or Grey County.

The Municipality of West Grey indicated that they would not be able to complete the municipal consultation form until mid to late-February 2013. Grey County indicated that they would provide the municipal consultation form by the end of January 2013. NextEra will follow up with both the Municipality and the County for receipt of the forms and to address issues raised on the forms.

6.1 Municipal Consultation Form and Draft PDR to Municipalities

The Municipal Consultation Form, which is intended to aid in highlighting key municipal issues associated with the Project, was first provided to the Municipality of West Grey, in addition to Grey County, along with the updated PDR on June 13, 2012 (greater than 30 days prior to the first REA public meeting).

Updated Municipal Consultation Forms were sent to the Municipality of West Grey, in addition to Grey County, on October 11, 2012 along with the draft REA Reports to commence the municipal consultation period (greater than 90 days prior to the final REA public meeting).

6.2 Distribution of Draft Documents for Review – Municipal

As mentioned above, the draft REA Reports were provided to the Municipality of West Grey, in addition to Grey County on June 13, 2012. Although draft documents are to be made available 90 days prior to the final public meetings, NextEra made the draft documents available for an additional month. The following documents were provided for municipal review 120 days prior to the final public meeting:

- Municipal Consultation Form
- One hard copy and one CD of the following REA Reports:
  - Project Description Report
  - Construction Plan Report
  - Design and Operations Report
  - Decommissioning Plan Report
  - Wind Turbine Specification Report
  - Natural Heritage Assessment Report
  - Water Assessment and Water Body Report
  - Heritage Assessment Report
  - Stage 1 and 2 Archaeological Assessment Reports
  - Noise Study Report

Appendix F-8 contains the cover letters for the Municipal Consultation Period. Note that when the Draft Reports were made available for the Public Consultation Period on October 11, 2012 (90 days prior to the final Public Meetings), the final NHA Report, Stage 2 Archaeological Assessment Report, and corresponding MNR and MTCS confirmation letters were not available and will be provided to the municipalities to replace the draft reports by the end of January 2013.

6.3 Summary of Key Municipal Correspondence

Table 6-1 Summary of Key Municipal Correspondence

Date	Description of Consultation	Follow up/Response
Municipality of West Grey		
July 6, 2011	• NextEra notified West Grey and Grey County that East Durham Wind Energy Centre was offered a contract by the Ontario Power Authority, which is a key step in allowing NextEra to move forward with environmental background work.	• n/a
July 26, 2011	• NextEra provided information regarding the Met Tower and the purpose of monitoring the wind resource in the area.	• n/a
September 7, 2011	• NextEra requested information on whether West Grey had a by-law or mapping as it relates to seasonal half load restrictions.	• West Grey noted that By-Law 8-2006 includes all roads in West Grey with restrictions from March 1st to May 15th which can be extended depending on weather.
October 14, 2011 & November 29, 2011	• NextEra requested opportunity to meet with West Grey Council to clarify issues related to the project.	• West Grey indicated NextEra was welcome as a delegation to Council (which should not be considered municipal consultation under REA process) in January or February 2012.
January 11, 2012	• West Grey confirmed they do not have a tree cutting by-law but the County does have Forest Management provisions.	• NextEra followed up with setting a meeting with the County to discuss forest management issues.
February 6, 2012	• Delegation to Council regarding the project, NextEra, the REA process and project schedule • NextEra representatives were project manager, communications manager, community relations consultant and GENIVAR's environmental project manager.	• Clarification requested on 550 m setback as it applies to new residences and an existing turbine. • Requested a follow up meeting reviewing the turbine siting process.
February 9, 2012	• NextEra indicated that the updated Project Description Report and Municipal Consultation Form (MCF) were being couriered to them for their review. • NextEra was not seeking comments on the MCF at that point, but wanted to provide them with the form to indicate where municipal input would be required.	• This was not provided until June 13, 2012 due to modifications made to the report.
March 2, 2102	• Follow up email clarifying that the MOE confirms that there is no regulation regarding new residences and existing turbines and the 550 m setback that is deemed to be a local municipal decision.	• n/a
March 22, 2012	• NextEra requested to be a delegation to Council to present an overview of the siting process.	• Municipality confirmed Council delegation on May 28, 2012
April 13, 2012	• NextEra provided a copy of the draft Community Vibrancy Fund agreement to Municipal staff and suggested this could be forwarded to Council and discussed at the May 28, 2012 meeting.	• n/a
July 16, 2012	• NextEra provided a reminder to Council of the upcoming public meeting on July 18, 2012 and confirmed that a draft turbine layout would be presented at the meeting and suggested scheduling a delegation in the near future.	• n/a
July 16, 2012	• NextEra requested clarification from West Grey Staff on the status of Part Lot 20, Concession 2 NDR regarding landfill and development on surrounding properties.	• July 26, 2012 confirmation provided by West Grey that the lot is a closed landfill (closed in 2008) and that development would require an Environmental Impact Study prior to issuance of a building permit on the lot even though it is zoned Agricultural A2.
July 24, 2012	• West Grey requested a copy of maps and correspondence provided at public meeting on July 18.	• NextEra provided maps and a copy of the presentation boards from the public meeting to West Grey on July 24, 2012.
July 25, 2012	• NextEra emailed Councillor Cutting confirming that the presentation made to Council in May and the map from	• n/a

Table 6-1 Summary of Key Municipal Correspondence

Date	Description of Consultation	Follow up/Response
	the July 18 public meeting both outlined that NextEra will plan for 16 turbines but will only construct 14.	
July 29, 2012	• Councillor Cutting requested answer regarding fire suppression issue.	• July 31, 2012 response from NextEra suggesting Ontario operations manager could contact the Councillor or make presentation to discuss emergency action plan matters.
August 16, 2012	• West Grey requested a copy of the Draft Site Plan Report.	• NextEra provided an additional copy to West Grey on August 20, 2012.
August 30, 2012	• NextEra provided a draft copy of an overview of the Emergency Response for the East Durham Wind Energy Centre.	• n/a
September 6, 2012	• Council requested NextEra to arrange for the Operations Manager to attend September 24, 2012 Committee of the Whole Meeting. • Previous emails did not fully address emergency response concerns specifically related to wind turbines (high angle rescues and NextEra needing to provide their own emergency response personnel).	• Meeting September 24 scheduled to address high angle rescues and NextEra needing to provide emergency response personnel.
September 12, 2012	• NextEra requested confirmation that the road allowance running north/south between Lot 25 and Lot 26, Concession 4 NDR is still unopened or that it has been closed by by-law.	• Municipality confirmed (September 12, 2012) that it is an unopened road allowance between Lots 25 and 26, Concession 4 NDR and that is under ownership by West Grey.
September 17, 2012	• Councillor Cutting requested information on the telephone town hall meeting, specifically: o How were people chosen to be called – there didn't seem to be a structure o Noted that she connected at 7:50 pm and was cut off at 8:12 pm o Numerous people were left on hold and then received a polite thank you o Who were the doctors and engineers giving advice	• NextEra responded on September 18, 2012: o A firm was hired to conduct this and the numbers dialled were based on telephone exchanges of nearby urban centres o Conducted this forum as another way to reach out to more people but it was not meant to take the place of any required public forums o NextEra engineer and non-medical doctors from Intrinsik.
September 27, 2012	• Provided a draft Road Use Agreement for review and consideration by West Grey.	• n/a
October 9, 2012	• NextEra requested that their engineering team could meet with both West Grey and Grey County staff to discuss technical matters on the project.	• West Grey and County engineering, planning and transportation staff to meet with NextEra engineers on October 30th.
October 9, 2012	• NextEra requested information on whether any municipal drains were in the vicinity of the project.	• West Grey confirmed (October 9, 2012) that there are no municipal drains within the proposed project area.
October 10, 2012	• West Grey Fire Chief requested a copy of NextEra's emergency plan for review and approval.	• NextEra responded that there is not a specific West Grey one available as yet. • NextEra forwarded a draft copy of the Emergency Action Plan for review on October 30, 2012.
October 27, 2012	• Councillor Cutting requested answer as to why residents of Glenelg received letters explaining the error on a previous mail out. • Noted that names seemed to be outdated on the mailing list.	• November 5, 2012 NextEra provided clarification that the letter was intended for participating landowners and was sent to the incorrect mailing list. This was clarified in a letter sent out in October. • Mailing list is developed based on land title records (municipal and land registry offices) so that owners of the property receive notification. These may not necessarily be updated for many years.
November 5, 2012	• NextEra requested whether West Grey would consider allowing the electrical collection line along Concession Road 4 (east of County Road 23) to be attached to the bridge by way of a conduit underneath the bridge structure. NextEra engineers determined that boring for the underground cable was not possible at this location.	• Discussed with West Grey staff at the December 19, 2012 meeting.
November 13, 2012	• West Grey requested a GIS map showing the turbines and the 550 m setback, since they could not find this in the Draft Site Plan Report.	• NextEra confirmed (November 15, 2012) that these were not mapped but the table in the Draft Site Plan Report provides distances to each receptor and the receptors are shown on the map in the report.

Table 6-1 Summary of Key Municipal Correspondence

Date	Description of Consultation	Follow up/Response
November 19, 2012	• Re-scheduled October 30 meeting and NextEra met with County and West Grey staff related to engineering, planning and transportation issues: • Topics included: Axle weights for turbine deliveries, haul routes, standard construction of buried cabling, Emergency Action Plan, NavCanada lighting requirements, confirm vacant lot receptors and provide map of REA setbacks, existing met tower and additional details on insurance policy.	• n/a
December 3, 2012	• NextEra gave a delegation to West Grey Council on technical specifics of the project and wind related issues.	• NextEra provided (December 12, 2012) follow-up information requested by Council on stray voltage and distribution system code.
December 18, 2012	• Formal request from West Grey requesting that NextEra utilize a Question and Answer type format instead of an Open House type format at the meeting scheduled for January 15, 2013 and have Sheila Willis as the moderator.	• January 3, 2013 response that NextEra will divide the January 15, 2013 meeting into two parts with the first half an open house format and the second half a question and answer format.
December 18, 2012	• West Grey provided notification that they will be completing the Municipal Consultation form in mid-to-late February 2013.	• NextEra will indicate this in the REA submission and will follow up with West Grey in February 2013.
January 7, 2013	• Council notified that of the change in the format of the public meeting scheduled for January 15, 2013 (combined open house and questions and answer formats and Sheila a Willis as moderator).	• n/a
Grey County		
July 6, 2011	• NextEra notified West Grey and Grey County that East Durham Wind Energy Centre was offered a contract by the Ontario Power Authority, which is a key step in allowing NextEra to move forward with environmental background work.	• n/a
January 22, 2012	• West Grey provided a link to the County's Forest Management By-law and confirming upcoming meeting with West Grey and County.	• n/a
February 6, 2012	• Meeting with County staff regarding Forest Management provision and transportation issues; confirmation of planned infrastructure on County ROW's; timelines moving forward; possible meetings with other County staff to discuss impacts to ROW; and REA expectations for comments through MCF.	• n/a
February 10, 2012	• Notification that the County planner will change due to a conflict of interest with the project (related to the study area).	• Discussions to now be held with Intermediate Planner.
October 9, 2012	• NextEra requested that their engineering team could meet with both West Grey and Grey County staff to discuss technical matters on the project.	• West Grey and County (engineering and transportation staff) to meet with NextEra engineers on October 30th.
October 25, 2012	• NextEra provided a draft copy of the Road Use Agreement, similar to the one sent to West Grey, for consideration by the County.	• n/a
November 19, 2012	• Re-scheduled October 30 meeting and NextEra met with County and West Grey staff related to engineering and transportation issues: • Topics included: Axle weights for turbine deliveries, haul routes, standard construction of buried cabling, Emergency Action Plan, NavCanada lighting requirements, confirm vacant lot receptors and provide map of REA setbacks, existing met tower and additional details on insurance policy.	• n/a
January 16, 2013	• Meeting to discuss project with County planning and transportation staff and NextEra engineering and construction team.	• n/a

7. Consideration of Stakeholder Input

NextEra maintained ongoing communication with members of the public, local municipalities, Aboriginal Communities and government agencies throughout the Project planning process, as documented above and in the associated appendices to this report.

The majority of comments received throughout the project planning process were general comments or concerns relating to matters surrounding wind energy. NextEra responded to these questions and concerns directly via email, written letters, through conversations at public meetings, or individual meetings.

The following table outlines NextEra Energy Canada's consideration of stakeholder comments received. Comments were considered throughout the planning process to minimize any effects or perceived impacts. Following the publication of the draft site plan layout in July 2012 and the subsequent site plan release (August 2012), no specific comments have been received from the public requiring a change in infrastructure location.

Table 7-1 Consideration of Stakeholder Input

Comment Received	Project Response
Concerns from the Municipality of West Grey regarding the removal of infrastructure to a depth of 1.0 m, they prefer 1.2 m since there is tile drainage and other agricultural practices in the area.	• NextEra modified the various REA reports (construction, design and operations and decommissioning) to the 1.2 m depth for removal of infrastructure. • No alterations to the project layout are deemed necessary.
Concerns from the Municipality of West Grey that the public meeting should be a Question and Answer type format and not and Open House type format.	• NextEra modified the second REA public meeting (held on January 18, 2013) to provide half of the meeting as an open house type format and the second half was a question and answer type format. As further requested by the Municipality, the moderator for the Question and Answer portion was Sheila Willis. • No alterations to the project layout are deemed necessary.
Municipality of West Grey passed a moratorium that they are an "unwilling host to wind turbines".	• NextEra has worked and will continue to work with the Municipality to bring forward information and to address concerns/issues raised.
Infrastructure siting preferences based on landowner feedback	• NextEra continuously met with landowners hosting project infrastructure to develop a site plan that would abide by provincial setback requirements and also reflect their preferences for locating infrastructure on their properties. NextEra worked closely with each landowner to abide by their preferences as much as possible. • No additional alterations to the project layout are deemed necessary.

NextEra is committed to continuing open dialogue with Project stakeholders throughout all phases of the project and will address concerns if they arise.

Appendix 10

THE CORPORATION OF THE MUNICIPALITY OF WEST GREY

BY-LAW NUMBER 59 - 2012

BEING, a by-law to amend Bylaw Number 56-2012, being a bylaw to adopt a Municipality of West Grey Public Works Department Policy Manual;

WHEREAS, the Council of the Municipality of West Grey deems it expedient and in the public interest to amend Bylaw Number 56-2012, being a bylaw adopt a Municipality of West Grey Public Works Department Policy Manual;

NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE MUNICIPALITY OF WEST GREY ENACTS AS FOLLOW:

1. That the Municipality of West Grey Public Works Department Policy Manual be amended by adding a policy respecting "Electrical Cables on Road Allowances Policy", as shown on Schedule "A" attached to and forming part of this Bylaw.

2. That this by-law shall come into full force and effect on the date of passing.

****

Read a first and second time, this 17th day of December, 2012.

Read a third time and finally passed, this 17th day of December, 2012.

Kevin Eccles, Mayor

Christine Robinson, CAO

SCHEDULE "A" TO BY-LAW NUMBER 59 - 2012

Section:	**Policy Number:**
Sub-section:	**Effective Date:**
Subject:	**Revision Date:**

ELECTRICAL CABLES ON ROAD ALLOWANCES POLICY

Purpose: To establish Regulations to ensure the safety of West Grey Public Works Staff, Residents, Contractors and Utility Companies excavating on road allowances.

Policy: All Hydro One or Westario Hydro Power Lines on West Grey Road Allowances or crossing West Grey Road Allowances are to be installed above ground level on Poles at the proper height as per regulations.

All underground direct current electrical cables on West Grey Road Allowances or crossing West Grey Road Allowances are to be enclosed in a concrete conduit in the ground at a minimum depth of 1 meter with an increased depth in certain areas of road allowances as directed by the Public Works Department.

Appendix 11

TORYS LLP

Suite 3000
79 Wellington St. W.
Box 270, TD Centre
Toronto, Ontario
M5K 1N2 Canada
Tel 416.865.0040
Fax 416.865.7380

www.torys.com

March 15, 2013

VIA FACSIMILE (519-369-5962), EMAIL AND MAIL

Mayor and Members of Council
c/o Christine Robinson, CAO
Municipality of West Grey
402813 Grey Road 4, RR2
Durham, Ontario
N0G 1R0

Dear Ms. Robinson:

We are counsel to NextEra Energy Canada, ULC which through its subsidiary is in the late stages of developing the East Durham Wind Energy Centre (the "Project") in the Municipality of West Grey. As you know, the Project is being developed in accordance with the province's Renewable Energy Approval ("REA") process and that NextEra intends and fully expects to be able to begin construction of this project following receipt of its Renewable Energy Approval, anticipated in the fourth quarter of 2013.

We understand that the Municipality of West Grey has proposed the enclosed amendments to its By-law 9-2012 to establish certain fees and charges that would apply to our client (the "Proposed Amendments"). The Proposed Amendments purport to require wind project developers to pay:

(a) an industrial wind turbine performance bond of $100,000 per turbine;

(b) a fee of $6,500 plus security of $20,000 per kilometer to cover the issuance of a permit for locating works in the municipal right-of-way, including for the inspection of such works, the inspection of post construction remediation and the preparation of a right-of-way permit agreement;

(c) a municipal consultation/peer review fee of $50,000 plus the actual expense of any outside consultants greater than $50,000 in relation to industrial wind energy projects; and

(d) an entrance permit fee of $5,000 plus security of $50,000 for permits regarding a municipal road with no box culvert or bridge; $125,000 for permits regarding a municipal road with a box culvert; and $200,000 for permits regarding a municipal road with a bridge.

Our client has serious concerns regarding the Proposed Amendments, which if passed would unlawfully frustrate the development of the Project. Among are client's concerns are those discussed below.

The Proposed Amendments are in Conflict with the Purposes of Provincial Legislation

Municipalities can only exercise powers delegated by provincial statute. This delegated authority is subject to limitations. One such limitation is that municipal by-laws are without effect to the extent they conflict with or frustrate the purpose of any provincial statutes or regulations. In this regard, the province passed the *Green Energy and Green Economy Act, 2009* (the "Green Energy Act") with the predominant purpose of encouraging and facilitating renewable energy development in Ontario. In doing so, the province established the REA process as the regulatory regime for permitting these projects. In particular, pursuant to the *Environmental Protection Act* and Ontario Regulation 359/09, the Ontario Ministry of the Environment ("MOE") is the sole authority responsible for reviewing REA applications to ensure the proposed renewable energy project is sufficiently protective of the environment, health and safety and surrounding property. The legislature clearly intended the REA regime to be a comprehensive regime for the assessment of these matters. In purporting to impose performance bond and security requirements and unreasonable consultation and permitting fees, the Proposed Amendments would add an additional layer of municipal regulation that is in conflict with the purpose of the Green Energy Act and the REA regime.

The Proposed Amendments Violate the *Municipal Act, 2001*

The Proposed Amendments also purport to exercise a power explicitly withheld from municipalities under the *Municipal Act, 2001*. In particular, municipalities are limited to imposing fees that are reasonable and reflective of the costs incurred by the municipality in providing the relevant service. In contrast, the amounts of the proposed permitting and consultation fees and performance bond and security requirements are prohibitive and unrelated to the Municipality's administrative costs. For example, the Proposed Amendments purport to impose on wind project developers a $5,000 fee and up to $200,000 in security for an entrance permit, whereas the Municipality's fee for all other entrance permits is no more than $600. The Municipality has provided no information to substantiate why the amounts set out in the Proposed Amendments are reasonable. Therefore, it appears that the Proposed Amendments attempt to impose a tax to discourage wind energy development, generally, and the Project in particular. Although NextEra would expect to pay the entrance permit fees set out in the current version of By-law 9-2012, the fees in the Proposed Amendments are unreasonable and invalid given what the relevant legislation allows.

The Proposed Amendments Conflict with the *Electricity Act, 1998*

Under the *Electricity Act, 1998*, a distributor has a statutory right to construct or install such structures, equipment and other facilities as it considers necessary for the purpose of its distribution system within any public street or highway, such as a municipal road allowance, without the consent of the owner of such street or highway. The Ontario Energy Board has determined that this right authorizes wind energy projects to locate their distribution facilities within municipal right-of-ways without the consent of the municipality. If a developer chooses to

do so, and cannot reach an agreement regarding the location of those facilities within the road allowances, an application can be brought to the Board to decide the matter. Because the *Electricity Act, 1998* affords NextEra a clear statutory right to locate the Project's distribution facilities within municipal right-of-ways, the Municipality cannot lawfully impose fee requirements that would effectively limit that right.

Therefore, it is NextEra's position that the Proposed Amendments are invalid, in some cases given the unreasonable fees they would impose. Even so, NextEra remains committed to continuing to work with the Municipality in developing the Project, on the understanding that Council does not pass the Proposed Amendments. If the Proposed Amendments are passed, NextEra will have no choice but to seriously consider all available legal options.

Please feel free to contact, or have your counsel, contact me at 416.865.8245 so we can discuss NextEra's concerns and hopefully take steps to avoid the need for costly and unnecessary legal action.

Sincerely,

plr John Terry

Tel 416.865.8245
jterry@torys.com

cc Chief Administrative Officer, Municipality of West Grey
Adam Rickel, NextEra Energy Canada, ULC
Ashley Pinnock, NextEra Energy Canada, ULC

14923101.3

Appendix 12

MINUTES
For the Regular Meeting of the
Council of the Municipality of West Grey
Held on Monday, July 15, 2013, at 6:00 p.m.
At the Council Chambers – West Grey Municipal Office

Council	Mayor Kevin Eccles, Deputy Mayor John A. Bell, Councillor Bev Cutting, Councillor John Eccles, Councillor Carol Lawrence, Councillor Don B. Marshall, Councillor Mark Rapke, Councillor Rob Thompson
Absent	Councillor David Mollison
Staff	Mark Turner, Clerk. Kerri Mighton, Director of Finance/Treasurer; Ken Gould, Director of Infrastructure and Public Works – during reports

Lord's Prayer/Moment of Reflection

Declarations of Pecuniary Interest and General Nature Thereof - None

Closed Session
BELL-THOMPSON, WHEREAS, the Municipal Act, S.O. 2001, Section 239 (2), authorizes Councils of municipalities to close to the public a meeting or part of a meeting for dealing with certain subject matters,
NOW THEREFORE BE IT RESOLVED, that the Council of the Municipality of West Grey, does now go into a closed session of Council at 6:03 p.m., with the Clerk and Director of Finance/Treasurer, to discuss items which relate to personal matters about an identifiable individual, including municipal or local board employees; labour relations or employee negotiations; and litigation or potential litigation, including matters before administrative tribunals, affecting the municipality or local board.
… #215-13 CARRIED.

RAPKE-JOHN ECCLES, BE IT RESOLVED THAT, the Council of the Municipality of West Grey hereby returns to Open Session of Council at 7:04 p.m.
… #216-13 CARRIED.

(Mayor Eccles confirmed that only closed session items identified were discussed in closed session).

Matters Arising from the Closed Session – n/a
Public Meetings - None

Part I - Consent Agenda

Adoption of Minutes
Council:
A1 Minutes of Regular Council Meeting – July 3, 2013

Committees:
A2 Normanby Recreation Advisory Committee – April 17, 2013
Normanby Recreation Advisory Committee – June 25, 2013
Other
A3 West Grey Public Library Board – April 15, 2013 – resolution #217-13

CUTTING-LAWRENCE, BE IT RESOLVED THAT, the minutes of the Regular Meeting of the Council of the Municipality of West Grey, held on July 3, 2013, be approved, as printed;
AND FURTHER THAT, the Minutes of the West Grey Committees – A2, be received, as circulated;
FURTHER THAT, the Other Minutes – A3, be received, as circulated.
… #217-13 CARRIED.

Award of Tenders
B1 None

Routine Department Reports
C1 Director of Building Services/C.B.O. – Report #CBOC 07/15/13 (received for information)

Miscellaneous Correspondence (For Information Only - Not Circulated but Available for Viewing at Meeting)
D1 Saugeen Conservation – Evening Conservation Tours 2013 newsletter
D2 Ministry of Rural Affairs/Infrastructure/Transportation – re: consultation on proposed $100 million Provincial commitment to help small, rural and northern municipalities address roads, bridges and infrastructure
D3 Drinking Water Source Protection – July 2013 newsletter
D4 Rick Parker, West Grey Canine Control Officer/Livestock Valuer Report – June, 2013
D5 West Grey – Durham B.I.A. – June 4/13 Executive Meeting minutes and notice to Durham BIA Corridor individuals respecting parking

Future Committee Meetings
E1 West Grey Committee of the Whole Meeting – July 29, 2013, 9:00 a.m., West Grey Municipal Office
E2 West Grey Planning Advisory Committee – July 29, 2013, 1:00 p.m., West Grey Municipal Office

Part II – Regular Agenda

Communications from the Mayor and Council
Mayor Eccles reported on past activities and events since the last regular meeting of Council, and on upcoming events and activities.

Delegations

Tim Dyck, Chair, West Grey Public Library Board, and Kim Priestman, Chief Libraran/CEO (cancelled)

Business Arising from the Previous Meeting – None

Staff Reports

Director of Finance/Treasurer - Report #FTR 07/15/13
Approval of Accounts, Voucher #13-2013 – resolution #218-13
Contract Cleaner for Municipal Office (see Bylaw Number 56-2013. Council noted need to add duties to clean outside entrances/exits – contact cleaner to obtain quotation for this added work)

THOMPSON-JOHN ECCLES, BE IT RESOLVED THAT, the Director of Finance/Treasurer be authorized to pay the accounts presented as Voucher #13-2013 of the Municipality of West Grey, in the amount of $706,865.95.
… #218-13 CARRIED.

Director of Infrastructure and Public Works – Report #IPWR 07/15/13
Park Street West Roadside Parking - a request from a concerned citizen in regards to parking along Park Street between Countess St. and The Grey Standard Condominium Corporation entrance was brought before The C.O.W. at the June 24th, 2013 meeting. The C.O.W. asked that The Police Chief review the request. West Grey Police Chief Rene Berger has toured the area in question and is recommending "No Parking" signs be installed on this section of Park Street. (Council consented to placement of "No Parking" signs as per above)
Scots Hill Road - Scot's Hill Road has previously been assumed by West Grey and with the majority of the houses now built the home owners are asking for the road to have an application of surface treatment applied. The developer (The Seaton Group) has provided West Grey with a reserve to complete the paving project. The Public Works Dept. is prepared to move forward with the project and use the tendered prices from MSO Construction Ltd. to complete the surface treatment on Scot's Hill Road. (Council authorized moving forward with the surface treatment on Scot's Hill Road)
Household Hazardous Waste Day - The Municipality of West Grey is hosting a HHW Day on Saturday July 27th, 2013. HHW products will be received on the south side parking lot of the Durham Arena from 10:00 a.m. to 2:00 p.m. Hotz Environmental are collecting and transporting the HHW products. (received for information)
Sidewalk Maintenance (Plumeville Construction has completed sidewalk work in Ayton, and is starting sidewalk work in Durham tomorrow) (received for information)

Clerk – Report #CR 07/15/13
Township of Warwick – resolution #219-13
County of Grey Clerk's Department – resolution #220-13
Alzheimer Society Sudbury-Manitoulin – resolution #221-13
Nuclear Waste Management Organization (Council requested the NWMO to attend a Council meeting to discuss the proposed fuel bundle/medium level waste repository)
West Grey Police Services Board – resolution #222-13
Boyd Subdivision (Durham) – resolution #223-13

CUTTING-RAPKE, BE IT RESOLVED THAT, the Council of the Municipality of West Grey, also declared as an unwilling host for wind turbines, hereby supports the resolution of the Council of the Township of Warwick declaring the municipality as "not a willing host" for industrial wind turbines;
AND FURTHER THAT, a supporting letter be forwarded to the Premier of Ontario, Minister of Environment, Minister of Energy, Minister of Rural Affairs, and aforementioned municipalities.

RECORDED VOTE

FOR: **Deputy Mayor John A. Bell, Councillor Bev Cutting, Councillor John Eccles, Mayor Kevin Eccles, Councillor Carol Lawrence, Councillor Mark Rapke, Councillor Thompson**
AGAINST: **Councillor Don B. Marshall**
… #219-13 **CARRIED.**

THOMPSON-JOHN ECCLES, BE IT RESOLVED THAT, the Council of the Municipality of West Grey hereby supports the resolution of Grey County Council requesting the Provincial Government grant lower tier Grey County municipalities declared as "not a willing host" for industrial wind turbines the authority to deny this type of development through the passage of a by-law or by power of a veto;
AND FURTHER THAT, a supporting letter be circulated to all lower tier municipalities in Grey County, local MPs and MPPs, Premier Wynne, the Minister of Energy, and the Minister of Environment. … #220-13 **CARRIED.**

RAPKE-LAWRENCE, WHEREAS, Alzheimer's disease and other dementias are progressive, degenerative diseases of the brain that cause thinking and memory to become seriously impaired;
AND WHEREAS, Alzheimer's disease and other dementias affect more than 500,000 Canadians currently and that this figure is projected to reach 1.1 million within a generation;
AND WHEREAS, the cost related to health care system is in the billions and only going to increase, at a time when our health care system is already facing enormous financial challenges;
NOW THEREFORE BE IT RESOLVED THAT, the Council of the Municipality of West Grey hereby calls on the Federal Government in cooperation with all levels of

government, the Federation of Canadian Municipalities and other municipal and health care sector organizations to develop a national dementia plan that is inclusive of strategies in primary health care, health promotion and prevention of illness, community development and capacity building, care-partner engagement and investments in research. … #221-13 CARRIED.

THOMPSON-BELL, BE IT RESOLVED THAT, the Council of the Municipality of West Grey approves issuing a Request for Proposals (RFP) for an architect/engineering firm to prepare working drawings and tender documents for the new West Grey Police station, as recommended by the West Grey Police Services Board. … #222-13 CARRIED.

RAPKE-CUTTING, BE IT RESOLVED THAT, the Council of the Municipality of West Grey hereby supports a one year extension of draft plan approval of the Boyd Draft Plan of Subdivision 42-T-2005-08, by the County of Grey. … #223-13 CARRIED.

By-Laws – First, Second & Third Readings

54-2013	A By-law to appoint an acting Chief Administrative Officer for the Municipality of West Grey – resolution #224-13
55-2013	A By-law to appoint signing authorities for the Municipality of West Grey – resolution #225-13
56-2013	A By-law to approve and authorize the execution of an agreement for the provision of cleaning services for the Municipality of West Grey Municipal Office – resolution #226-13
57-2013	A By-law to approve Sidewalk Patio Agreement and Sidewalk Patio Application templates – resolution #227-13
58-2013	A By-law to adopt a Delegation of Powers and Duties Policy for the Municipality of West Grey – resolution #228-13 (Bylaw to be amended to exclude delegation of authority of Director of Infrastructure and Public Works to approve industrial entrance permits)
59-2013	A By-law respecting the care of animals – resolution #229-13
60-2013	A By-law to repeal Bylaw Number 26-2013 – resolution #230-13

MARSHALL-THOMPSON, BE IT RESOLVED THAT, By-law Number 54-2013, being a By-law to appoint an acting Chief Administrative Officer for the Municipality of West Grey, be now read a third time, passed and numbered and that the said by-law be signed by the Mayor and CAO, sealed with the seal of the Corporation and be engrossed in the by-law book. … #224-13 CARRIED.

LAWRENCE-CUTTING, BE IT RESOLVED THAT, By-law Number 55-2013, being a By-law to appoint signing authorities for the Municipality of West Grey, be now read a first, second and third time, passed and numbered and that the said by-law be signed by the Mayor and CAO, sealed with the seal of the Corporation and be engrossed in the by-law book. … #225-13 CARRIED.

THOMPSON-JOHN ECCLES, BE IT RESOLVED THAT, By-law Number 56-2013, being a Bylaw to approve and authorize the execution of an agreement for the provision of cleaning services for the Municipality of West Grey Municipal Office, be now read a first, second and third time, passed and numbered and that the said by-law be signed by the Mayor and CAO, sealed with the seal of the Corporation and be engrossed in the by-law book. … #226-13 CARRIED.

RAPKE-CUTTING, BE IT RESOLVED THAT, By-law Number 57-2013, being a Bylaw to approve Sidewalk Patio Agreement and Sidewalk Patio Application templates, be now read a first, second and third time, passed and numbered and that the said by-law be signed by the Mayor and CAO, sealed with the seal of the Corporation and be engrossed in the by-law book. … #227-13 CARRIED.

THOMPSON-BELL, BE IT RESOLVED THAT, By-law Number 58-2013, being a Bylaw to adopt a Delegation of Powers and Duties Policy for the Municipality of West Grey, be now read a first, second and third time, passed as amended and numbered and that the said by-law be signed by the Mayor and CAO, sealed with the seal of the Corporation and be engrossed in the by-law book.
… #228-13 CARRIED.

RAPKE-LAWRENCE, BE IT RESOLVED THAT, By-law Number 59-2013, being a Bylaw respecting the care of animals, be now read a first, second and third time, passed and numbered and that the said by-law be signed by the Mayor and CAO, sealed with the seal of the Corporation and be engrossed in the by-law book.
… #229-13 CARRIED.

BELL-JOHN ECCLES, BE IT RESOLVED THAT, By-law Number 60-2013, being a Bylaw to repeal Bylaw Number 26-2013, be now read a first, second and third time, passed and numbered and that the said by-law be signed by the Mayor and CAO, sealed with the seal of the Corporation and be engrossed in the by-law book.
… #230-13 CARRIED.

New Business
Bylaw Number 61-2013 (see resolution #231-13)

Addendum - None

Notice of Motion/Direct Motions
Proposed Bylaw Number 61-2013 – Bag Tag Vendor Distribution Agreement (Pioneer Gas Bar) – resolution #231-13

THOMPSON-BELL, BE IT RESOLVED THAT, By-law Number 61-2013, being a Bylaw to provide a policy for the distribution and sale of West Grey garbage bag tags, and to amend Bylaw Number 86-2011, be now read a first, second and third time, passed and numbered and that the said by-law be signed by the Mayor and CAO, sealed with the seal of the Corporation and be engrossed in the by-law book. … #231-13 CARRIED.

Closed Session – Incomplete Items Only – n/a
Matters Arising from Closed Session – Incomplete Items Only – n/a
Question Period - None
Municipal Act – Notices - None

Adjournment
RAPKE, RESOLVED THAT, we do now adjourn at 8:03 p.m., to meet again on Wednesday, August 7, 2013, 10:00 a.m., or at the call of the Mayor. CARRIED.

(SIGNED)
Kevin Eccles, Mayor

(SIGNED)
Mark Turner, Clerk/Acting CAO