NextEra Energy Canada
Jericho Wind Energy Centre

Community Liaison Committee (CLC): Meeting #3

November 17th, 2015 6:00 p.m. to 8:00 p.m.
The Legacy Recreation Centre
16 Allen Street, Thedford

NOTE: This meeting package was compiled by the CLC Coordinators and Facilitators (AECOM) and as such may be subject to clarification or correction by NextEra Energy Canada and its technical staff/specialists. The CLC members will be notified of any revisions to the meeting package, and the final package will be posted and available for public review on NextEra Energy Canada's website.

NEXTera ENERGY CANADA

AECOM

Introductions

CLC Members:

- Carol Clay
- John Couwenberg
- Dean Jacobs
- Marilyn Keunecke-Smith
- Mary Lynn Metras
- John Moons
- Marina Plain
- Jamie Tabor
- Eddy Van Engelen

CLC Coordinators and Facilitators (AECOM):

- Adam Wright
- Tiffany Lobb

NextEra Energy Canada:

- Catherine Mitchell, Business Management
- Jeff Damen, Construction
- Doug McIntosh, Regional Operations Manager
- Peter Miller, Operations Manager
- Derek Dudek, Senior PGD Technical Services Specialist

Consultants

- Christy Humphrey, Biologist, Natural Resource Solutions, Inc.

Agenda

1. **Introductions**

2. **Recap of CLC Meeting #2**
   - Purpose of the CLC
   - Overview of the Project
   - Post-Construction Activities
   - Introduction to Operations Team
   - Public Attendance and Depositions
   - Requests for Additional Information
   - Minutes (Parking Lot Items)

3. **Activities and Questions/Comments Raised Since the Second CLC Meeting**

4. **Status of Post-Construction Activities**

5. **Operations and Maintenance Update and Activities**

6. **Post-Construction Monitoring and Mitigation Measures**

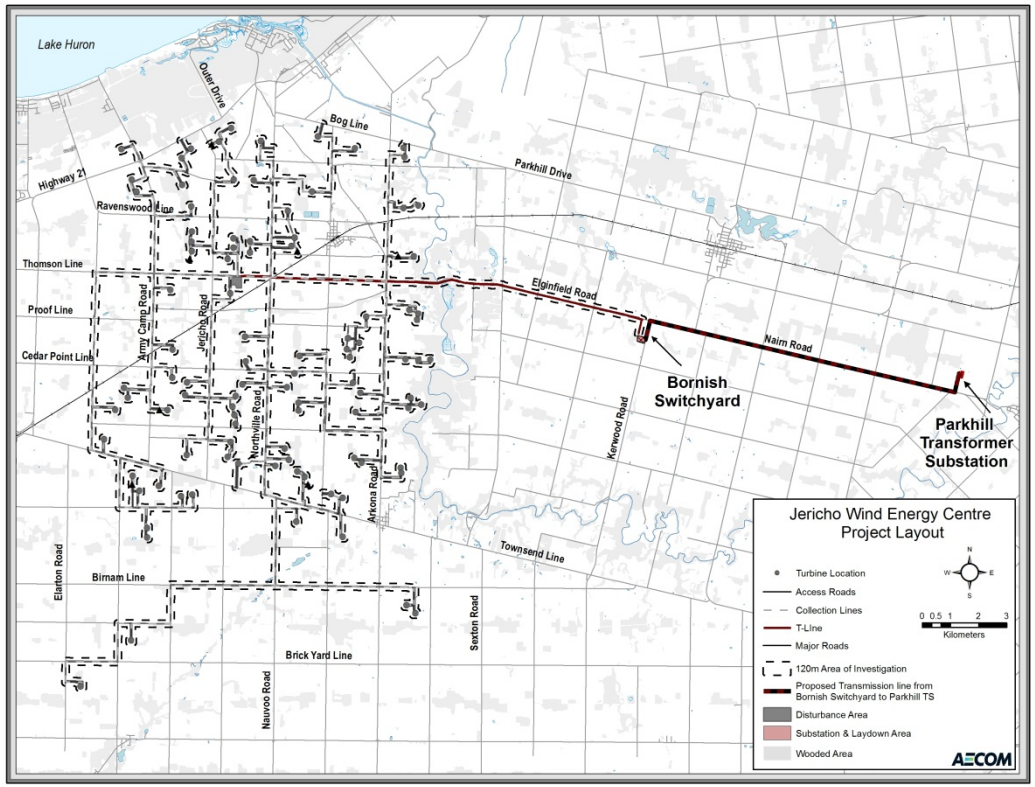
7. **Retirement and Decommissioning Process**

8. **Question and Answer Period (15 minutes)**

9. **Tentative Items for Discussion at Future CLC Meeting**

Overview of the Jericho Wind Energy Centre

- The Class 4 Wind Facility is operating in the Municipality of Lambton Shores and the Township of Warwick, in Lambton County, Ontario and in the Municipality of North Middlesex, in Middlesex County.
- The ninety-two turbines, each with 80 metre towers and three blades up to 50.5 metres in length, have a generating capacity of 149-megawatts, capable of generating electricity to power nearly 37,500 homes.
- The project consists of wind turbines, overhead and underground electrical lines, two met towers, electrical substation, transformer substation (to connect to the Hydro One transmission system) and required roads.
- The Facility, with the exception of some electrical lines, was built on privately owned land, which remains in agricultural use.



Recap: CLC Meeting #2

Meeting Summary for our 2nd CLC Meeting:

- Draft minutes were prepared by AECOM and circulated to the CLC on **July 10th, 2015**
- Members were asked to advise AECOM of any errors, omissions or changes by **July 24th, 2015**
- All recommended comments/changes were incorporated and the minutes were posted on NextEra's publically accessible website **July 24th, 2015**
- CLC members were also emailed the final minutes on **July 26th, 2015**

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 – Local Labour

Construction Stats

- General Contractor is Borea Construction Canada
- Many **Southwestern Ontario Companies** used (subcontractors and suppliers) on the Jericho project.
- There is at least **$6 million** in contracts with subcontractors and suppliers in the southwestern Ontario region. Services ranging from materials, equipment, utilities, labour, housing, and subcontractors, were provided by nearly 30 Lambton and Middlesex County businesses.
- Peak volume of individuals on site including subcontractors is approximately 200.
- Indirect economic benefits have not been measured, but local hotels, restaurants, home improvement stores, gas stations, machine shops, pubs and grocery stores have seen an increase in business since the start of the project.

Projected Economic Impact

Construction Jobs:	Approx. 200
Full Time Operations Jobs:	10
Capital Expenditures	Over $400 Million
Corporate Income Tax	Over $200 Million*
Property Taxes:	Over $8 Million*
Landowner Payments:	About $30 Million*

*Estimated over first 20 years of the project.

Activities and Questions/Comments Raised Since CLC #2

Parking Lot Topic	Response / Action
Where were all of the parts for the machines made? Committee would like specific details.	We had domestic content requirements to ensure the majority of the project was manufactured within Ontario. While it is difficult to pinpoint the specific origin of each of the turbine components, we can tell you that we met the domestic content requirements, mandated to us by the OPA (now IESO).
Emergency First Response Plan	Since the last CLC meeting, the Operations team has provided an up to date Emergency First Response Plan to all local fire departments in the local region.

Status of Post-Construction Activities

1) Construction Clean up, Modifications and Road Repairs: largely complete

- NextEra is complete with its physical restoration work but has an agreement in place with Lambton Shores and Warwick to pay for the restoration of key roads that were used during construction.
- While we do not have a Road Use Agreement with Lambton County, we are continuing to restore county roads.
- Additionally, we have hired an engineering firm to inspect all ditches or rights of way (ROW) for any outstanding reclaim items due to underground collection installation and all mitigation measures installed along the transmission line.

2) Reclamation: Summer to Fall 2015

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

Operations

Recap and Questions: Operations and Maintenance Centre Tour

- 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 has also been 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.

Update on Operations

Wind Energy Centre Reached Commercial Operation: November 22, 2014

- Operations and Maintenance building located in Parkhill, currently expanding to allow for additional staff/equipment.
- The facility has been operating extremely well with an Availability Factor > 99%.
- Jericho Wind employs 10 Full Time employees as well as more than a dozen shared specialists in Ontario.
- Operations staff have completed the required 500 hour “Break In” maintenance and all the first scheduled services.

Update on Operations

Vortex Generator Concerns

- At NextEra Energy Canada, the safety of our operations, for both our employees and the communities in which we operate, is paramount.
- With that in mind, and out of an abundance of caution, we temporarily shut down certain turbines in Ontario, particularly those near roadways or other public access areas, due to a potential problem that we identified with a small thin plastic attachment on the turbine blades themselves that could have separated while in operation.
- After removing this item from the blades, we restarted the turbines.
- No injuries or property damage occurred as a result of this situation and we are working aggressively to develop a long term solution. Importantly, we communicated with the affected landowners, sharing with them the actions we've taken, and reinforced our commitment to the safe operation of our wind fleet

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, and based on the complexity of the matter, contact complainant to follow up.
- 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: Jericho.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 is partly completed. Results will be reported to the MOECC this week.

Monitoring and Mitigation Measures

- **Bird and Bat Post-Construction Monitoring**
  - Monitoring will be conducted in accordance with requirements of the REA and Ministry of Natural Resources and Forestry (MNRF) Guidelines
  - Monitoring began May 1, 2015
  - Turbine searches occurred 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 end of February following each year of monitoring
  - 3 years of monitoring are required

- **Species-At-Risk (SAR) Monitoring**
  - Species at Risk mortality monitoring began in April 2015
  - Monitoring has been conducted in accordance with MNRF requirements
  - All 92 turbines were searched monthly between April and November
  - Annual report will be prepared in winter 2015
  - Species at Risk Monitoring continues for the life of the project

Monitoring and Mitigation Measures

- **Natural Heritage Monitoring**
  - Post construction monitoring of certain wildlife habitats is required by the REA
  - Bat maternity colony habitat, Amphibian Breeding habitat
  - Habitat monitoring began in 2015, in accordance with the requirements of the REA
  - 3 Years of habitat monitoring is required
  - Annual reports will be submitted to MNRF each year

Retirement and Decommissioning

Lifespan

- The average lifespan of a turbine is 25 years.
- At the end of its lifecycle, a wind facility can either be decommissioned or repowered.

Repowering:

- If the economics are viable, a facility may be repowered with new technology.
  - NextEra Energy has replaced hundreds of old turbines with 34 Siemens 2.3 MW machines at the Altamont Pass facility in California. Several kilometres of overhead electrical lines, electrical poles and redundant service roadways were also removed.

Decommissioning:

- The process and impacts are similar to the construction phase, but in reverse sequence:

- **Temporary Work Areas:**
  - Creation of temporary work areas (50 m x 50 m area with topsoil removed).
  - Creation of crane pads (15 m x 35 m area with topsoil removed and crushed gravel added).
- **Removal of Equipment and Buildings:**
  - Use of cranes to remove the blades and hub and tower segments and use of trucks for the removal of turbines, towers and associated equipment.
  - Removal of above-ground lines and poles that are not shared with Hydro-One and filling of holes with clean fill.
  - Demolition of the substation.
  - Removal of roads and replacement with clean sub- and top-soil, unless the landowner requests that the roads be left in place.

Retirement and Decommissioning

Decommissioned Equipment Left in Place:

- Underground electrical lines will be cut and the ends buried 1 m below grade. These lines are inert and will have no negative impacts on the environment, soil and cultivation practices.
- Foundations will be left in place. The top 1 m will be removed and replaced with clean fill and stockpiled topsoil – to allow for cultivation of agricultural lands.

Recycling:

- All materials will be recycled, where possible, or disposed offsite at an approved and appropriate facility.

Tentative Items for Discussion at Future CLC Meetings

CLC Meeting #4

- Update on Operations and Maintenance
- Monitoring and Mitigation Measures
- Ongoing Community Involvement and Access to Information
- Conclusion of the REA mandated CLC Process

www.NextEraEnergyCanada.com

- 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
- Heritage Assessment Report
- Noise Study Report
- Ontario Energy Board - Documents
- Project Description Report
- Project Modifications
- Renewable Energy Approval documents
- Shadow Flicker Report
- 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; adam.wright@aecom.com
  Fax: 519.763.1688
  Mail: 55 Wyndham Street North, Suite 215, Guelph, ON, N1H 7T8