

NextEra Energy Canada East Durham Wind Energy Centre

Community Liaison Committee (CLC): Meeting #4

March 8th, 2016 6:00 p.m. to 8:00 p.m.
Durham Arena & Community Centre
451 Saddler Street West
Durham, ON

March 8, 2016



Introductions

CLC Members:

- Bev Cutting
- Pat Greenshields
- Stan Rowbotham
- James Clements

CLC Coordinators and Facilitators (AECOM):

- Avril Fisken
- Adam Wright

NextEra Energy Canada:

- Adam Rickel, *Project Director, Development*
- Derek Dudek, *Senior PGD Technical Services Specialist*
- Doug McIntosh, *Wind Regional General Manager*
- Octavio Alonso, *Associate Wind Site Manager*
- Ray Dewaepenaere, *Wind Site Manager*
- Julie Rice, *Director Business Management*
- Amanda Gittens, *Senior Business Manager*
- Heidi Lamarche, *Construction*

Consultants

- Charlotte Moore, *Biologist, NRSI*
- Ben Coulson, *RWDI*

Agenda

1. Introductions
2. Recap of CLC Meeting # 3
 - Discussion of Monitoring and Mitigation Measures
 - Public Attendance and Depositions
 - Requests for Additional Information
 - Meeting Summary
3. Parking Lot Items and Questions / Comments Raised Since the Third CLC Meeting
4. Update from the Operations Team
5. Update on Monitoring and Mitigation Measures
6. Delegations
7. Public Question and Answer

Recap: CLC Meeting #3

Purpose of the CLC:

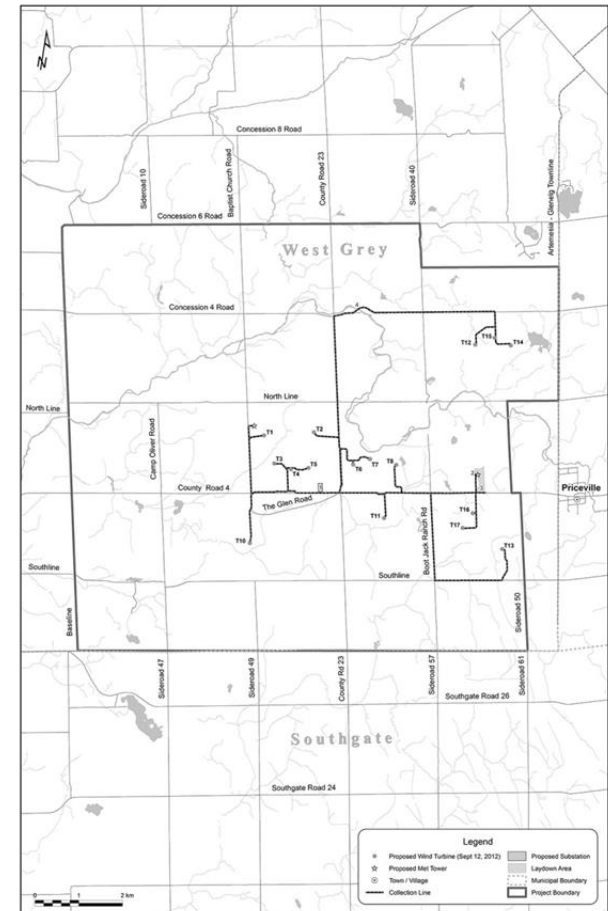
- A forum for two-way communication between NextEra Energy Canada and the public
- An opportunity to provide additional information and updates, and to respond to questions or concerns related to:
 - Construction and installation
 - Use and operation
 - Maintenance
 - Retirement of the Facility

Project Overview:

- Class 4 Wind Facility, in the Municipality of West Grey
- 14 turbines, with 80 metre towers and 50.5 metre blades
- A generating capacity of approximately 23-megawatts
- Received Renewable Energy Approval from Ministry of Environment and Climate Change
- Outline of construction process

Public Attendance and Depositions:

- Local residents in attendance.
- Two depositions were provided.



Recap: CLC Meeting #3

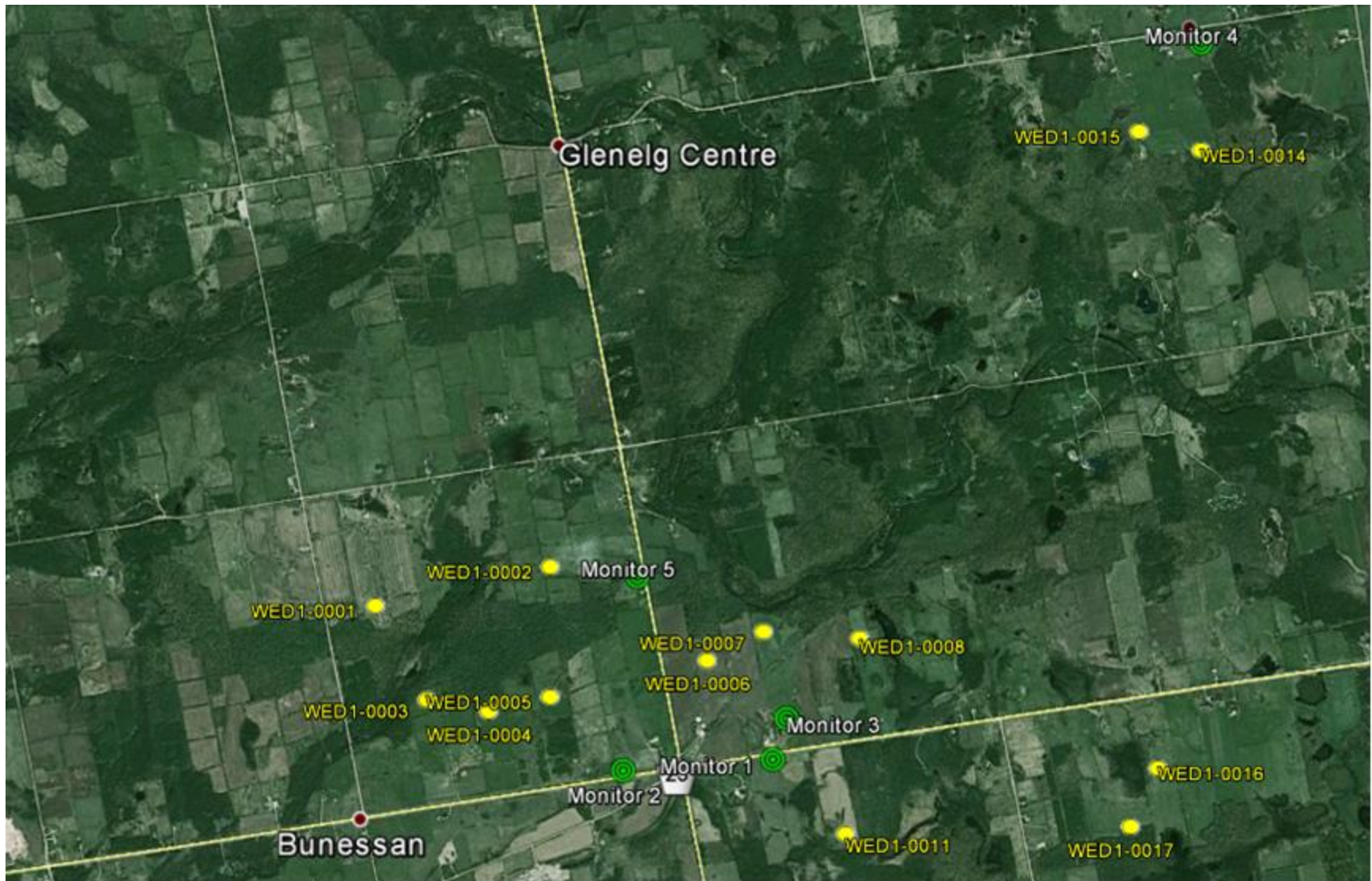
Meeting Summary for our 3rd CLC Meeting:

- Draft minutes were prepared by AECOM and circulated to the CLC on **Sept. 14, 2015**
- Members were asked to advise AECOM of any errors, omissions or changes by **Sept. 28, 2015**
- CLC members were emailed the final minutes on **Sept. 28, 2015**
- All recommended comments/changes were incorporated and the minutes were posted on NextEra's publically accessible website.

Recap: CLC Meeting #3 – Parking Lot Items

Parking Lot Topic / Action Item	Action
<ul style="list-style-type: none"> File number and name of MOECC person handling noise complaints. 	<ul style="list-style-type: none"> NextEra to follow up and provide update at CLC#4
<ul style="list-style-type: none"> Confirm if raw data from Acoustic Monitoring will be available for public review 	<ul style="list-style-type: none"> Update will be provided at CLC#4
<ul style="list-style-type: none"> Invite RWDI to next meeting to discuss noise impacts 	<ul style="list-style-type: none"> RWDI will be invited to CLC#4.
<ul style="list-style-type: none"> Potential for B. Cutting to observe Mortality Monitoring 	<ul style="list-style-type: none"> Update will be provided to Bev Cutting before CLC #4
<ul style="list-style-type: none"> Date and location of upcoming noise assessment, circulate this to CLC members 	<ul style="list-style-type: none"> Details to be provided to CLC members and interested members of the public once available.
<ul style="list-style-type: none"> Turbine Lighting Update 	<ul style="list-style-type: none"> Update to be provided by NextEra Energy

Acoustic Monitoring Equipment Locations



Update from the Operations Team and Business Management Team

- Performance is exceeding expectations – Equivalent Forced Outage Rate is .63% and Availability Factor > 98%
- Excellent safety performance - zero injuries
- Construction remediation has been completed
- New jobs created: three full-time and two part-time employees
 - Four local employees
 - One remote employee



Operations – Complaint Resolution

- NextEra acknowledges that some members of the community may have concerns regarding wind farm operations.
- To resolve disputes in a collaborative manner, NextEra follows its complaints resolution process.
- Should any complaints arise throughout the course of the operation and decommissioning phases, a NextEra representative will contact the complainant to understand the nature of the complaint.
- NextEra will **notify the local MOECC** (Ministry of Environment and Climate Change) **district office** of the complaint **within 2 business days** of receipt of the complaint (**1 business day** if the complaint is related to **Ground Water**).
- NextEra will provide the local MOECC district office with a written records of the complaint **within 8 business days** of the complaint. The MOECC notification will include:
 - Description of the nature of the complaint;
 - Wind direction at the time of the incident related to the complaint;
 - Time and date of the incident related to the complaint; and
 - A description of the measures taken to address the cause of the incident and to prevent a similar occurrence in the future.

Operations – Complaint Resolution

continued

- Upon resolution of complaint, verbal and written correspondence will be provided to complainant as soon as possible.
- **Note:** the majority of complaints received to date relate to ongoing matters which have not yet been resolved as a result of continuing studies being undertaken both by NEEC and it's external consultants (i.e., acoustic audits, navigation lighting research). Written correspondence will be provided on such matters upon the completion of such work to resolve such matters
- Information requests and complaints about the East Durham project specifically:
 - NextEra Energy Canada, LP**
 - 390 Bay Street, Suite 1720**
 - Toronto, ON M5H 2Y2**
 - Toll Free Phone: 1-877-463-4963**
 - Email: eastdurham.wind@nexteraenergy.com**
 - Website: www.NextEraEnergyCanada.com**
- Any other general inquiries to NextEra Energy Canada, LP:
 - 416-364-9714 - Main**
 - 877-257-7330 - Toll Free**

Monitoring and Mitigation Measures

- **Environmental Effects Monitoring Plan:**

- In accordance with the requirements of Ontario Regulation (O.Reg.) 359/09, the Environmental Effects Monitoring Plan addresses various elements including, but not limited to, heritage and archaeological resources, natural heritage features and noise.

- **Noise**

- The Provincial Environmental Protection Act (EPA) requires that noise emissions for any new projects must not have any adverse effects on the natural environment and not exceed 40dBA when wind speeds are of 6 metres/second and below.
 - NOTE: the allowable noise levels increase during higher wind speeds.
- Prior to construction, a Renewable Energy Approval (REA) was obtained with measures to be adhered to, i.e. noise modeling by independent consultants.
- Acoustic Emission and Immission testing will be conducted following COD. Results are then reported to the MOECC.
 - Transformer Audit Complete – submitted to MOECC
 - Turbine Emission Audit due August 2016 – work is ongoing
 - Immission Audits due Aug 2016 and Feb 2017 – work is ongoing

Monitoring and Mitigation Measures – Noise cont'd

- **Noise Audit (General)**

- Measures the sound contribution from the source of concern, excluding the background ambient sound
- Checks that source is performing as specified (compliance)
- Requires special methods to measure or exclude (i.e., subtract) the background
- Assessed under worst-case operating conditions (i.e., when source is loudest)

- **Transformer Noise Audit**

- Transformer sound originates from electrical (hum) and mechanical components (fans)
 - Fans are manually forced on to measure this condition
- Measurements are conducted following MOECC requirements at the source and at nearby receptors
- Verifies the construction of any mitigation measures (e.g., noise barriers)



Monitoring and Mitigation Measures – Noise cont'd

- **Turbine Immission Audit**

- Measurements conducted at receptors (e.g., homes)
- Locations based on MOECC requirements
 - Receptors with highest predicted sound levels
 - Land-owner permission required to access
 - Downwind of turbines for prevailing winds
 - Location representative of residence
 - Avoid locations near buildings, many trees, roadways, other (e.g., farm sources)
- Typically conducted in spring (March) and fall (October) over 2-3 months
- Measure sound, wind speed and direction, temperature, humidity, precipitation
 - “Total sound” while turbines on
 - “Ambient sound” while turbines parked (off)
- Compliance determined based on meeting MOECC criteria at different wind speeds
 - Subtract average ambient sound from average total sound for each wind speed
- Difficult to obtain required number of data points
 - Higher wind speeds (7 m/s) may not occur over many weeks, or may only occur with precipitation (i.e., storms)
 - Need to forecast required winds for ambient and then park turbines



Monitoring and Mitigation Measures

- **Bird and Bat Post-Construction Monitoring**
 - Monitoring will be conducted in accordance with requirements of the REA and MNRF Guidelines
 - Monitoring will begin May 1, 2016
 - Turbine searches will occur twice weekly from May 1 through October 31, and raptor surveys will continue weekly from November 1st through November 30th.
 - Correction factors are applied in order to calculate overall estimated mortality rates across the project
 - Annual report provided to MNRF by March 31 following each year of monitoring
 - A minimum of three years of monitoring are required
- **Natural Heritage Monitoring**
 - Post construction monitoring of certain natural features and wildlife habitats are required by the REA, including:
 - Woodland and edge restoration monitoring (3 years)
 - Amphibian woodland breeding habitat surveys (1 year)
 - Habitat monitoring will begin in 2016, in accordance with the requirements of the REA
 - Annual reports will be submitted to MNRF by December 31 of each year of monitoring

Monitoring and Mitigation Measures

- **Species-At-Risk (SAR) Monitoring**

- Species at Risk mortality monitoring began in the summer of 2015
- Monitoring is being conducted in accordance with MNRF requirements
- Annual reports are prepared and submitted to MNRF in accordance with reporting requirements
- Species at Risk Monitoring continues for the life of the project



Delegations from Members of the Public

- Marian Ratcliffe
- Maria De Melo

Public - Question and Answer Period



- Archaeological Reports
- Community Liaison Committee Materials
- Community Newsletter
- Construction Plan Report
- Consultation Reports, Information Packages and Other Communication
- Decommissioning Plan Report
- Design and Operations Report
- Natural Heritage Assessment Report
- Heritage Assessment Report
- Noise Study Report
- Ontario Energy Board - Documents
- Project Description Report
- Project Modifications
- Renewable Energy Approval documents
- Turbine Visualization Images
- Water Assessment & Water Body Report
- Wind Turbine Specification Report

Thank you!



NextEra Energy Canada and AECOM would like to sincerely thank all the CLC members for donating their time over the past two years and for their valuable input and interest in the project.