



Meeting Summary – East Durham Wind Energy Centre Community Liaison Committee

Attn.: CLC members, NextEra Staff & Consultants

Subject: East Durham Wind Energy Centre, Community Liaison Committee (CLC): Meeting No. 5

Held:

October 19, 2016, from 6:00 pm to 8:00 pm

Durham Arena & Community Centre

451 Saddler Street West, Durham, ON

Present:

CLC Members

• Bev Cutting; James Clements; Pat Greenshields

NextEra Energy Canada

• Derek Dudek, Senior PGD Technical Services Specialist; Octavio Alonso, Associate Wind Site Manager; Peter Miller, Regional Wind Site Manager; Amanda Gittens, Senior Business Manager; Jason Gaynor, Senior Business Manager; Jeff Damen, Construction

Consultants

- Charlotte Teat, NRSI
- Ben Coulson, RWDI

AECOM

• CLC Chair - Avril Fisken; CLC Coordinator - Adam Wright

Absent:

• Stan Rowbotham





Item Discussed

1. Introductions

Avril (CLC Chair) welcomed the Committee and members of the public to the fifth Community Liaison Committee meeting for the East Durham Wind Energy Centre, and outlined that AECOM has been retained as a third-party facilitator for the CLC meetings.

The Chair asked Committee members and NextEra representatives to introduce themselves and outline their role on the Committee.

CLC Members

- Bev Cutting Councilor from West Grey Municipality
- James Clements Landowner
- Pat Greenshields Landowner

NextEra

- Derek Dudek, Senior PGD Technical Services Specialist
- Octavio Alonso, Associate Wind Site Manager
- Peter Miller, Regional Wind Site Manager
- Amanda Gittens, Senior Business Manager
- Jason Gaynor, Senior Business Manager
- Jeff Damen, Construction

Consultants

- Charlotte Teat, Biologist, NRSI
- Ben Coulson, Acoustic Engineer, RWDI

The Chair reminded meeting participants and attendees that CLC members were sitting at the table alongside representatives from NextEra and their sub-consultants, specifically noting that Pat, James and Bev are the CLC members.

The Chair then reviewed the Agenda for the meeting and outlined that the last 15 minutes would be open to the public to ask questions and receive answers from the NextEra team. The Chair also noted that there is one deposition for the meeting, Maria De Melo.

The Chair then moved on to discuss parking lot items and questions brought forth since the last meeting.

2. Parking Lot Items and any Questions/ Comments Raised since the last CLC Meeting

The Chair reviewed the parking lot items from CLC#4 and invited NextEra representatives to speak to specific items.





Derek Dudek (DD) provided information relating to the following parking lot items.

Parking Lot Item #1: Turbine Lighting

- NextEra had considered navigation light shielding on a test basis, but had encountered issues with the mounting hardware.
- They had worked with vendors to try and resolve the issues, but were unable to do so.
- Transport Canada advised they no longer supported the use of lighting shields due to the following issues.
 - Snow load
 - Birds nesting
 - Mounting hardware issues
- Not currently considering any further action on this matter.

Cllr Cutting: Can you provide a letter from Transport Canada detailing these items?

DD - Yes we can and will include in the meeting minutes (attached in Appendix B)

Parking Lot Item #2: Contact Number on turbines

• All turbine access roads have the 1-800 number posted at their entrances.

Parking Lot Item #3: Noise assessment study – access to results

• Discussed in page 5 & 6 of the presentation

Parking Lot Item #4: Which IWT required dewatering?

• NextEra completed a review of all the weekly environmental construction reports for East Durham and noted that dewatering only occurred at the substation, and was completed in accordance with Ontario regulations.

Parking Lot Item #5: Opportunity for CLC member to participate in mortality search?

- At previous meetings we discussed the potential for a CLC member to participate in the monitoring process. Unfortunately at this time (time of the 4th CLC meeting), we had not yet discussed this possibility with NRSI. NRSI subsequently raised two main concerns:
 - 1. Non-compliance with searcher efficiency tests; all searchers must undertake 4 searches to become qualified.
 - 2. Untrained searchers can elevate potential for lack of efficiency.

Cllr. Cutting - I requested to go on the searches, was told these were occurring in May. About a week and a half ago I received an email detailing that I would not be allowed. In line with your rationale noted, can I ask if students are used for these searches?

CT – No, we use professional biologists for the searches.





Cllr. Cutting – Regardless, I would have stepped up and taken the training so I could become a qualified searcher. I am disappointed that I am not able to observe this monitoring process. DD – In regards to Cllr. Cuttings comments we do apologize for the delayed reply, but due to NRSI concerns we have chosen this as the best path forward.

The Chair then introduced Ben Coulson to speak to Monitoring and Mitigation measures relating to the Acoustic Monitoring process.

3. Monitoring and Mitigation Measures

Ben Coulson (BC) provided details regarding the difference between Imission and Emission testing, noting that Imission tests are done at the receptors (points where sound is received) where Emission testing is done at the turbine / project infrastructure.

Ben noted that he is speaking to the Imission process and Derek will discuss the Emission testing later in the presentation.

Ben discussed the following points:

- The facility is required to meet the sound level limits outlined by the Ministry of Environment and Climate Change (MOECC)
- First Immission Audit submitted in August 2016
- All five monitors are capturing data and indicating compliance with limits set out in the REA
- Additional data still being collected and is required for 3rd party engineers to make definitive statements of compliance
- Second audit is due February 2017
- Summary of results including any potential mitigation measures will be provided after this time period and upon discussion and confirmation with the MOECC as the approval authority

JC – Which turbines are being monitored?

DD – There are 5 monitoring stations, near Turbines 2, 6/7 14/15 and the sub-station specifically being monitored, which is from where the bulk of the complaints have arisen.

Question - Why do we have to wait until 2017 to determine if the sound is affecting my health?

DD – The last of the two Immission reports that are required by the REA are due in February 2017. We expect by that point, we will have a more complete data set to confirm that the turbines are operating in accordance with the REA.

So you are running behind schedule?

DD – No we are on target as outlined at previous meetings.

Who is doing the audits?

DD – RWDI is undertaking the acoustic audits.





Marian – Are the locations representative of the terrain of the area, for example are any located in a valley?

BC – Turbine 2 is located somewhat in a valley. Topography is a big factor that we have to account for and the MOECC provides criteria to determine acceptable locations.

Marian – But shouldn't these areas that are not suitable for MOECC requirements also be monitored as there can still be impacts in these zones.

BC - Regarding the locations, the MOECC wants us to test the potentially loudest areas. What the audit is trying to achieve is looking at the most impacted receptors (based on modelling) and then undertaking the acoustic audits to confirm the accuracy of the models.

Did you monitor emissions after it hits a structure, what happens after it hits a structure?

BC – Sound can move in various ways (reflections) after it hits a structure. We are required by MOECC not to monitor directly adjacent to structures as the reflections can invalidate the results.

Why is the acoustic monitoring occurring at my neighbour's properties and not mine where I am being impacted by Turbines 14 & 15. If there is someone being impacted why don't you study this area? BC – My simple answer is that we are following protocol as outlined by the MOECC and that the areas being monitored are chosen as they represent the loudest areas and provide us with a "worst case scenario." Measuring closer to the turbines provides a stricter assessment of compliance with the limits.

Chair – Is there a distinction that we are placing on leaseholders lands or are the studies being conducted throughout the Project study area?

BC – We measure sounds irrespective of leaseholders areas; we do not avoid monitoring at loud areas.

If it is affecting people, shouldn't we be monitoring where people are being impacted?

BC – Sound reduces the further you move away from a Turbine. We are trying to monitor the loudest sound, which may not necessarily be at a person's home, and then if necessary, we mitigate from there.

Marian – I want to know the results from T2, you can hear the sounds throughout the house and I have a hard time believing that it is compliant whenever the winds are from the SE / NE. DD – At this time none of the studies are complete so we can't provide answers or suggest mitigation measures.

Comment: The simplest way to quell the concerns is to place the acoustic monitoring equipment at the locations where people have concerns. Deal with reality not with theory.

Avril introduced Derek to speak to the Emission auditing process.

Emission Audit (sound emitted at turbine):

- Audits were/ are being conducted at one of each model turbine, in accordance with REA and international standards
 - Turbine 16 (1.62MW)
 - Turbine compliant with the REA, audit results were submitted August, 2016





- Turbine T2 (1.39 MW)
 - Testing ongoing and expected to be complete December 2016
- Turbine T6 (1.34 MW) — Testing ongoing and expected to be complete November 2016
- Regarding T2 and T6, there have been issues getting complete data sets as there has been insufficient wind speeds, so this is why testing is still ongoing.

Cllr. Cutting – On page 5 of the presentation, it states that these reports were submitted in 2015. Are these reports going to be available to the public?

DD – One of the emission reports have been submitted, while the other two emission reports have not been finalized. None of the reports are available yet but a summary will be released.

Cllr. Cutting – How do we get the raw data?

DD – I am not sure, the reports are very large and we have no protocol at this point.

Cllr. Cutting – If we wanted to conduct an independent review of the findings how we go about this? DD - I am not sure but we will outline the reports that will be available in the meeting summary. [Note: Emision and Immmission reports will be made available on www.nexteraenergycanada.com]

Team

Cllr. Cutting - How do I get a copy of the document and would NextEra be willing to sign off?

DD – You would have to contact the MOECC, and we can provide a response to that question in the meeting minutes. Complete reports will not be made available as they are intended for the MOECC to approve.

[Note: Emision and Immmission reports will be made available on www.nexteraenergycanada.com]

Avril then invited Charlotte Teat to speak to the Bird and Bat Post-Construction Monitoring process.

Bird and Bat Post-Construction Monitoring

- Monitoring will be conducted in accordance with requirements of the REA and MNRF Guidelines
- Monitoring began May 1, 2016
- Turbine searches occur twice weekly from May 1 through October 31, and continue through November 30 specifically for raptor monitoring.
 - The frequency for raptor monitoring is once per week in November
- Correction factors are applied in order to calculate overall estimated mortality rates across the project
- Annual report provided to MNRF by March 1 following each year of monitoring
- A minimum of three years of monitoring is required

Regarding correction factors Charlotte referred to slide 8 of the presentation (see below) and walked the CLC through the graphic.





Correction factors are calculated using a standardized formula provided by the MNRF. Correction factors can vary widely month-to-month. A lower correction factor increases the number of bats accounted for. For example: In this example, for every 1 bat found, 80% 70% 90% 1.98 bats are accounted for. of the area earch scavenge efficiency searched correction factors vary month-to-month determined using standard formula from MNRF

Cllr. Cutting – Once this is completed in March 1 2017 (report submitted), how do we get a copy of that report?

DD – We provide public summaries for these reports, but the complete reports are not provided.

Charlotte then spoke to the Natural Heritage monitoring process:

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 of studies)
 - Amphibian woodland breeding habitat surveys (1 year of studies)
 - Habitat monitoring began in 2016, in accordance with the requirements of the REA
 - Annual reports will be submitted to MNRF by March 31 following each year of monitoring

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 report is prepared and submitted to MNRF in accordance with reporting requirements
- Species at Risk Monitoring continues for the life of the project

Cllr. Cutting - So you have already submitted a report for the past year?





CT – Yes, we prepared a report for 2015.

Cllr. Cutting - Was this report posted online?

CT – Due to the sensitive nature of Species at Risk and the potential for poaching or other illegal activity this report is not posted online or made available to the public. NRSI provides this information to the MNRF and then from that point they own the information. The MNRF requires us to submit documents, and NRSI cannot disclose our findings.

Cllr. Cutting – Do you have a name of the document submitted in 2015, how do I ask the MNRF for this document.

CT – I believe it would be called the *East Durham Wind Energy Centre Operation Mitigation Plan Annual Report 2015.*

Cllr. Cutting - When will the 2016 report be submitted?

CT – It is required to be prepared by March 1st 2017.

Cllr. Cutting- At what point do you implement a mitigation plan?

There are three thresholds and if any of these are exceeded, mitigation measures are then implemented. These mitigation measures can include reducing the cut-in speed of the turbine, changing the time the turbine operates (e.g. avoid bird migration timing windows) or other potential solutions. The threshold levels for bats, birds and raptors are:

- 10 bats per turbine/year
 - 14 birds per turbine/year
- 0.2 raptors per turbine/year

Cllr. Cutting - Have there been any mitigation measures implemented to date?

CT – At this point there have not been any mitigation measures implemented as we have only prepared the 2015 report and have not yet completed a full year of monitoring

4. Update from Operations and Business Management

The chair then invited Octavio to provide an update from Operations:

- Performance is exceeding expectations Equivalent Forced Outage Rate is .67% and Availability Factor > 97%
- Excellent safety performance
- Planned Preventative Maintenance Execution on target

JC – What is the status of the fire suppression systems on the turbines?

PM – These have been installed and tested to ensure they are compliant with all relevant standards.

JC – What about the conversations with the local fire department, is there a plan in place?

PM – We have spoken with the local fire department before and can confirm they would respond to a turbine fire like they would any other fire. If there were to be a fire in a turbine, the local fire





department knows to not attempt to extinguish fires located in the nacelle as the turbines have a fire suppression system.

How many dedicated project staff are there to this project?

PM – There are 5 full time employees based out of the Mt. Forest office who are responsible for both the Conestogo and East Durham projects.

How many turbines in Conestogo?

There are ten turbines in the Conestogo project.

Chair asked if there were any other questions, none received.

5. Depositions, if any requests received

The chair then outlined the deposition process and invited Maria to present her deposition.

Before presenting her deposition Maria asked a few questions.

Derek are there going to be future CLC meetings for the East Durham project? DD – In terms of the CLC format, we no longer plan to meet in this format.

Maria De Melo then presented her deposition (included in Appendix A).

Comment: If I would have known about the "inaudible sound" and I would have gotten a turbine I would have moved. Every time I leave I get relief.

Comment: These meetings seem like they are full on non-answers. As you know I live with my wife and I do not have any of the experiences that she has, I am not bothered by sounds from Turbines but she is. I have helped her avoid this noise and although I cannot see/hear this I know that she is impacted. In my opinion it seems that the company comes in, makes their money and then leaves. The other day my wife screamed related to something, we don't know what but it started with the turbines. Why would I lie about this? What is happening is wrong. We purchased this property about 20 years back and we like it here, we don't want to leave but the doctors say you either have to leave or deal with it. I don't have a question but wanted to share my experience with the CLC so they have a better understanding of how these turbines impact people in their day to day lives.

The Chair thanked the member of the public for their comment and asked if anyone had questions.

MR – What does it take to make a turbine or receptor "fail"; does it have to be out of compliance for one minute or for longer?

BC – The sound levels are averaged on a one minute basis and if they are out of compliance for that time period it is noted.

MR – So if it thuds for 5 minutes and then it stops repeatedly, how is this captured?





BC – The measurements are done on a one minute basis, so there is some averaging that takes place but these type of sounds would be captured.

Those are DBAs that you are measuring, what about DBCs?

BC – dBA and dBC is somewhat like using inches vs. centimeters. dBC is how an ear responds to sound at loud volumes. dBAs are based on a quite environment, how the ear responds to noise in a quiet environment. It would be inappropriate to use dBAs in an outside environment.

Marian - When windows are open on an evening you get audible whoosh, roar and thump sounds. What is happening there? And when I close the windows I hear a high pitch squeal. I have a friend who can feel the thump. What is happening with the sound and the valley / clouds? Why is the noise so bad in my situation?

BC – When we are measuring for compliance, these levels are intended to create environments that are comfortable. The sound should be louder outside than inside but perception of sound can change due to a number of variables. The sound limits are not intended to make them 100% inaudible. The environmental conditions do affect sound and how it is perceived. Sound travels in a straight line when it can. When in an outside environment, there are various factors and the ministry guidelines tries to take these into account but this is difficult.

So you are saying that these turbines cannot have an impact on human health.

BC - The Ministry has a process which ensures we are meeting the limits. We are doing tests to ensure the turbines are meeting the requirements.

Maria De Melo – In your professional opinion, if the government came to you and asked you to set the standards for these types of projects would you change anything? BC – I would suggest that no changes be made.

How much noise is made at the towers and do you allow workers to go up the tower by themselves? PM –Workers do not go up by themselves. Typically there are teams of two and we do not allow workers to go up in the towers when they are running. This is not related to sound though.

Comment: In the past I have heard about people telling false rumours about neighbours who have signed up for the project pressuring us to sign up for the company. I am disgusted with the whole process from the start up and recruiting landowners to how things are now.

Where do they turn them off?

They can turn the turbine off remotely or at the base of the tower

DD – Just relating to Maria's deposition, can you please send this request to me in a formal letter to the address noted on pg. 13, with attention to Derek Dudek. I would also suggest you contact the MNRF in regards to the portion relating to them.

BC – I just wanted to say how thoroughly disappointed I am that NextEra is not willing to meet face to face once a year. This action only proves to the community that you are not engaged in the process for the long haul. You are just sitting here now proving to this community that they are right about





how they feel about you. This is the only venue that works for us as the letter writing, emails and other items do not work. You can't even come and present the summaries for these reports in a years' time when there are questions, who is the community going to ask questions to? I respectfully request that we host an additional meeting in a years' time.

DD – We will provide an answer to this request in the Meeting Summary. NextEra does not believe that the CLC meeting format is the most efficient way to communicate matters to the public. We have an existing plan in place to deal with individual matters on a case by case basis. As owner/operaters of the project we are always available to discuss matters with the public. In addition, we are required, and/or have voluntarily agreed to post summaries of all post-construction monitoring activities (natural heritage and acoustic monitoring respectively) on our website for public review. Any questions that arise from these summaries can be dealt with on a case by case basis as the need arrives.

6. Question and Answer Period (15 minutes)

7. Ongoing Access to Information or Providing Input

Derek outlined the contact information on slide 13 and noted that information requests and complaints about the East Durham project can be submitted to:

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: <u>www.NextEraEnergyCanada.com</u>

- Any other general inquiries to NextEra Energy Canada, LP:
 - 416-364-9714 Main 877-257-7330 - Toll Free

8. Conclusion of the CLC

The Chair enquired if there were any other questions, noting that if there were none the meeting was adjourned.





Appendix A

Deposition from Members of the Public





Maria De Melo

Date: October 14, 2016 Regarding: Delegation Request-East Durham Wind Energy Centre-CLC meeting Oct. 19, 2016

My name is Maria De Melo and this is a follow-up to my Feb. 29, 2016 delegation.

As you are all aware, the community of West Grey opposed NextEra's project (East Durham Wind Energy Centre) via DACES Inc.

The results of DACES Inc.'s legal proceedings were as follows: Costs against DACES: \$26, 387.80. (Email: From: Smith, Alexander sent September-24-15 10:14 AM; To: Eric Gillespie; Cc: Terry, John. Subject: DACES costs)

Our community would like to inform you of the following:

- \$26, 387.80 cost award is the last known amount we were sent: MNR&F @ \$10,000.00;
- NextEra @ \$15,387.80; I assume balance is interest
- DACES is an asset-less entity, and is not apt to acquire any assets
- Please be advised that DACES Inc. would desire to terminate its existence
- We therefore officially request NextEra's and MNR&F written consent to this step.

At our last meeting I informed you that our experiences were no longer based on research and hearsay.

Our community has and continues to be impacted by this project. Some citizens have already moved away, forced off their properties. Others are in the process of moving out, while others who can't easily move (farmers) live with the discomforts due to noise and general disturbance of the peace from the turbines.

Below are just a few updates on community member's impact:

Susan Tweney: "we purchased our land on Rd 23 in 2006. Neither of us had heard about the industrial wind turbines coming to the area. Our home is 710 metres from turbine #2. We have 8 turbines within less than 2 km's and the noise is difficult to tolerate. Should we stay? Should we go? And what would the losses be? When we built our house, we built our dream retirement home; valuation came in a hundred thousand less than the cost of building. So now, we are in wait and see mode while we live with the discomforts from the turbines."

Jackie Vainik: "forced to move out of home due to constant high pitch buzzing in the house and outside the house; in the process of moving out; being forced out without wanting to or being ready has been traumatic; process is slow, costly and completely disruptive."

My own situation: after living and working from home in WG for fifteen years, I am being forced to move out of my house. The constant high pitch buzzing in the house makes it impossible to





live in it. I am in the process of moving out; process is slow, costly and completely disruptive.

We request NextEra and MNR&F recognize your \$26, 387.80 pales in comparison with our sacrifice and impact and hereby request that you relieve DACES Inc. of this cost.

We await your reply. Sincerely, Maria De Melo





Appendix B

Letter from Transport Canada regarding lighting shields

Lobb, Tiffany (Amelia)

From:	Alf, Eduard <eduard.alf@tc.gc.ca></eduard.alf@tc.gc.ca>
Sent:	April-21-16 7:09 AM
То:	Seelmann, Jason
Cc:	Mateen, Ovais
Subject:	RE: trial of shields on wind turbine lights
Attachments:	F1365 Solis.jpg; image1.JPG; image1.JPG.JPG; image3.JPG; nest on multi-layer shield
	CL-864.jpg

hi Jason,

The TowerShade product is not recommended for use. There are issues in relation to bird nests, snow/ice accumulation and fatigue failure. Attached are photos of installations.

It is unlikely that a bird will make a nest next to a spinning blade, but is still a point in regard to what can happen after installation.

That leaves the snow/ice accumulation and fatigue failure. In regard to the latter, the louvres of the shade have aerodynamic lift and ultimately fail at the bolts.

The possibility of snow/ice accumulation is also a concern. The attached photo {F1365 Solis} shows a beginning accumulation.

I think that overall, the better course of action is the light unit itself. Which is the reason why I wanted to know what light unit you have presently on the windturbines.

eduard

From: Seelmann, Jason [<u>mailto:Jason.Seelmann@nexteraenergy.com</u>] Sent: Wednesday, April 20, 2016 12:21 PM To: Alf, Eduard Cc: Mateen, Ovais Subject: RE: trial of shields on wind turbine lights

Hi Eduard, I apologize for the delay in my response.

We are continuing to investigate the use of the TowerSHADE model TS-5-1 (attached) and our engineering group is working through the detail. I will keep you informed as we determine if this is the best equipment to try.

Regards,

Jason E Seelmann Wind Technician Leader Northeast Region

Cell: 226-821-4700

From: Alf, Eduard [mailto:eduard.alf@tc.gc.ca] Sent: Monday, April 11, 2016 3:56 AM To: Seelmann, Jason Cc: Mateen, Ovais Subject: trial of shields on windturbine lights

This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.

Jason,

I understand you would like to do a trial of shields for windturbine lighting.

I would like to follow up on this.

The first question is what lights [manufacturer, model] you presently have on the windtubines at

 1- East Durham Wind Energy Centre Turbine #002 Lat. 44 12 28.33 Long. -80 42 07.12 TC File No. ATS-12-13-00020053
2- Conestogo Wind Energy Centre Turbine #010 Lat. 43 46 37.928 Long. -80 34 51.395 TC File No. 2011-109

I should be available on Tuesday 12apr2016 from 0500am to 1100am.

If I have an opportunity, I may try to call you today ... Monday 11apr2016.

eduard

Eduard Alf Senior Engineer, Aviation Lighting Systems Flight Standards Division Standards Branch Transport Canada 330 Sparks Street, Ottawa, Ontario K1A-0N8 613-990-2100 eduard.alf@tc.gc.ca















