



AECOM
215 – 55 Wyndham Street North
Guelph, ON, Canada N1H 7T8
Tel: 519 763 7783 Fax: 519 763 1668

Meeting Summary – Adelaide Community Liaison Committee

Attn.: CLC members, NextEra Staff

Subject: Adelaide Wind Energy Centre, Community Liaison Committee (CLC): Meeting No.2

May 22, 2014 6:30 pm to 8:30 pm

Gemini Sportsplex - Westcast Room

667 Adair Blvd., Strathroy, ON

Present:

CLC Members

- Kurtis Smith, Donna Hornblower, Carolyn Cornelissen, Ron Peters, Shirley Miller, Dean Jacobs, Fallon Burch

NextEra **Energy Canada**

- Ben Greenhouse, Director, Development; Jeff Damen, Construction; Holly Davidson, Construction; Nancy O’Neill, Environmental Services; Ray Dewaepenaere, Operations Manager

Borea Construction

- Scott Langstaff; Guillaume Jacques

DNV GL Energy

- Gabriel Constantin, Environmental Consultant

AECOM

- Avril Fiskens, Adam Wright

Absent:

Mac Parker (*attended site tour, unable to attend CLC meeting*)



Item Discussed	Action
<p data-bbox="188 422 607 457">1. Welcome and Introductions¹</p> <p data-bbox="188 495 1154 680">Avril Fisken (CLC Chair) welcomed the Committee to the 2nd CLC meeting and noted that no members of the public were present at the start of the meeting. Avril also noted that all members of the committee were present except for Mac Parker who was able to go on the site tour before the meeting.</p> <p data-bbox="188 730 1097 800">CLC members and NextEra team members introduced themselves and provided brief details (refer to pg.1 of the Meeting Summary)</p> <p data-bbox="188 846 862 877">Chair reviewed the Agenda for the meeting (Slide 3)</p> <ol data-bbox="237 926 1203 1419" style="list-style-type: none">1. Introductions2. Recap of CLC Meeting # 1<ul style="list-style-type: none">– Purpose of the CLC– Overview of the Project– Public Attendance and Depositions– Requests for Additional Information– Minutes (Parking Lot Items)3. Activities and Questions/Comments Raised Since the First CLC Meeting4. Update on Construction and Installation5. Anticipated Timing of Commissioning and Operations6. Depositions, if any requests received7. Tentative Items for Discussion at Future CLC Meetings8. Plus/Delta <p data-bbox="188 1470 1143 1539">Chair outlined the expected decorum of the committee which is rooted in respectful dialogue.</p> <p data-bbox="188 1585 1195 1730">Chair then discussed the ‘Parking Lot’ and the process for dealing with unanswered questions that are brought forward at the meeting, (if at the end of the meeting there are remaining concerns, these will be added to the ‘Parking Lot’ and addressed via the Meeting Summary or at the next meeting).</p>	

¹ The Meeting Summary is not intended to be verbatim, rather it is provided to Committee members to ensure that key discussions have been accurately captured and that context is provided for readers who were not present at the meeting.



<p>No depositions were made for the meeting. Chair noted that anyone is able to provide a deposition to the Committee; people wishing to do so should submit an application to the CLC Chair one week in advance of the next meeting. It is the Committee’s role to review and approve any deposition.</p> <p>Chair noted that time will be provided at the end of the meeting today to brainstorm topics that the committee would like to see discussed at future CLC meetings.</p> <p>We saw that you are sharing the substation with Suncor, is there any possibility to share offices / business centres?</p> <p>We are not sharing a substation with Suncor. On Cuddy Drive, NextEra is sharing a trench with Suncor for collection. Regarding sharing offices, this is something that we have talked to Suncor about and we know they are potentially interested.</p>	
<p>2. Recap of Meeting #1</p> <p>Avril provided a recap of the 1st CLC meeting (Slide 4)</p> <p>Purpose of the CLC:</p> <ul style="list-style-type: none">• 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:<ul style="list-style-type: none">– Construction and installation– Use and operation– Maintenance– Retirement of the Facility <p>Project Overview:</p> <ul style="list-style-type: none">• Class 4 Wind Facility• Located in Municipalities of Adelaide-Metcalf and North Middlesex in Middlesex County• 37 turbines, w/ 80 metre towers and 50.5 metre blades• A generating capacity of 60 MWs• Status of background studies and approvals.• Outline of construction process <p>NextEra (Ben G.) reviewed the map and outlined the areas where the site tour visited.</p>	



<p>Parking Lot: Map for next meeting which outlines the project in relation to the meeting. Context for the wider local area with other wind farms (Bornish, Suncor and WBD).</p>	<p>NextEra will provide map for Meeting No.3</p>												
<p>3. Activities and Questions / Comments Raised since Meeting No.1</p> <p>NextEra (Ben G.) outlined local labour details (Slide 5)</p> <p>Construction Stats</p> <ul style="list-style-type: none"> • General Contractor is Borea Construction Canada • Many Southwestern Ontario Companies used (subcontractors and suppliers) on the Adelaide project. • There is at least \$40M in contracts with subcontractors and suppliers in the southwestern Ontario region. • Peak volume of individuals on site including subcontractors was around 150. Currently, we are at peak with about 150 staff members on site. • 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. <p>NextEra noted that Scott Langstaff and Guillaume Jacques from Borea can answer any particular questions that the committee may have.</p> <p>NextEra reviewed the Projected Economic Impact for the Adelaide project (Slide 5)</p> <p>Projected Economic Impact</p> <table> <tr> <td>Construction Jobs:</td> <td>150 at peak</td> </tr> <tr> <td>Full Time Operations Jobs:</td> <td>6 - 8</td> </tr> <tr> <td>Capital Expenditures:</td> <td>\$180 Million</td> </tr> <tr> <td>Corporate Income Tax:</td> <td>\$ 90 Million*</td> </tr> <tr> <td>Property Taxes:</td> <td>\$ 8 Million*</td> </tr> <tr> <td>Landowner Payments:</td> <td>\$ 13 Million*</td> </tr> </table> <p>*Estimated over first 20 years of the project.</p>	Construction Jobs:	150 at peak	Full Time Operations Jobs:	6 - 8	Capital Expenditures:	\$180 Million	Corporate Income Tax:	\$ 90 Million*	Property Taxes:	\$ 8 Million*	Landowner Payments:	\$ 13 Million*	
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<p>4. Update on Construction and Installation</p> <p>NextEra reviewed Project Activities and Status (slide 6)</p>													



1. Planning and Resource Assessments

- **Surveying:** Design survey is complete
- **Geotechnical Studies and Sampling:** Complete
- **Archaeological Assessments:** Complete

2. Permitting and Clearances

- **Feed-in-Tariff contract by the Ontario Power Authority:**
Awarded July 2011
- **Renewable Energy Approval (REA):** Issued August 2013, with terms/conditions
- **Ausable Bayfield Conservation Authority:** All permits issued
- **Municipalities of Adelaide-Metcalf and North Middlesex (building permits):** Complete
- **MTCS sign-off on archaeological studies:** Complete

Contractual dates to go commercial - Original date was July 2014, but this has been extended and the wind energy farm will not be fully operational until August 2014

Have the activities to date included comments from the MTCS?

NextEra (Nancy) outlined the comment process for the Ministry of Tourism, Culture, and Sport (MTCS) and that the archaeologists note the comments from MTCS and make all the necessary revisions. To date there have been no comments. In the Stage 2 work, URS identified areas where there was the need for more research. Stage 2 studies were signed off before we submitted the REA.

For the archaeology review, what is MTCS's role?

If the MTCS is satisfied with the Stage 2 assessment then it is complete. If there are recommendations for further studies, the MTCS is still involved in the process until the final report is submitted. A condition of the MTCS approval is to have archaeology monitors throughout the process to ensure the protocol is followed. For this project, there are both Aboriginal and Archaeology monitors. Also whenever soil is disturbed, there are monitors at the site to ensure protocol is being followed.

To clarify, there are monitors on-site but no MTCS archeological officials who monitor?

Yes that is true. In the past, we have had official MTCS officials visit sites, but so far not for Adelaide. However, the archaeologists on site are licensed by the MTCS and have professional obligations to the MTCS.



NextEra continued to review Project Activity and Status (slide 7)

3. Construction

- **Land Clearing, Construction and Installation:** December 2013 to July 2014
- **Clean up, Modifications and Road Repairs:** July 2014 onward
- **Turbine Commissioning (testing & inspections):** May to August 2014

4. Operations

- Anticipated to begin August 2014

5. Decommissioning

- To happen at the end of useful life of the project (e.g., after 25 to 30 years of operations)

Borea (Scott L.) reviewed Construction (slide 7)

Regarding construction, the collection line, erection of towers and lines still remain to be constructed. All the on-going work for collection lines is on Kerwood and Cuddy.

To achieve our contract for production in August, construction work will need to be complete by July. After this, the reclamation process starts and the roads will be pulled back to 16ft of crushed gravel.

As the towers are completed, the pre-commissioning and commissioning of the turbines occurs (i.e., pre-testing and testing of the towers).

There may be options for re-powering the towers but as part of the REA there is a decommissioning plan which would be the next major construction activity.

The contract is only for 20 years?

That is correct, but depending on the market we may get another contract for energy production. After our contract expires, we are free to sell to the open market.

Do you have any turbines that have been operational for more than 25 years?

NextEra has some sites in California that have been around since the late



1970's. Some of these are being (or have been) repowered with new technology. Additionally, we are starting the de-commissioning process for some turbines in Texas.

NextEra (Ben G.) reviewed the Construction Process and Anticipated Timing (slide 8)

Comment from NextEra: There is only the one meteorological tower that will be used to predict our power output as required under the market rules. This tower will be on Sullivan road on the south side of Mulberry. NextEra reviewed the map to show the Committee where the meteorological tower is.

The meteorological tower will have cup anemometers to measure wind speed, and weather vanes to show the direction of the wind. The meteorological tower is used to gauge wind, and forecast the amount of power that will be supplied.

NextEra (Jeff D.) reviewed Construction and Installation (slide 9)

Construction Laydown Area: Complete

- Temporary storage/laydown areas located around turbines, the substation, the switchyard area, and the centralized construction field office and temporary storage area.
- Area was cleared by trucks, graders, tracked bulldozers and backhoes.
- Top soil and subsoil were stripped, as required to create an even work surface.
- If construction disturbances were close to watercourse(s) then erosion control measures were implemented (i.e., hay bales, silt fences).

Are there going to be dust issues when things dry out?

When Borea spreads the topsoil it still has some moisture in it so dust shouldn't be an issue. There will be some dust on the municipal roads resulting from the construction traffic, but a lot of this heavy construction is already over. Borea has procedures in place for dust suppression, but we will need to discuss our approach on a case by case basis with the municipality to see what their preferred approach is.

There is limited material hauled off site during the reclamation process. Contaminated gravel/ top soil will need to be removed but we can have discussions with landowners if this occurs to see what their preferred course



of action is.

Regarding roads and land clearing - final access road width will be 16 feet and all the ditches and right-of-ways (ROW) will be reclaimed and levelled out.

Is the soil just stockpiled until it is incorporated back into the land?

Yes, the topsoil is taken off down to the layer of clay and stored in stockpiles. We wait until it is dry enough to spread the topsoil back. After the topsoil is spread there is no more construction traffic in these areas.

Will the access roads to the turbines be gated?

The landowner can make that decision. If a gate is chosen the land owner will have a key as well as NextEra and Borea. Typically we wouldn't have gates but if a landowner requests one we can put a gate in.

I don't want a gate right now. But in a couple years if it turns out I would like a gate, can I have one installed at that point?

Yes for sure. This is an on-going process -- we talk with landowners to ensure that if they have concerns we can help resolve them. We have landowners in Summerhaven that have requested gates a couple years after operations have started.

Did you have a CLC for Summerhaven?

Yes, absolutely.

NextEra (Jeff D.) continued to review Construction and Installation (slide 11)

Turbine Foundations: In Progress

- Excavation for the turbine base is approx. 20m x 20m x 3.5m. Excavation material was stockpiled for backfilling.
- Constructed using concrete, formwork and rebar. Formwork and rebar are used to construct the foundation.
- Excavated area then backfilled and compressed, leaving only the tower base portion of the foundation above ground.
- During foundation installation, a transformer pad will be installed at each turbine site. Construction of each pad mounted transformer involves: excavation, soil storage, installation of a grounding grid, pad, transformer, and electrical connections.

The soil is compacted as much as needed to cover the foundation; elsewhere



we attempt to return the soil to its previous compaction rates. Six inches of the concrete foundation pad is visible after construction is complete. As well, there will be a small green box at each site which is the transformer. As a result farming can occur quite close to the tower.

NextEra (Jeff D.) continued to review Construction and Installation (slide 12)

34,500 (34.5 kV) volts of power comes out of each tower and runs through the collection lines. These ultimately come together at the transformer station, which transitions it to 115kV and then injects it into to the transmission line we have built on Kerwood Road.

NextEra outlined the trenching process.

The poles on Kerwood road, can these be shared with the Municipality for power lines?

They call this “underbuild”, where they share a line underneath. We had a conversation with Hydro One and they have a policy against this. Hydro lines have different people who work on these lines and therefore repairs and separation of the lines needs to be considered. With this context, our lines are not designed with underbuild in mind.

We do have an agreement with Hydro One for coordination in the event of a storm; if they arrive first they can make it safe and then pass on to us and vice-versa. We have worked with Hydro One to bury their lines serving houses or businesses to avoid our lines falling on Hydro One’s lines.

Is there potential for ‘piggybacking’ wires/lines on NextEra poles / Hydro One’s poles?

Most likely not. The key issue is separation of the two wires. Some structures may have room depending on how high on the structures HONI wants to attach. However, I would not expect that the poles as currently designed have enough strength to support a distribution line in addition to NextEra wires.

NextEra (Jeff D.) continued to review Construction and Installation (slide 13) and discussed trenching under driveways and roads. NextEra undertakes directional drilling to avoid roads and reduce impacts.

NextEra lines are part of the Ontario 1 call for digging. If our cables are potentially impacted they will be located and marked (survey stakes). If you want to re-tile your farm, you can contact the site manager and they will work



with you to mark the cables.

NextEra (Jeff D.) continued to review Construction and Installation (slide 14)

Transformer Substation: 95% complete

- Equipment includes an isolation switch, circuit breaker, step-up power transformer, distribution switch gear, instrument transformers, grounding and metering equipment.
- Substation grounding meets the Ontario Electrical Safety Code.
- Secondary containment system was installed around the main transformer in the event of an oil leak to prevent any soil contamination.
- Substation is connected to our transmission line (115kV) that goes to Bornish substation and then to Parkhill substation.
- The Parkhill substation is then connected to Hydro One transmission line

The substation is slightly elevated; this is to ensure that all cables are given sufficient space. There is also a containment system (concrete pad) to ensure that if any of the substation components leak out, the spill is contained.

What is the amount of fluid in a turbine?

There is approximately 255 liters of oil in the gear box, and approximately 40 - 50 litres in the hydraulic system.

NextEra (Jeff D.) continued to review Construction and Installation (slide 15)

This is the testing process to ensure that the turbines are operating according to specifications.

Wind Turbine Commissioning: July 2014

Requires Collection System, Substation, and Turbines to Start

- Turbine commissioning will take place in sequential order prior to the planned Commercial Operation of the Project.
- Portable generators may be used to provide back-feed power for commissioning prior to being connected to the power grid.
- Commissioning will necessitate testing and inspection of electrical, mechanical, and communications operability.
- A detailed set of operating instructions must be followed in order to connect with the electrical grid.



Chair asks the Committee if there are any questions.

No questions from the Committee.

NextEra (Jeff D.) continued to review Construction and Installation (slide 16)

Clean Up and Reclamation: Starts in June, ongoing (weather permitting)

- 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.
- 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).

Reclamation may not start in June depending on the weather; we want to wait until the soil is dry to ensure that we do not make more of a mess than necessary.

At this time we have had no concerns regarding oil spills. There have been some standard issues with machines leaking oil but we have spill kits available and bins close by. These spills are typically no more than a couple buckets worth of soil.

NextEra (Jeff D.) continued to review Construction and Installation (slide 16)

Chair asks the Committee if there are any questions.

No questions from the Committee.

Chair noted that the next meeting will probably be focused more on operations as the Adelaide project will be in this stage.



5. Anticipated Timing of Commissioning and Operations

NextEra (Ray D.) reviewed operations of the Adelaide Wind Energy Centre (slide 17)

Using the best practices available to NextEra, we operate the turbines for 25-30 years. We have regularly scheduled maintenance as well (winter and summer checks) to ensure air filters and coolant levels are all good.

If there are any malfunctions or minor components failures, we replace these parts on site.

If there is a failed bearing in a gear box (40,000 lbs.), we have to bring some heavy machinery to fix this. This is quite infrequent but may occur every 4-5 years.

Spill prevention - as per protocols with the MOE, if there is any oil that leaves the nacelle this is a reportable incident and we must do a total assessment of how the spill occurred and the amount of spill.

In terms of staff at the Operations and Maintenance Centre, we have business service technicians to ensure that all the bills are being taken care. Wind technicians are responsible for the maintenance and safe operation of the project and they do periodic checks to ensure that everything is running smoothly.

Safety is a value for NextEra and we do not do anything without having a safety plan in place.

We do not require the fire dept. or ambulance to do the rescues, we are self-rescuing. The only time we require assistance is when there is an injured person. We will take the person down the tower and will then hand them off to the EMS. We practice this with the local fire and EMS departments.

Weather monitoring systems exist for each turbine. If there is any inclement weather, such as lightning within 50 miles, we caution the technicians; if lightning is within 30 miles, the technicians must come down from the tower.

Do you have any experience with sharing operations buildings?



<p>Yes we do . Typically each site is operated locally, however, in Minnesota we have two wind projects there; we sold one of the projects but still operate the project for the owner. So yes, that is something that we have done.</p> <p>Chair asked the Committee if there are any questions. No questions from the Committee.</p>	
<p>6. Depositions, if any requests received</p> <p>No depositions were received for this meeting. Chair again noted that anyone is able to provide a deposition to the Committee; people wishing to do so should submit an application to the CLC Chair one week in advance of the next meeting. It is the Committee’s role to review and approve any deposition.</p>	
<p>7. Tentative Items for Discussion at future CLC meetings</p> <p>Chair opened up the floor for suggestions regarding meeting topics for future meetings (slide 18).</p> <p>Chair inquired if there are any subject matter experts the Committee would like at the next meeting and reviewed the subject matter experts we have at the current meeting.</p> <p>NextEra and NextEra consultants introduced themselves.</p> <p>Arlee Whitmore - DNV_GL - Environmental engineer, oil spill water quality side Gabe Constantin – DNV_GL - REA reporting and permitting for the project. Focused on noise studies, environmental studies, post-construction studies Andrew Ryckman - Natural Resource Solutions – biologist focused on pre-construction work and post-construction monitoring. Can address any wildlife questions that the Committee may have Josie Bird - Corporate Communications. Involved in communications, media from the start of project into operations. Craig Scott - Land services with Canadian Green Power since 2005 Mellissa Wallace - URS - licensed archaeologist Michael Lange - NextEra Energy Canada - Project Manager, Development Bourke Thomas – NextEra Energy Canada - , Construction and Environmental Liaison</p>	



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When is the next meeting? I am interested in the bird impacts so when can we learn more about this?

Our monitoring for birds is seasonally based and as such will not start until the mandated CLC meetings are over. Monitoring will start (as per provincial requirements) in May 2015. The province wants a full year of monitoring which runs from May 2015 to October 2016. As well, there is some wildlife monitoring. We can share the results with the committee after the reports are complete though.

Regarding monitoring at the sites, there is internal protocol (inspection and watch). This occurs whenever a wind technician first arrives to a tower. The monitor will walk a 50 foot radius around the tower to see if there have been any bird or bat mortalities. If there are injuries, the MNR is contacted and worked with to ensure that animal is re-habilitated. If there are mortalities, we do not disturb the specimen, but do take a photo and follow all REA/MNR reporting guidelines.

Our commitment is to collect 3 years of data, starting in 2015 and ending in 2018.

Parking Lot: Information regarding Species of Risk for next meeting. Habitat compensation for other projects - (Bobolink compensation).

Monitoring is conducted by AECOM and hopefully we can have someone present for the next meeting.

Regarding icing on turbine blades, NextEra has a proprietary process for this. As icing events are different for turbine blades than they are for tree branches; icing on turbine blades can be a predictive occurrence by looking at the weather patterns. If NextEra notices a particular type of weather coming they can pro-actively shutdown the towers to avoid icing. This eliminates the icing effect. As well, this reduces the wear and tear on the turbines and minimizes the safety impacts. This has been tested in Murdochville in Gaspe, Quebec.

Icing events also happened in Texas. Because of our internal protocols, we proactively shutdown the turbines allowing them to be quickly re-powered once the storm had passed. In Texas, we were able to provide power back quickly, in the absence of hydro; helping officials there manage the outage

NextEra will provide information at Meeting No.3 regarding monitoring for Species at Risk / Habitat Compensation.



<p>situations.</p> <p>In two (2) weeks, we will provide the meeting summary to the committee. You will have two weeks to review and comment and then we will update the minutes, post to the website and email the final Meeting Summary notes to the CLC.</p> <p>We are tentatively looking at the 2nd week of November for the next meeting. Please let us know if there are any scheduling conflicts during that time.</p> <p>Comment: Ensure that we maintain the 3 week turnaround for the Meeting Summary.</p> <p>CLC Chair noted this comment and outlined the deposition process for the next meeting.</p>	
<p>Meeting Wrap Up</p> <p><i>Chair adjourns meeting.</i></p>	

PARKING LOT

Parking Lot Topic	Response / Action
<ul style="list-style-type: none"> Map which outlines the project in relation to the meeting. Context for the wider local area with other wind farms (Bornish and Suncor and WBD. 	<ul style="list-style-type: none"> NextEra will provide map for Meeting No.3
<ul style="list-style-type: none"> Discuss Species at Risk monitoring in the project area, for next meeting. 	<ul style="list-style-type: none"> NextEra will provide information at Meeting No.3 regarding monitoring for Species at Risk / Habitat Compensation.