

NextEra Energy Canada East Durham Wind Energy Centre

Community Liaison Committee (CLC): Meeting #3

August 27th, 2015 6:00 p.m. to 8:00 p.m.
Durham Arena & Community Centre
451 Saddler Street West
Durham, ON

August 27, 2015



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
- Jeff Damen, Project Manager, Construction
- Jason Seelmann, Wind Technician Leader, Operations

Consultants

- Christy Humphrey, biologist, NRSI
- Alex Dundon, Acoustic Engineer, AECOM

Agenda

1. Introductions
2. Recap of CLC Meeting # 2
 - Purpose of the CLC
 - Construction Overview and Update
 - Anticipated Timing of Commissioning and Operations
 - Public Attendance and Depositions
 - Requests for Additional Information
 - Minutes (Parking Lot Items)
3. Activities and Questions/Comments Raised Since the Second CLC Meeting
4. Update on Construction and Installation
5. Operations and Maintenance - Introduction of Operations Team
6. Preliminary Discussion of Monitoring and Mitigation Measures (to be further discussed at CLC Meeting No. 4)
7. Depositions, if any requests received
8. Tentative Items for Discussion at Future CLC Meetings
9. Public Question and Answer

Recap: CLC Meeting #2

Purpose of the CLC:

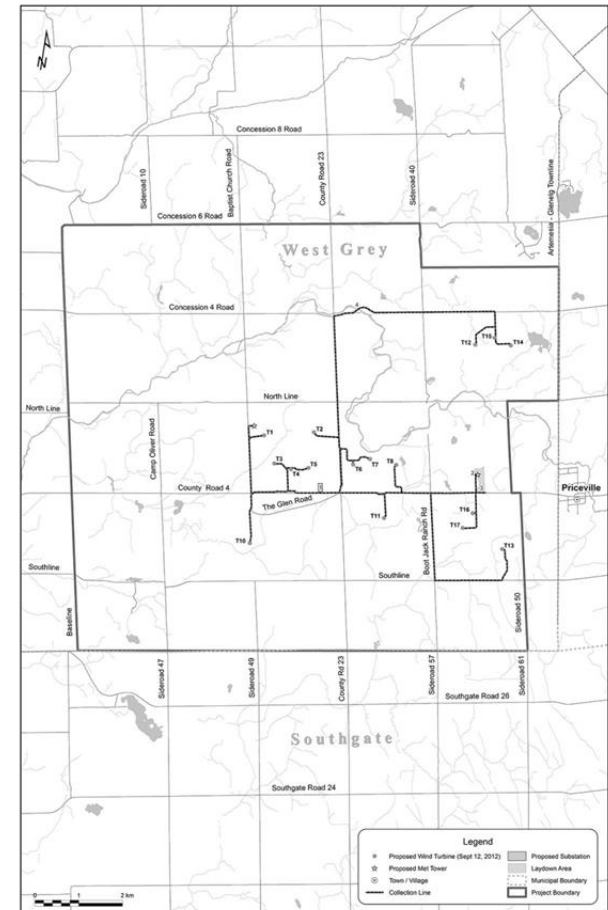
- A forum for two-way communication between NextEra Energy Canada and the public
- An opportunity to provide additional information and updates, and to respond to questions or concerns related to:
 - Construction and installation
 - Use and operation
 - Maintenance
 - Retirement of the Facility

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.
- No depositions.



Recap: CLC Meeting #2

Meeting Summary for our 2nd CLC Meeting:

- Draft minutes were prepared by AECOM and circulated to the CLC on **April 20, 2015**
- Members were asked to advise AECOM of any errors, omissions or changes by **May 4, 2015**
- CLC members were emailed the final minutes on **May 7, 2015**
- All recommended comments/changes were incorporated and the minutes were posted on NextEra's publically accessible website.

Opportunity for Improvement: We'd like to understand your expectation for when you should receive the summary of the meeting? Is two weeks after we meet acceptable?

Recap: CLC Meeting #2 – Parking Lot Items

Parking Lot Topic / Action Item	Action
<ul style="list-style-type: none"> NextEra to update contact numbers for the construction emergency plan 	<ul style="list-style-type: none"> NextEra to update contact numbers for the construction emergency plan by CLC #3
<ul style="list-style-type: none"> NextEra to provide detailed information regarding location of waste disposal site. 	<ul style="list-style-type: none"> NextEra to provide information regarding location of waste disposal site at CLC #3
<ul style="list-style-type: none"> NextEra to provide more information at the next meeting regarding the fire plan 	<ul style="list-style-type: none"> NextEra to provide more information at CLC # 3 regarding the fire plan.
<ul style="list-style-type: none"> NextEra to provide searching protocol as per MNRF 	<ul style="list-style-type: none"> NRSI and NextEra to provide searching protocol as per MNRF at CLC #3.
<ul style="list-style-type: none"> NextEra to confirm number of bird mortalities for MNRF thresholds. 	<ul style="list-style-type: none"> NRSI to confirm number of bird mortalities for MNRF thresholds and outline in Meeting Summary for CLC#2 and discuss at CLC #3.

CLC Meeting #3 – Local Labour

Construction Stats

- General Contractor is Borea Construction Canada
- Nearly \$3 million was invested in local businesses throughout the construction of the East Durham Wind Energy Centre, which began in late March 2015.
- Services ranging from materials, equipment, utilities, labour, housing, and subcontractors, were provided by about 15 local businesses.
- Peak volume of individuals on site including subcontractors was approximately 150.
- Indirect economic benefits will not be measured, but local hotels, restaurants, home improvement stores, gas stations, machine shops, pubs and grocery stores did see an increase in business once the project started construction.

Projected Economic Impact

Construction Jobs:	150 at peak
Full Time Operations Jobs:	3
Capital Expenditures:	\$ 65 Million
Property Tax:	\$ 2 Million*
Landowner Payments:	\$ 5 Million*

*Estimated over first 20 years of the project.

Project Activities and Status

1. Planning and Resource Assessments

- **Surveying:** Complete
- **Geotechnical Studies and Sampling:** Complete
- **Archaeological Assessments:** Complete

2. Permitting and Clearances

- **Awarded Feed-in-Tariff contract by the Ontario Power Authority:** July 2011
- **Renewable Energy Approval (REA):** Issued January 2014
- **Saugeen Valley Conservation Authority:** Issued in June 2014
- **Building permits:** Received in August – October, 2014
- **MTCS sign-off on archaeological studies:** Complete

Project Activities and Status

3. Detailed Design

- Road Design Complete
- Turbine Foundations Complete
- Collection Complete
- Substation Complete

4. Construction Complete

5. Clean-up, Modifications and Road Repairs Ongoing

6. Operations Began July 26, 2015

7. Decommissioning Will occur at the end of useful life of the project (e.g. after 20 to 30 years of operations)

Status of Post-Construction Activities

1) Construction Clean up, Modifications and Road Repairs: July 2015 onward

- Waste and debris generated during construction activities to be collected and disposed of at an approved facility.
- All equipment and vehicles will be removed from the construction area.
- Reasonable efforts made to minimize waste generated and to recycle materials, including returning packaging material to suppliers for reuse/recycling.
- During construction: Use of industry best practices for spill prevention will be utilized. In unlikely event of a minor spill, clean up will be immediate and any impacted soils will be removed from the site and disposed of at an approved facility.

2) Reclamation: (July to Spring 2016)

- Stripped soil will be replaced and re-contoured in the construction areas and disturbed areas will be reseeded during appropriate conditions for germination (as seasonality allows).

Update on Project Commissioning and Operations

Wind Turbine Commissioning: July 26, 2015

- Turbine commissioning took place in sequential order prior to the planned Commercial Operation of the Project.
- Commissioning included testing and inspection of electrical, mechanical, and communications operability.
- A detailed set of operating instructions were followed in order to connect into the electrical grid.



Operations

- The operation phase will be approximately 25 years and the operations building will require full time staff (i.e., site supervisor and wind technicians).
- Turbines will require scheduled maintenance (i.e., oil change, gearbox cleaning and lubrication, replacement of worn parts). Routine preventative maintenance activities will be scheduled as required, in accordance with manufacturer requirements.
- Spill prevention best practices utilized during the Construction Phase will also be implemented during operational maintenance.
- If unscheduled maintenance of a turbine is required (i.e. component failure), then the turbine will be taken out of service until the repair is complete. Larger trucks and cranes may be required periodically for larger repairs, but this is expected to occur infrequently.
- To monitor subsystems within each turbine and the local wind conditions, a comprehensive control system is installed and networked to the local operator and to NextEra's central operations centre (staff on-site 24/7). The operations building will be notified if an event occurs outside a turbine's normal operating range, and the turbine will be shut down. Turbines can be controlled remotely from the central operations centre.
- Operation decisions based on meteorological data include turbine shut down under icy or extreme weather, and cut-in and cut-out wind speed.

Operations

- **System Maintenance:**

- GE 1.62 MW wind turbines are automated and have few maintenance requirements.
- Initial maintenance of the turbines occur approximately 500 hours after initial commissioning and routine preventative maintenance activities are scheduled as required.
- Maintenance activities include changing of oil and gas filters, cleaning of gear boxes, replacement of worn parts and on-going inspections.
- All maintenance activities adhere to the same waste disposal and spill prevention industry best practices undertaken during construction.

- **Unplanned Turbine Maintenance:**

- Modern turbines are very reliable and designed to operate for approximately 25 years.
- Minor component failure may occur (i.e. electronic cards, switches, fans or sensors) and can take a turbine out of service until the faulty component is replaced.
- Replacement of a major component (i.e. gearbox or rotor) is atypical. NextEra would work with the County and the landowner to coordinate the delivery of any large equipment and repairs (if required).

Operations – Complaint Resolution:

- NextEra acknowledges that some members of the community may have concerns regarding construction activities and long-term 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 construction, operation and decommissioning phases, a NextEra representative will contact the complainant to understand and seek a resolution.
- 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**).
- 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, cont'd:

- NextEra will provide the local MOECC district office with a written records of the complaint **within 8 business days** of the complaint.
- As soon as possible, **no later than three (3) days** call complainant to follow up.
- Prepare letter to respond to customer/citizen and mail **within 5 days of receiving complaint**.
- Information requests and complaints about the local operations and maintenance can be addressed to:

NextEra Energy Canada, ULC

390 Bay Street, Suite 1720

Toronto, ON M5H 2Y2

Toll Free Phone: 1-877-463-4963

Main Office Line: 416-364-9714

Email: eastdurham.wind@nexteraenergy.com

Website: www.NextEraEnergyCanada.com

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.
- Noise emissions will not likely change unless there is damage to the equipment (immediately recognized by the computer monitoring system and addressed by the operations team).
- Acoustic Emission and Immission testing will be conducted following COD. Results are then reported to the MOECC.

Monitoring and Mitigation Measures

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

- Species at Risk mortality monitoring is occurring in the summer and fall of 2015
- Monitoring is being conducted in accordance with MNRF requirements
- All 14 turbines have been searched monthly since the turbines were backfed into the grid
- Annual report will be prepared in winter 2015
- Species at Risk Monitoring continues for the life of the project
- 2016 Species at Risk monitoring will begin April 1

- **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 1st through October 31st, 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 3 years of monitoring are required

Monitoring and Mitigation Measures

- **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



Tentative Items for Discussion at Future CLC Meetings

CLC Meeting #4

- Update on Operations and Maintenance
- Monitoring & Mitigation Measures
- Other
- Post-Construction Activities (e.g., reclamation or required repairs)
- Provisions for Decommissioning
- Other



Timeframe for next meeting, and possible dates? November 2015?

Tentative Items for Discussion at Future CLC Meetings

CLC Meeting #4

- Update on Operations and Maintenance
- CLC Member Tour of Operations and Maintenance Centre
- Operations monitoring activities
- Mitigation Measures
- Other



- 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

Depositions from Members of the Public

- The CLC meetings are open to the general public for observation.
- Notices of upcoming meetings will be posted on NextEra's website (www.NextEraEnergyCanada.com). AECOM will also publish Notices in the local newspapers.
- Brief depositions (up to 3 per meeting, at a maximum of 5 minutes each) may be made by members of the general public, providing the depositions pertain to items on the meeting agenda (i.e., the construction, installation, use, operation, maintenance and retirement of the Facility).
- Depositions will be selected at the discretion of the CLC Facilitator and in consultation with the CLC members and NextEra.
- To be considered for a public deposition, a request along with the written deposition must be submitted to AECOM at least one week in advance of the CLC meeting:

Email: avril.fisken@aecom.com

Fax: 519.763.1688

Mail: 55 Wyndham Street North, Suite 215 Guelph, ON, N1H 7T8