

St. Columban Energy Limited Partnership (SCELP)

St. Columban Wind Project / 160960649

Date/Time: November 18, 2015 / 6:30pm to 8:30pm
Place: Huron East Council Chamber
Next Meeting: TBD
Attendees: CLC member: Dennis Mueller
Veresen: David Hayles
HGC Engineering: Ian Bonsma
Stantec: Andrea Terella, & Krista Walkey (Chair)
Approximately 27 members of the public
Absentees: Carole-Michelle Cronin (CLC member)
Distribution: CLC, SCELP, Project website

Item:

1. Greetings – Krista Walkey (KW)

- Krista thanked CLC members, and members of the public for attending the CLC meeting.
- Krista asked for members of the public to sign in on the sheet.
- Krista indicated that she would pass around agenda and advised that she would follow the items listed on the agenda which supports the CLC Terms of Reference (ToR)
- **Safety Moment – KW**
- Krista introduced herself, and noted that safety is a part of Stantec's culture and that she would like to start the meeting with a safety moment. Krista advised that with the winter months approaching, everyone should ensure that they are well prepared for the driving conditions, including winter tires and checking their windshield wipers.

2. Introduction of CLC Members - KW

- Krista went around the room and the CLC member and all Project Team members present introduced themselves.
- Krista provided the agenda for the meeting and indicated that they would start with Project Updates from the Project Team, and then CLC member Dennis Mueller would review the community questions that were submitted which included 14 properties, and lastly the Project Team would address the questions.
- Krista advised that written correspondence should have been received by Friday November 13, 2015 to be considered in the meeting and those submissions would be

considered/discussed prior to any open floor questions.

3. Project Update – David Hayles (DH)

Review Summer/Fall 2015 and Planned Winter 2015/Spring 2016 Activity

- DH – Provided an overview of work that has occurred to date and what to expect in the coming months.
 - Construction was complete by the end of August 2015 and clean up started in September 2015.
 - Turbines were in full operation by June/July 2015.
 - Remediation has occurred including interior road reclamation and construction clean up.
 - The Road User Agreement is outside scope of work for Veresen; however Veresen is working closely with the Township to define damage that has occurred due to the movement of large trucks throughout the Project Area. Some of this activity may fall into 2016.
 - Siemens went into service mode after 500 hours running turbines. Siemens checks all units and ensures they are safe and operating properly.
 - Turbines have been down recently because they were being serviced to ensure they were functioning properly. It takes approximately one day to assess a turbine.
 - Recently, they have moved to the Preventative Maintenance (PM) phase and all turbines have either been or will be re-serviced.
 - The PM work is almost complete. Tools were required at another site which delayed the re-servicing of the last 4 turbines. Therefore, there are only 4 turbines left to complete.
 - From this point on the Project is considered operational and PMs will be completed throughout life of the Project.
- KW – Confirmed that turbine construction was complete and that there would be ongoing maintenance and service checks of the turbines for the life of the Project.

CLC Member Presentation of Community Concerns - Dennis Mueller (DM)

- Denis Mueller (DM) – Presented the concerns of residents for 14 different properties within the Project Area.
 - DM – I represent the community and there are many more affected properties than

just these 14 in McKillop, but these were the ones we got in on time (& put in writing).

- DM – The University of Waterloo has shown the human body can put up with a certain amount of infrasound exposure, but that threshold peaks on average at about 6 months, and that is why wind project communities usually don't begin to show severe symptoms until after the 6 month period. DM also advised that the St. Columban Project had only been operating for 4.5 months and questioned: How much worse was it going to get?
- DM went through each of the 14 property concerns reported in detail.
 - Property 1: "I would like to know why my bed trembles or lightly vibrates? The nights of the storm were particularly noticeable. I always sleep with my bedroom window open but can't anymore. On the windy nights I hear them even with it closed. It is a whoosh. It sounds like the washing machine is going all the time with a whoosh in between. Once I am awake it then takes quite a while to get back to sleep. I can't hear it in the rest of the house. On windy days it is noticeable outside. I have been in touch with someone who suggested adding anti-vibration blocks. They seem to help some but still it is noticeable."
 - Property 2: "Noise from turbines were very loud last night (Oct.31st) but have got to the point that no one will follow up. We run a fan all night to drown out the noise. As soon as my head touches the pillow I can hear the noise and feel the vibration." (presented a list of documented noise occurrences)
 - Property 3: "Our concerns are noise-night time mainly. Going to sleep we hear a constant swoosh. The instances where the weather, temperature, & wind are in a perfect combo causes them to be very loud-enough to wake you from a sleep."
 - Property 4: "When the wind is South-South West between 6-16 km/h I hear it the worst. So much so, that before I walk out the door, I can tell which turbine the noise is coming from based on the direction I hear the noise. I have called the proponent 3 times now regarding turbine noise and have not been called back once. I have also called the MOECC at least 3 times and nothing has changed with regard to noise, nor has anyone come out to my home. Question(s): Will you shut them down at night if it's consistently affecting certain families? What can you do to regulate the infrasound because many of my neighbours say they are feeling the turbines even if they can't hear them?"
 - Property 5: "1 consistent case of adult nausea when returning home after being out of town for work (twice a week on a regular basis). Sept 25, 26, & 27th the swoosh from the turbines heard very loud (with sleeplessness experienced for 1 adult & 2 kids). On the morning of Sept 25th, two kids affected (1 could not think properly and follow basic duties without constant confusion & the other woke up with a very bad headache – the turbine is the closest to the room these 2 children sleep in). Oct 2nd 1 child had pain

behind their eyes (bedroom closest to turbine out of all in the residence)."

- Property 6: "I suffer from sleeplessness from the turbines and find them very loud. It was particularly bad Sept 25th-27th. If the turbines are loud and I can hear them from inside the house, my cat now will refuse to go outside the door. That was never a problem before."
- Property 7: "We live in St. Columban and have been affected on-going since the turbines started spinning. We hear them every day. We have 2 adults and 2 children living in our home. Noise affects us both during the day and at night. Shadow flicker from the blades as well as the blinking red lights at night are a problem for us. We can always hear them whether it is windy or calm."
- Property 8: "We definitely hear the turbines and they have interrupted our sleep especially during the summer months as we do not have air conditioning and could not sleep with the windows open. Both occupants of the house are experiencing sleeplessness."
- Property 9: "It sounds like there's a train behind our barn. We're not able to sleep when the window is open (especially during the summer months) as we do not have air conditioning. It is always worse before a storm. Sleeplessness is experienced on a regular basis by both occupants of the house."
- Property 10: "We are experiencing noise both day and night from the turbines, literally seven days a week. Shadow flicker; nausea; headaches; & ringing of the ears are problems we have experienced. The lights are a distraction at night and make us nauseous. Obviously the noise is worse if it is windy."
- Property 11: "I complain everyday it spins, even last night-Nov.15th, 2015 I was awake till 3:30-4:00 am to get to sleep due to the sound. Last week (8th-15th of Nov) day and evening noise. I put an official complaint in at 12:30 or 1:00, and I have recorded the sound on my phone. Migraines during the night, since the turbine started turning. At times I sit straight up in bed due to the swoosh and then can't get back to sleep because of the sound- it's that loud. We have 2 adults and 3 children living in our house. Warm, windy nights seem to be the worst. We experience: sleep disturbance, high blood pressure, nosebleeds, vibration on chest during the night, shadow flicker, headaches & nausea."
- DM - Why is there no noise by-law for this type of noise?
 - Property 12: "Depending on wind direction, we are affected most early morning (around 3 am). It is loud enough to wake us up, making it very difficult to get a good night's rest. We hear them both at night and during the day. We are also affected by shadow flicker and headaches. The weather does not seem to affect the noise. It is the same regardless. If the

wind is blowing, we hear them."

- Property 13: "Noise is particularly bad depending on wind direction. Sounds like it comes right into the house. 4-5 nights a week our sleep is interrupted. We experience nausea and headaches as well. That was never a problem before."
 - Property 14: "Noise is particularly bad depending on wind direction. Sounds like it comes right into the house. 4-5 nights a week our sleep is interrupted. We experience nausea and headaches as well. That was never a problem before."
- DM – Studies show that 20% of the population has health problems from turbines.
 - DM – I have had a discussion with the other two CLC members that could not be present and determined actions items, and recommend Veresen to follow through moving forward.
 - **DM – Action Item 1: In order to determine if there are sound/infrasound issues in the Project Area a number of community members have requested that Veresen mail out a survey to those living in the Project Area and then post the results of the survey. If Veresen does not want to conduct this survey they need to provide an explanation as to why (to the public) and we as a community will then conduct the survey and post the results anyway.**
 - **DM – Action Item 2: The University of Waterloo has recently announced they are conducting a study on how infrasound from turbines is affecting people. Since, Veresen (at one time) was willing to offer money to the municipality by way of a Vibrancy Fund; the community is requesting that in lieu of the Vibrancy Fund, Veresen put the fun towards an infrasound study on their Project. The acoustician could be mutually agreed upon by both Veresen and the community, and the results would be made public. If Veresen chooses not to fund such a study, the CLC committee would request that an explanation be provided as to why and that explanation would then be made public. The press will be contacted regarding this request as well.**
 - DM – Veresen was required as part of their REA to conduct a sound study on the Project but the problem with that is that the engineering firm was hired by the proponent. When a study is truly done independently different results sometimes occur.
 - DM – The community has been contacted by an engineer who is able to test for infrasound. Residents have already noticed that on windy days, turbines closest to sound study equipment were in fact shut down. DM questions how the community can trust that the study was conducted in an independent and transparent fashion?
 - DM – Veresen was required to do vibration testing during construction of the Interconnection Line near a culturally significant property in Cranbrook known as "The Cameron House." The Ministry of Culture & Tourism made a recommendation

in 2012 that construction cease if vibration levels exceeded a certain threshold near the historic property. Intensive drilling took place there for a month using (according to the drilling company) their biggest of 3 drills. The vibration testing had already taken place before the largest of the 3 drills was brought in. The only person the results of the vibration tests were shared with was the property owner who admits she had no way of interpreting the engineer's report. Also, contacted MOE and received no response.

- DM – I requested the vibration threshold level and was refused, a FOI request was made to obtain the vibration monitoring report (to no avail) and the only information Veresen provided was that vibration levels were not exceeded. The REA somehow allowed Veresen to monitor themselves (using their own engineers) and then report the results to no one. DM questions if this seemed transparent or honest? The infrasound study would not be a "monitor yourself and report to no one" type scenario. It would be an excellent opportunity for Veresen to show the public that their Project is safe and that it will not harm anyone in the community.
- DM – Posted link in regards to the wind industry.
 - DM – Residents have already noticed that on windy days, turbines close to the sound study equipment were in fact shut down. How is the community to trust that the study was conducting tests honestly? (presented a picture of drilling equipment) The drilling equipment was stationed very close to an old school house of heritage significance and the vibration testing was completed before the drill was actually brought on site.
- KW – Suggested the acoustic engineer go over his role and explain the acoustic testing he has been working on within the Project Area.
- Ian Bonsma (IB) – Advised that he was an acoustic engineer with HGC Engineering, who had been hired by Veresen to complete the acoustic auditing commitments. IB also provided background information on noise and explained the acoustic testing he is currently completing. IB indicated that he could not speak on behalf of the unresponsiveness of the MOE.

Public – If you are working for Veresen how can we trust the information from the acoustic testing is correct?

IB – I work for an acoustic engineering company with an office of professional engineers who have an ethical duty as Professional Engineers to complete audits in an unbiased manner. The acoustic audits will follow the MOECC standards and the final reports are required to be submitted to the MOECC. There are a number of conditions that must be met for the Acoustic Audit analysis.

- IB – Reviewed the conditions of the MOE that must be met. Noted that he would be out in the field for the next couple weeks completing the acoustic testing, and that similar equipment would be installed again in the middle of April, to complete acoustic tests once the snow has cleared.
- IB – Advised that there is a minimum of data required for the analysis, to follow

compliance protocol with the MOE. The Compliance Protocol for Wind Turbine Noise from the MOECC only considers sound levels during the night as day time hours typically have an abundance of background noise interference.

- KW – Noted that public questions should have been provided in advance of meeting and that Ian would first respond to those questions that DM had submitted on behalf of community members in advance to ensure that those responses were provided.
- IB – Explained the testing process at different turbines, and indicated turbines would be turned on and off for testing. Also, explained how noise testing locations are determined. Noted that the acoustic audit for the transformer station was complete and the summary report was currently being developed.
- IB – Advised that the MOECC has set deadlines for submission of the various acoustic reports – Transformer Station Acoustic Report due middle of December 2015, the Fall Acoustic Report due in July 2016, the 3 Turbine Acoustic Reports due July 2016, and the Spring Acoustic Report due December 2016.
- IB – Indicated that the noise assessment completed and used in the approval document for the REA, was not completed by HGC Engineering and that there are requirements for an independent noise consultation for the current noise studies being conducted. Advised that data has been collected for 6 weeks.
- KW – Opened up the floor to public questions.

DM – How many audits has your firm completed?

IB – Started in 2004, for a wind farm in Nova Scotia, closest home at that time was 350m from turbine.

DM – Did the company turn off the wind turbines?

IB – Yes, under certain wind speeds the company turned off turbines. Mitigation works to reduce wind turbine noise and has been completed in Ontario. MOE is the governing body that is approving noise reports and any suggested mitigation measures for those that are over the limit. In order to complete their assessment they test without the turbines running to gather a base level and then with the turbines on.

DM – No company seems to be over the noise threshold?

IB – For some projects constructed prior to the 2004 or the 2008 noise guidelines, sound level exceedances occurred and projects received complaints. One particular company provided remediation for closest turbines to ensure they were in compliance.

DM – Has there been any curtailing completed?

IB – I know of two projects that did curtailed mitigation measures.

DM – Do you work with clients and suggest mitigation?

IB – Yes, we have worked with industries and recommended mitigation measures to reduce noise.

DM – Based on testing so far is this Project going to pass?

IB – For this Project, data is still being collected, and statistical analysis will need to be completed. This report will be submitted to MOECC and will follow the requirements of the Compliance Protocol for Wind Turbine Noise.

Public – We were told we would never hear the turbines.

IB – I can say that every wind project has complaints. However, one has to remember that turbines going into a rural area will be noticeable. Turbines can create a sound level of up to 40 dBA, which by comparison to urban areas is not high, however, definitely more noticeable in a rural area.

DM – It is not just noise about the noise level, but the health issues like the nose bleeds and headaches.

IB – Health Canada has completed an extensive study on wind turbines and their health effects. The study indicated that 16% of population can have annoyance to noise; and annoyance can lead to these sorts of health effects, such as stress and stress leads to lots of things present in this community. MOE sets the limit of 40 dBA.

Public – Noise limits are not the strictest in the world, it is average.

IB – I indicated that Ontario is one of the strictest. Australia, New Zealand, have limits at 35 dBA, Alberta 40, Nova Scotia 45 dBA, Ontario 40 dBA. One county in the USA recently changed to 37 dBA, however, typically in the USA the limit is 45 to 55 dBA.

DM – Will Veresen shut down certain wind turbines, if they are consistently affecting certain families? What is your response to that?

DH – If the turbines are meeting all MOE noise requirements, Veresen does not have to shut them down from an operational stand point.

DM – So what if there were constant complaints?

DH – Veresen would work on a case by case basis and determine the noise levels.

IB – If there are complaints but Veresen is within the sound level limits they have no obligation to implement mitigation measures.

DM – No matter how sick the family becomes due to turbine noise mitigation will not occur?

IB – MOE has a team that goes around and completes its own testing to investigate concerns from the public.

DM – K2 project has had noise concerns put forward, and MOE indicated all equipment is up in K2 and will be used for project until winter and then can't test in winter. Can you explain?

IB – I can't address what MOE is currently doing in K2. During winter, snow can reflect sound, also it

is suggested not to use equipment in cold weather, restrictions on humidity also, ice and/or snow can create moisture on equipment and freeze and will not function properly. MOE recommends not completing acoustic testing during winter to avoid complications with the instrumentation.

DM – Ok, you basically just reiterated what MOE stated, so this community will have to deal with health issues until spring, when tests can be completed by MOE. What can you do to regulate the infrasound because many of my neighbours say they are feeling the turbine even if they can't hear them?

IB – Infrasound studies on astronauts were completed to determine how loud of levels will affect them. Most show the levels have to be pretty high. A research paper completed by our company shows the perceptibility levels, for the average person. Some people are more susceptible to noise than others. Most projects completed for acoustic testing, have all been below the perception limits. Also, new studies focused on blade pass. People have critiqued the more recent Steve Cooper study which indicates that sensation from turbines occurs when the turbines are off and on. The critique is that turbines are not generating any infrasound when they are off, so there should be no sensation. The Japanese have completed studies regarding infrasound, and haven't correlated any health effects to date. The Health Canada study indicated that stress created sleep deprivation which can lead to health impacts.

DM – Action Item 1, Veresen has had since Friday, In lieu of vibrancy fund the community would like the money contributed to University of Waterloo study. This is an opportunity for Veresen to benefit the community.

DH – I can and will take this request back to the board, and we will discuss.

DM – But, you have had it since Friday, why don't you have an answer?

DH – This action item will be taken back to the board, the vibrancy fund was turned down by the municipality.

IB – A number of municipality's are gearing up to have infrasound studies completed prior to and after construction of local wind projects. A lot of research shows that when residents do not like the turbines and are annoyed by them this can lead to other issues because of their annoyance.

DM – But there are bylaws in place?

IB – Most municipalities refer to MOE for by-laws on noise.

DM – If you are having a social function and the noise exceeds the by-law and they are out of compliance police shows up and they must stop.

IB – These are nuisance complaints, if the complaint is MOE related then the MOE deals with noise issue.

DM – But, the MOE is not addressing complaints.

IB – There is a complaint procedure which the MOE typically follows.

DH – I see every complaint that comes into the MOE for this Project. To date I have only received 7

or 8 official complaints.

IB – We cannot speak for the MOE, and their lack of response.

DM – But they regulate everything for Veresen.

DH – We have 48 hours to respond, when a complaint comes in.

DM – When will you have an answer to Action Item 1, on what date?

DH – I will take this back to board and we do not have a date.

DM – Will I receive the answer too and will it be made public?

DH – Yes

DM – Action Item 2, Veresen should create a questionnaire to determine what health effects are experienced by the community. What is Veresen's answer to this request?

DH – This is a board level decision. I have only heard from one person directly about a complaint, as I received only one phone call, last night. The other 7-8 complaints came in from the MOE. MOE gives me an area of where the complaint can be located and then I look into it and determine what turbines it could be. And I normally respond within 24 hours.

Public – How did you deal with the complaint you received?

DH – We had a noise test completed immediately.

DM – What was the nature of the complaint?

DH – It was related to noise.

Public – How did you do it that quick?

IB – I was already in the area completing other acoustic testing at the monitoring locations. Dave Hayles advised he had received a complaint in regard to noise and asked me to use a sound meter level that I had on hand. So, I completed a sound level measurement near the house of where the complaint came from. I have not analyzed the data in detail but it appears to be within limit.

Public – How much was the dBA for sound level that you completed?

IB – For both on and off conditions the sound level was about 43 dBA, there were a lot of trees in the area and that affects both conditions. Winds were high and turbines were running very well, and the sound level was the same in both on and off conditions. Would have to look at the data again to confirm.

DM – So, Veresen could turn turbines on and off?

IB – There are a number of off conditions required for the Acoustic Audit. 60 min in each wind

speed bin when the turbines are off and 120 minutes in each wind speed bin when the turbines are operating. The turbines are being shut down based on our request to complete the acoustic tests. As other sounds can affect the sound level, and we want to try and remove the background sound from the assessment to determine the wind turbine only sound level.

Public – You can't identify the sound level of individual turbines and can't pin point rpm?

IB – audible sound cannot be pin pointed, equipment will measure all other noise in the area.

Public – Sound levels need to be monitored to get every weather condition. There is a pulse to a wind turbine, which may be leaving out of your tests. There is a study which indicated that infrasound affects tissues, infrasound does create effects. Have to get back to how we are going to help people, deal with issues even if they are in compliance with sound levels. Need to deal with the nose bleeds, headache, and waking up due to noise this is not acceptable. We were told that we would not even notice this project was here. David you are here and we don't know how to communicate with you. You should provide your contact cards. So even if the Project is in compliance, Veresen needs to do something.

KW – We will ensure that Dave's contact information is provided to everyone here who provided their email address.

DM – One of the property owners who had complaints about health issues, is a mother who works as a police officer, she is not in the business of making things up. There has to be some kind of solution here. You have had all this information since Friday. Are you going to shut down certain turbines, if they are consistently affecting family members?

DH – Right now acoustic studies are being completed.

Public – Ian how close were you to the receptor, when you completed that last minute sound level request from Dave. Did you get permission from property owner?

IB – I was on the adjacent property, as it was late at night and I did not knock on an individual's door as it was after 11pm. I was about 200m from the property, closer to the turbine completing the sound level study on a property which I had permission to be on.

Public – I was one of the individuals who complained to the MOE, that I was still hearing turbines and waking me up at the middle of night and MOE indicated that I was the only one with this complaint.

DH – I cannot speak for the information the MOE has provided to you. I have 7 or 8 complaints from them that I have responded to.

DM – I have MOE logistics questions I would like to leave to the end. Do you have information for these questions?

- DM – Presented a number of questions on the screen, which included:

Project Status: Has the St Columban Project received all necessary approvals to connect to the grid and to start supplying power to Hydro One? If yes, what is the final approved output capacity for the Project? If no, when does Veresen anticipate this approval will be

received?

Turbine Operations: Are all 15 turbines currently operating? Has the placement of some towers in downwind positions reduced the ability of some towers to achieve nameplate capacity output?

Liens: Suppliers to the Project have registered liens against the titles of land owned by the leaseholders who participated in the Project. Please provide details on the circumstances that lead to the withholding of payments to these suppliers? When does Veresen expect to be in a position to make the payments that would allow these liens to be removed from property titles?

Tower Construction: Were all bases and towers constructed so as to be in full compliance with specifications for the concrete foundations and turbines?

Reports indicate that the Project has adversely affected the credit position of local farm operators and high profile local companies. Please provide the following information: leaseholders – What steps has Veresen taken to prevent the financial disputes with their suppliers from affecting the leaseholder's ability to obtain financing for regular farm operations? Have the required lease payments to leaseholders been made while other companies were not paid? And Aggregate Suppliers – It is understood that a local concrete company provided the cement for the tower foundations. Has the company been paid for this work and if not, why has the company not been paid and when do you anticipate the payments will be made.

Project Financing: It is understood that TD Bank, Farm Credit Corporation and Libro Credit Union (as stated on publicly obtained documents) provided financing for this Project. Are these loans current?"

KW – For the Project Status we can ask David Hayles to answer. As for the liens questions, that is a legal issue and is between the property owner and Veresen.

Public – Who here at the meeting represents the company, David?

DH – Yes, I am here representing the company.

Public – Who is really here as you represent operations for Veresen? What about liens?

DH – Veresen is not a constructor financed Project. Veresen put up all the cash for the Project. The constructor was Mortenson.

Public – Have the bills not been paid because the turbines are substandard or do you not have the money?

DH – Veresen has the money.

Public – Huron East is receiving taxes on turbines and is listed on agreements, they represent all of us, we should know about any liens.

KW – You should talk to your councillor. This meeting is not meant to discuss these legal matters.

That would be a question for lawyers and would involve people's individual properties. We are here to discuss the operations phase of the Project.

DM – Have you seen these questions Dave?

DH – Yes, and Veresen have received all necessary approvals. And the turbines are meeting nameplate capacity output.

DM – On the IESO website there is nothing about the St. Columban Project.

DH – There are two different parts to the grid transmission and distribution. We will never be on the IESO list.

IB – Smaller projects are not on the IESO transmission grid.

DM- Hydro One doesn't report on output?

DH – You would have to ask HONI to provide that information.

Public – So if there is a surge of power what happens?

DH – The power is regulated and engineered there will not be any power surges.

Public – When power is not required will you leave the turbines off.

DH – No, that will not occur.

IB – Companies under IESO grid will be asked to turn on and off depending on power needs.

Public – Dennis, I would rather Veresen provide answers via writing to the rest of those questions that can be posted as I have more questions I would like to ask. That night Dave got the call about the noise. How did you do the sound level test so quick? Why did you keep back 200 m and not go write up to the house.

IB – It was almost midnight, when I was out completing tests, and I was not comfortable approaching a house at that hour, and did not want to disturb residents at that time. We are currently completing an independent audit for St. Columban, so I am out completing various acoustic tests weekly, and I happened to be out that night. I completed that test right away.

Public – I have a problem with the fact that you were 200 m away completing the test. The noise is so loud at my house that I shoot up in bed. Sounds resonate off the backboard of my bed. Also, some people have homes where there are alcoves, where sounds get trapped.

IB – One can get reflection off buildings, and the sound levels will be louder. Resonation will differ from house to house. Even in rooms depending on furniture that is present. In regards to addressing comments from earlier, just because you can hear turbines doesn't mean they are over the sound level limit. Rural areas are very quiet, and turbines don't get louder at night. The only difference is that background noise is quieter at night time, so you will hear the turbine noise more, as it is not masked by other sounds. For example, fitness studio, turning on a fan to mask noise, or running the

HVAC fan, to bring background sound up

Public – What is the average sound of TV? You should know

IB – It really depends.

Public – If you are surround by three turbines there much more sound coming from all of them as opposed to one.

IB – The measurement was completed on noise coming from all three turbines. There was a 10 dBA difference, within 3 km radius turning off all turbines. Equipment measures everything; the device is recording all surrounding sounds.

DM – The two houses you are monitoring I know one which is the other?

IB – Overall, it can be very difficult to find people who are willing to have noise equipment placed on their property so that can limit location of testing.

Public – There are a lot of properties with health concerns, so I am sure you have a lot or properties you could use.

IB – Some locations have a lot of trees, which really affect noise conditions. We try to pick places with not as many trees, not a lot of landscaping so pretty quiet and should be able to get a pretty good sound level difference between on and off turbine noise.

Public – You can filter out a car passing by.

IB – We are filtering out cars and coyotes etc. But when you have trees you will only get tree noise. We need to complete on and off studies and want to get a good indication of the difference of sound level between on and off conditions.

Public – you haven't tested infrasound. Wind industry lobbied to not test for infrasound.

Public – NASA did studies in 1978 and infrasound did affect people. We knew back in 1980 that was the worst sound and it affected people. The wind industry knew it was a problem.

IB – Regarding the 1978 study, there were different types of turbines created different pulses and were very close to houses, and not the distances we have currently. There is more recent research out there in terms of infrasound. In terms of the infrasound only Danish have regulated infrasound or low frequency noise. Ontario has used dBA a representative number of what typically people hear.

Public – It is out there that infrasound was not included in the CanWEA letter.

IB – The paper we completed and recommendations from us that MOE stay on top of current research.

Public – Infrasound is like carbon monoxide, very similar you can test for it.

IB – The Health Canada study was completed, and there was no link to turbines causing health

impacts.

Public – There was never to be a causal link, data is not released, the intention was never to make that causal link. And annoyance is a measure of health. Referencing the Health Canada study is not very wise in these circumstances as the way it was set up and the data was never released. A lot of talk about compliance but the bottom line is; what is Veresen going to do about the current situation in the community in regards to health concerns presented by property owners? They are keeping diaries they cannot deal with these health effects. What is going to be done, what is the mitigation piece? The fact is the Project is here and the people are here, that is not going to change, unless everybody leaves or turbines go which neither will occur. So we need to deal with these issues.

Public – So what is going to be done about it? Aside from other projects.

Public – David, there are 4 homes up on the screen that are seriously affected and all four have children. If they provided addresses will you turn off turbines at night at certain times to reduce sound?

Public – It appears the Project is most likely going to be operating within the sound level limit so if it is will nothing be done?

DH – We will need to deal with issues on case by case basis and we are currently completing a noise assessment.

Public – You might be in compliance and yet there are lots of complaints.

DH – During the Project advertisements and notices submitted there have been an email and 1800 number provided, I have had one call.

Public – I called a few times did not receive a response back.

DH – That is surprising to hear.

Public – Where can we make a comment, who can we call, the complaint protocol seems very complex, and that could be why residents may not call, since so much detail is required on the complaint document.

DH – Call me directly with any complaints and I will fill out the Project complaint protocol form, it was only posted to show what information we fill out. I also have an obligation to report all complaints to the MOE. And MOE has been out in the community.

Public – For what reason has the MOE been in the community?

DH – To complete sound audits with hand held sound devices. MOE has come out, and will not advise that they have and will not provide data.

Public – Maybe the public are not contacting you or Veresen as there is not a clear line to who should be contacted and this should be provided.

Public – When people call the MOE they are told they are the only one with a complaint, or

receive no response. Also, complaint process is so complex they will not bother to complain about it again.

DH – As mentioned I have received about 7 or 8 complaints from MOE and there is an entire process that I must follow and go through. If you call me directly I become the front person, and I will make a commitment that we will put out a letter to the community with my information. I can't commitment to turning off a turbine - that is above my position. But I will take your complaints seriously and we will deal with issues on a case by case basis.

IB – Public can help identify machinery problems based on information they provide about the noise.

Public – Can you give a community member a copy of the form you fill out for a complaint?

DH – Yes I can provide a copy of the form via email.

Public – MOE do they identify where the complaint comes from? How are you supposed to determine?

DH – They provide the closest intersection to the property and then I have to determine which turbine it might be within that area. The MOE has never provided names or resident information, and this is most likely due to the Privacy act.

KW – The CLC Meeting minutes will be posted on the Project website. Dennis advised earlier this evening that I could release the addresses of the properties you have mentioned, to Veresen.

DM – Yes you can release the names to Veresen.

KW – The 1-800 number can be provided. We will send out Dave's contact information tomorrow for those who have provided emails on the sign in sheet.

Public – David Hayles will the board meeting you are looking to set up, will the public be able to attend?

DH – I would have to find out for sure, but typically no the public is not invited to board meetings.

Public – Could you clarify your position? And those working above you are they local?

DH – I am the Operations Coordinator for Veresen working on the St. Columban Wind Project. The Operations Manager is who I report to and he is local, above him is the VP and he is also local.

Pubic – What would be the procedure for you to be able to turn off the wind turbines?

DH – I will need to confirm and find out.

Public – Doesn't sound like the Project will be out of compliance.

IB – Test are still being performed and information will need to be gathered and analyzed still, to confirm compliance.

Public – Have you ever turned off any turbines in Grand Valley?

DH – No. I have not needed to turn off turbines in Grand Valley.

Public – So that is what will happen here, no turbines will be shut off.

Public – There is a moral obligation to turn off turbines over money received from the turbines.

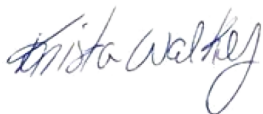
4. Next Steps

- KW – Advised for all members of the public to add their contact information to the sign in sheet, and noted that David Hayles contact information will be provided to those who provide email address.
- KW – Advised that the meeting minutes would be available on the Project website, and that the next meeting would occur in the Spring of 2016.
- KW – Thanked everyone for coming out to the CLC meeting.

The meeting adjourned 8:30 p.m.

The foregoing is considered to be a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

CLC Chair



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