

Public Question and Answer Session (September 2012) Correspondence Summary

Correspondent	Type of Correspondence	Correspondence Summary	Response Summary
13	E-mail	Given that a large percentage of our corn crop in Ontario and North America goes to the energy market, how does the energy produced annually from a 1.9 MW turbine compare to the energy produced by a corn crop on a land base equivalent to the footprint of the turbine and related access roads?	<p>Based on information the Project Team has been able to ascertain, it appears that a wind turbine with its collector roads and the extra space around the base of a turbine, has a footprint of approximately an acre.</p> <p>A wind turbine generates between 500 and 600 times the annual energy that would be generated if all the corn grown on an acre was collected and used as fuel rather than try to make it into ethanol.</p>
13	E-mail	What is the anticipated dollar amount to be spent locally and Ontario wide prior to and during construction of K2 Wind?	<p>The Project overall has an investment of \$800 to \$900 million to purchase the equipment and construct the Project. Half of that is going to be spent in Ontario. So that means somewhere between \$400 and \$450 million of investment is going to be made here in the province. That is going to include things like the turbine blades which will be manufactured in Tillsonburg southwest of the Project area, and the wind turbine towers that will be manufactured in Windsor by a steel fabricating company there.</p> <p>Most, if not all of the construction labour force will be Ontario-based workers. Local sourcing will include procurement of reinforcing bar steel for the foundation and the concrete itself for the foundations. Each of these wind turbines has a foundation that probably takes 400 or more cubic yards of concrete. With 140 wind turbines, that's 50,000-60,000 cubic yards of concrete that will have to be sourced from local concrete companies which are located both in Huron and Bruce Counties, near the Project Location.</p> <p>Additionally, the Project Team is going to be buying aggregate. We're building about 90 km of roads in the Project area into private lands, 90 km of access roads, 5 m wide. When they're finished will have a gravel surface made from aggregate that is more than likely going to be sourced locally since there's lots of aggregate mines in the ACW area. The Project Team expects there to be large amounts of procurement for those kinds of</p>

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			<p>materials, the concrete and the aggregate. In addition, our constructors have estimated there's probably another \$10 million of other local service contracts that will likely be entered into. After lodging and the vehicle services and the fuel, that's associated with the construction activity, you're maybe looking at significant economic injection into the local economy during construction.</p>
143	E-mail	Background on vacant lot receptors, what they are and how we factor them in.	<p>The regulations under the REA require that we assume that every vacant lot in the Project Area that does not have a residence on it, has a virtual residence placed on it (a vacant lot receptor) and that we take that into account in our noise modelling for the Project. The decision from the MOE and their direction to wind power developers was to place those vacant lot receptors in areas that were consistent with the local building patterns. For example, if farms down the road had houses that were a typical distance off the road, then we would place our vacant lot receptors a similar distance off the road. In addition to that, as we've gone through the modelling, we've had feedback from some landowners who had some concern when they saw maps coming out about vacant lot receptors placed on their land and suggesting that that's not where they would choose to build a house. We were able to move a lot of those to locations that were more acceptable to the landowners. The vacant lot receptors have all been taken into account in our noise modelling as if they were a real house.</p>
113	Phone	What are the MOE stipulations for collector lines and what are the extra costs of having buried lines as opposed to above-ground lines?	<p>Burying the lines for the Project is not a MOE requirement. The Project Team made the decision in 2011 to bury its collector lines. This was in response to concerns that were heard from local community members and local public officials regarding visual impacts and stray voltage concerns.</p> <p>The Project Team did not have a confirmed estimate, but approximately estimated it to be in the millions of dollars of additional Project costs.</p>
151	Phone	Do you have complaints or illness issues from your workers who are exposed to wind turbine noise?	<p>We recognize that there are questions around wind turbines and possible health effects.</p> <p>The operator of the Capital Power's Kingsbridge I Wind</p>

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			<p>Operation described his experience of living near a wind turbine built in 2001 and working around wind turbines. His personal view was that he had not encountered any health effects from wind turbines. He also stated that his experience in the wind industry had been positive and felt that further wind development in the area would also be positive for the larger community.</p> <p>Depending on the weather conditions, if you stop walking and stop talking and listen, yes you can sometimes hear a swoosh, but definitely throughout your day, you'll never even know they are there.</p>
48	Phone	Interested in learning about any bonus programs for residents living within 1 km of the existing Kingsbridge I Wind turbines (as are being offered to those living within 1 km of K2 Wind turbines).	<p>The K2 Wind Project is a partnership of Capital Power, Pattern Energy and Samsung Renewable Energy and those partners made the decision to offer a benefit for people who live within 1 km of K2 Wind turbines.</p> <p>The question regarding Capital Power's Kingsbridge I Wind Operation 1 will be forwarded to Capital Power's management.</p>
152	Phone	Requested information regarding the environmental advantages of the Project.	<p>Wind power is emission free; there are neither air emissions nor water emissions.</p> <p>Wind is one of the cleanest forms of electric generation. The K2 Wind Power Project will offset the energy requirements of 75,000 homes in Ontario.</p> <p>A 270 MW wind power project, as compared to coal-fired electric generation, eliminates over 877,000 tonnes of CO₂ emissions per year. That's the equivalent of taking 157,000 cars off the road.</p> <p>A 270 MW wind project will eliminate over 3,900 tonnes of sulphur dioxide emissions and 1,330 tonnes of nitrogen oxide to the atmosphere per year.</p> <p>Wind projects don't use water. With wind, water consumption of coal power plants is reduced by over five million litres every day. That's over 1.8 billion litres a year of water consumption that's eliminated by generating electricity through wind power.</p>
25	Phone	Could you explain how stray voltage works, who is	Stray voltage is a well understood phenomenon that exists on

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		responsible for it and how K2 Wind intends to mitigate this issue?	<p>electric distribution systems particularly where system loading is unbalanced and that is common in rural areas.</p> <p>Stray voltage may result from imbalances on the electrical distribution system, particularly in rural areas, where the distribution system may be less robust.</p> <p>Unbalanced loads can occur, for example, if there are multiple lines on a distribution system that are different phases and farms or homes take their feed from only one of those lines resulting in a different amount of current going through the various phases on the distribution system.</p> <p>Changes to the system such as load changes or demand fluctuation will vary beyond the stray voltage present on the system. Placing electric wires in parallel can also change the level of stray voltage which exists on a distribution system.</p> <p>K2 Wind is therefore mitigating stray voltage by:</p> <ul style="list-style-type: none"> • Burying the collector system which will increase the distance from the overhead distribution system which will minimize stray voltage. • Using the types of cables that can be placed in the ground as close together as possible so that the electric fields cancel each other out. <p>If there is an existing issue with stray voltage, in accordance with regulations that the Ontario Energy Board has in place, residents can go to their electricity distributor and ask the distributor to test their farm to see if they do have a stray voltage problem.</p>
153	Phone	Could you tell me why turbine 223 has been moved from the back of the farm closer to the front?	Correspondent's contact information was recorded and the Project Team noted they would investigate the specific question and respond to him shortly.