

## K2 Community Liaison Committee Meeting #2

K2 Wind Power Project / File Name

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Date/Time: May 28, 2014 / 6:30 pm to 8:00 pm  
Place: St. Joseph's School, Kingsbridge  
84685 Bluewater Hwy 21  
Next Meeting: TBD  
Attendees: Jennifer Miltenburg (CLC member), Kim Burgsma (CLC member), Steve Buchanan (CLC Member), John Bennett (CLC member), Glenn Hubbers (K2 Wind), Paul Wendelgass (K2 Wind), Jay Shukin (K2 Wind), Joanne McDonald (K2 Wind), Dale Whiteside (Black & McDonald), Herb Shields (Stantec; CLC Chair), Andrea Terella (Stantec), Joe Hendriks (public), Bill Ster (public), Ellen Nyland (public), Bob Montgomery (media),  
Absentees: Absentees  
Distribution: Distribution List

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### Item:

#### Greetings - HS

- Safety Moment by HS – Identified exists and the evacuation meet-up location (in case of emergency everyone to gather in the front of the building to the side near the parking area).

#### Introduction of CLC Members - HS

- HS went around the room to facilitate introductions of those in attendance at the meeting.
- Due to the small size of the group, HS will allow questions from the public. The chair (HS) reserves the right to stick to the agenda and implement the Terms of Reference during the meeting. Issues discussed throughout the REA and ERT process will not be revisited.

#### Project Update

- JS provided an overview of the K2 Wind Project (the Project) through presentation material.
  - Project is a 270 megawatt
  - OPA signed a Power Purchase Agreement (PPA) for the project in 2011.
  - K2 Wind received REA from the MOE on July 23, 2013.
  - In late 2013, K2 Wind engaged AMEC Black & McDonald as the prime contractor for the project.
  - Commercial operation is anticipated for mid-2015 (noted correction to one slide – operations to start mid-2015 not 2014)
  - Project components include: 140 Siemens SWT 2.3 wind turbines, electrical collection and communication systems, operations and maintenance building, protection and

control buildings, meteorological towers, turbine access roads and temporary construction and laydown areas.

- Anticipated Project Timeline: Late 2013 – Preliminary civil work; early 2014 – access road, turbine excavations; spring 2014 – turbine foundations poured, electrical system and substation installation commences; July 2014 - turbines arrive, installation begins; mid-2015 – Project operations to begin.
- K2 Wind Site Manager (GH), provided additional details on the project timeline.
  - Mid-July will be the arrival of the first turbine, and then turbines will be delivered about 5 per week.

### **Construction Process**

- The K2 Wind Site Manager (GH) provided detailed explanation on the construction process, including turbine assembly and site preparation, as outlined in presentation material.
- Access road construction has commenced. Eighty roads to be completed for the Project.
- Some access roads require turnaround areas for delivery trucks, and these areas will be restored to pre-existing conditions when construction is complete.
- Roads will be 5 meters wide.
- Turbine foundations are made of poured-in-place reinforced concrete.
- Excavate foundation, pour mud mat, rebar bottom, rebar top/grounding, formwork/conduit, pour concrete and backfill external grounding.

*Public - How wide is platform at the bottom?*

- GH -The foundations are octagonal in shape with a diameter of approx. 19-20 m and 3 m thick.

*Public - Will concrete be poured during the winter months?*

- GH -Potentially, yes. K2 Wind ensures proper temperatures when pouring foundations in order for concrete to properly set.
- There is a standard methodology for pouring concrete during the winter months, should this need to occur.

*Public - When strip ground out, does relocation of till occur?*

- GH – soil is removed and placed on the property while construction occurs. Once turbines are in place till and soil is then re-distributed back onto the property and grading is done to improve surface drainage.

*HS - What should the public anticipate with arrival of turbines?*

- GH -All turbine parts will be trucked into the area. Each turbine delivery will require a total of ten trucks, which will be delivered in a specific procession, following a pre-planned schedule to provide time for unloading.

*Public - Where are turbines coming from?*

- GH -The majority of parts will be coming from CS Wind in Windsor and the Siemens Blade Factory in Tillsonburg.

### **Design with community in mind**

*HS - What should people expect during construction?*

- GH -Increased traffic, not many road closures expected; more likely temporary stoppages.

*Public – For landowners who are renting out their cropland, are the renters aware of the disruption of basic farming operations?*

- GH/JH-Agreements are with the landowners of the properties, and it would be up to the landowner to notify their renters about construction. However, K2 Wind also knows and communicates with many of the tenants.

*Public – Is grounding for lightning bigger than the turbine foundation hole? Should it be deeper than 1m?*

- GH -Grounding cable will be placed underground around each turbine, approximately 1 metre deep. Extra topsoil is used for grading at the end of construction, mostly to maintain proper surface drainage. Site drainage will be discussed with the landowner.
- GH - Foundation construction is designed to be a combination of rebar and concrete. The foundation is tested to ensure it has the strength to hold the turbine.
- GH - 240 km of collector line will be trenched. Other than one stretch of approx. 700 m, all collector lines will be underground. Directional boring will be used to minimize impacts for areas like driveways, waterlines etc. It is expected that starting in early July, about 900 reels of cable will be used. Residents may notice certain areas of trenching where conduit is sticking out of the ground, which is pre-work.

*Public - How many trenching crews?*

- DW - Three boring companies, three trenching companies have been hired and one company that does both. An additional trenching crew will be from AMEC Black & McDonald.

*Public – Is the installation of trenched powerlines just as complicated as the erection of the turbines?*

- DW – Not exactly the trenchers can complete about 700 m of trench per day, and the erection of one turbine per day, which can be dependent on weather, specifically wind.

*Public - How many kms of trenches will actually be visible and within the road allowance?*

- DW - Approx. 160 km would actually be in the road allowance and visible to residents when work is being completed, the rest should be traveling to the actual turbines and occurring on landowner property. There could be some flagging setup for narrower roads.

*Public – Do collector lines go to substation?*

- DW -Yes, the collector lines carry the electricity form the turbines to the Project's substation and transformer station.

*Public – What about un-used electricity?*

- GH advised there is no un-used electricity.

*Public - Concerned about stray voltage?*

- GH explained that stray voltage is the occurrence of electrical potential between two objects that ideally should not have any voltage difference between them. The collector

line will be buried and going in a three-phase bundle; therefore there should be no measurable stray voltage.

*Public – The electrical magnetic field (EMF) contained in the cable that is buried, can it impact a nearby animal?*

- K2 Wind advised that a study was completed, which measured EMFs in various scenarios. For instance, when standing in front of a microwave EMFs will increase, the same can be said with standing near the collector lines, however the EMFs increase in that area is no higher than common home appliances (such as a microwave oven).
- Regarding, stray voltage, the collector lines will not induce a voltage on the Hydro One neutral line. K2 Wind advised that the operations and all details in regards to that, will be discussed at the next CLC and that K2 Wind can include in the next meeting a more detailed explanation of collector lines, electricity and stray voltage.
- The 500 kV substation and switchyard property is located at the northwest corner of the Tower Line and Glens Hill Road.
- The 230 kV transformer station will be located on the SW corner of Lanesville Line and Belgrave Road and will be contained within 6 acres.
- The transformer station was planned to allow for the collector system to be predominantly buried, as requested by the Township of ACW and local residents.
- To allow most collector system to be buried, approx. half of the collector lines will be routed to the transformer station.
- Power is then stepped up to 500 kV prior to being fed to the Hydro One switching station and to the existing 500 kV transmission line.
- The substation houses the switching, control, protection, communication and metering systems.
- Hydro One is underway with work on the switching station. Work on the substation will commence in June.

*HS – To summarize: what local residents and business owners can see right now regarding substation construction is Hydro One activity, not K2 Wind operations correct?*

- GH – Yes, K2 Wind has not started their work yet at that site.

*Public - Which road will the collector line travel down?*

- K2 Wind Indicated roads it will be travelling down
- GH - Along the collector line system residents will notice a series of equipment that is above grade, consist of switches, and/or smaller bonding wires between phases, and/or splicing.
- GH - Along the collector lines, fibre optic cables will be installed.

*Public - How deep are collector lines and what happens to the lines crossing municipal drains?*

- DW -The collector lines will be installed 1 m to 1 ½ m deep, and the lines will most likely be run underneath the municipal drain.
- Chain link fence surrounding the substation and transformer station will be included. Hydro One also installs a wooden fence where the lines cross between the substation and switchyard. Landscaping will also occur around the station to help camouflage the station.

*Public - Will a pond be dug?*

- DW - Ponds are installed to maintain excess water during heavy rainfall; and that is what the buffer ponds are used for. However, dry ponds are also commonly used and a potential. These ponds would collect excess water during storm events and then dry up.

*Public - What is the average life span of a turbine?*

- PW – The manufacturer says there is a design life span is 20 years, however in reality it is probably longer. The oldest turbine units are 26 years old and still operational.

*Public - What about the weather conditions? Does that factor into the lifespan of a turbine?*

- PW - The type of turbine is selected specifically to handle the expected weather within the surrounding area in which they are constructed. These turbines have been designed to withstand winter conditions, snow, ice and summer temperatures and conditions.

*Public - Are all turbines moved during daylight hours?*

- GH - The movement of turbines will abide by the permitting and approvals obtained for the Project. For the most part turbines will be brought in during the day time hours. However, potentially trucks that are empty after delivering turbine parts could be driving out during the evening hours, depending on unloading timing.

*Public what is the length of blade and height of turbine?*

- PW - Blade length approx. 49 m and turbine height approx. 99 m
- GH - Night time installation of turbines is not planned and crew members will try to avoid working during the evening, however night time construction may occur later on in the season to avoid working in the winter months.
- Wind speed and weather is a concern and can interrupt turbine erection.

## **General Inquiries**

- *Public – Could weather impact your schedule?*

GH - Ongoing schedule re-evaluation will occur as different factors delaying construction come into play. Weather is probably the greatest concern and can cause delays. However, there are pre-determined plans to help address work delays due to weather.

- *Public - What is the next component that could prevent crew from meeting schedule dates?*

GH - Other delays could be cause by lack of workforce or machinery breakdowns. However, there are plans to help prevent and or deal with these obstacles and will be dealt with on an as needed basis, as there are already plans to help deal with potential issues that could delay the project.

- *Public - Is there enough manpower, especially since there are a number of projects already within the area?*

GH – K2 Wind and AMEC Black & McDonald are not relying on a single company to provide all the resources and companies are aware of the schedule, and therefore there are a number of contractors. Also, project managers are responsible for looking

ahead and dealing with any issues/delays; also contingency plans have been developed.

### **Committee Feedback/Discussion - HS**

- HS advised the CLC members to email certain dates that would work to have the next CLC meeting as well as times that should be avoided. It was noted that CLC meetings usually occur about 6 months apart from one another; therefore may be looking at a date at the end of the year or early 2015.
- K2 Site Manager noted that the construction is planned to commence at the south end of the project and move northward.
- HS - Summary of key notes/topics discussed during the meeting were highlighted, and included:
  - K2 Wind is moving forward with construction schedule;
  - Construction is building access roads;
  - Those access roads will connect to municipal road and potential temporary widening of intersections;
  - Construction will also require trenching processes for collector lines;
  - During both trenching and access road construction, K2 Wind does not anticipate significant road blockages. Road users will still be able to use local roads with minimal delays.
  - Details on the delivery of turbines by truck and the general movement of equipment, also noted that the majority of the turbine parts will be coming from Tillsonburg;
  - Overall, residents, businesses and road users should expect increased construction activity in the area this Spring and Summer with work moving along road allowances and some temporary road blockades as large equipment is moved into place.
- Once Hydro One completes their work, K2 Wind can begin their work on substations and collector lines connecting into the power grid.

### **Next Steps - HS**

- Stantec to draft and finalize CLC meeting minutes.
- Meeting agenda and presentation materials provided at the meeting will be posted on the K2 Wind website for any member of public to view.
- The next meeting date is TBD. K2 Wind will look at connecting a future meeting to a project milestone.
- If CLC members have questions they want K2 Wind to address, let the Chair know and this can be placed on the agenda.
- Coordination of the next CLC meeting, with CLC members will occur.

- K2 Wind to provide scan of poster to Stantec.
- K2 Wind Site Manager noted that actual pictures of the K2 Wind project will be made available at the next CLC meeting.

The meeting adjourned at 8:00 pm

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.

**Stantec Consulting Ltd.**

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