

# BUFFALO ATLEE 1/2/3

## Frequently Asked Questions

*Updated: August 2019*

This document includes questions and responses received during initial public consultation undertaken during spring 2019, and updated through further questions and feedback received over the course of the summer. If you have any questions, or are interested in receiving a copy of any reports or references cited in these responses, please let us know, and we can send a copy by mail or email.

### Q.1. I'm worried about noise from the wind farm. Will it be noisy?

In order to obtain approval from the provincial government regulator, a noise impact assessment must be conducted which models the predicted sound levels at all residences located within 2 km of the project wind turbines. The predicted sound level at each residence is done using computer modeling which includes cumulative impacts from other noise sources in the area (such as oil wells), as well as environmental factors specific to the project area.

In Alberta, the permitted noise limit at a residence is 50 dBA during the day and 40 dBA at night. Wind farms operate 24/7, so when we prepare project layouts, the effective noise limit for both day and night is 40 dBA; this can be compared with what you might hear in a quiet library.

Frequently, this sound level limit is what determines how close a turbine can be to a house, and in most cases, turbines will not be built closer than about half a mile to a house.

## Q.2. I am concerned that the wind farm will affect wildlife. Will the project kill birds and bats? [Updated]

Wind farms are large-scale infrastructure projects that do have some impact on wildlife like birds and bats, however, through proper siting and design, this impact can be greatly reduced. Detailed design decisions like the use of existing roads and trails in the area, the minimization of the construction disturbance area, and the application of buffer distances between infrastructure and sensitive wildlife habitat all contribute to reducing the overall project impact.

Wildlife field surveys have been completed at the Buffalo Atlee projects and the survey findings have been used to finalize siting of roads, electrical collector lines as well as wind turbine locations so as to minimize potential impact on sensitive wildlife species.

The wildlife surveys were completed in accordance with the Alberta Environment & Parks (AEP) guidelines<sup>1</sup>, and the final layout needs to be reviewed and approved by AEP before it is approved for construction.

In addition, the area around the wind farms will be surveyed for 3 years following the start of operations in order to monitor actual impacts to wildlife. In the event that impacts are higher than anticipated, the projects will change how the turbines are operated to reduce the impacts to an acceptable level to AEP.

<sup>1</sup> **“Wildlife Wind Energy Directive”, Alberta Environment and Parks**

## Q.3. I live in the area and graze cattle. Will the turbines impact my health or the health of my animals?

There is no scientific evidence that wind turbines affect human or animal health. Many scientific articles have been written on this topic and no evidence exists to suggest a causal link between wind turbines and health impacts.

Health Canada carried out an extensive study in 2012 to investigate any concerns. Over 1,200 participants in Ontario and Prince Edward Island who live near wind turbines were surveyed about their health. The results support the research to date concluding that no evidence exists to support a link between turbine operation, or noise, and health.<sup>2</sup>

Presently, there are thousands of turbines installed across Canada and hundreds of thousands around the world that are operating safely and without human effect. In the Pincher Creek area of Alberta, wind farms have been present for over 25 years and often cattle can be seen grazing right under the turbines. Scientific research has shown that wind turbines can, in some cases, create an 'annoyance' factor for a small number of people. Some aspects of wind projects, such as the view and noise, can cause some people to feel annoyed, and this can lead to stress and other health side-effects.<sup>3</sup> This is not a direct cause of health effects, but rather a by-product of stress and anxiety.

Proper siting of wind farms and good consultation regarding wind farms and their planning, as well as adherence to government researched noise limits, all minimize the risk of annoyance for individuals living near wind farms. It is also worth noting that for the proposed project there is only one residence within 2 km of the project properties and the region is already heavily developed with extensive oil & gas industrial activity, therefore, these factors will also likely reduce the risk of local residents being annoyed by the project.

<sup>2</sup> **"Wind Turbine and Health Study", (Health Canada, 2015).**

<sup>3</sup> **"Wind Turbines and Human Health," (Frontiers in Public Health, June 2014).**

#### Q.4. I'm concerned about the view the turbines will create on the landscape. Will a photo simulation of the final project be presented? [Updated]

Photo simulations of the project from several vantage points around the greater project area are now available on the website. Typically, "higher impact" viewpoint locations are chosen for the photo-simulations in order to give a good sense of the level of visual impact that can be expected from the introduction of the wind farm in the area, so viewpoints were selected along Highway 555 and Highway 884, including from Jenner.

While it is clear that a wind farm will change the viewscape of an area, it is common that over time this change becomes less of an impact and perceived as simply part of the evolution of the landscape. In some cases, the viewscape is even seen as an asset to an area, drawing passers-by to come to an area to see the wind farm in action.

#### Q.5. How is turbine lighting determined? Will every tower have a light?

Transport Canada (the regulator for aviation lighting) assesses the lighting requirements based on the spacing and location of the turbines. Typically, turbines on the perimeter of the wind farm require lighting and the highest turbine every 900 m will also require lighting. Due to the variations in wind farm configuration, each project is assessed separately by Transport Canada to determine lighting requirements. We will try to install as few lights as allowed by law and regulation.

In order to minimize light pollution, we are also looking into various technologies which can help to reduce the visibility of the lights from the ground. Sensors and dimmers may be used to modify the intensity of lights based on meteorological conditions.

## Q.6. I own property near the wind farms. Will my property value be affected?

The projects will not have a major impact on nearby land use or on land value. Past research at a number of wind farms has proven that value of sales in and around wind farm areas is not affected by the wind project. In 2013, a Berkeley Lab study in the United States studied some 50,000 property sales in 27 counties spread throughout 9 different states hosting wind projects. The research looked at pre and post construction sale prices and distance to turbines and concluded that there is no statistically meaningful impact of wind turbines on the sale price for homes or farms.<sup>4</sup>

Another independent study on sale prices near wind farms was done in Canada in 2014. A study carried out at Guelph University analyzed the sales of over 1,500 farms (as well as over 5,400 rural residences) and found no link between price and distance to turbines.<sup>5</sup>

There have been other studies conducted on sale prices near wind farms, and all have shown the same results.<sup>6</sup> The Alberta Utilities Commission (AUC) has also held hearings where impacts on property value have been raised as a public concern with wind farms, and concluded that the evidence did not support the claim.<sup>7</sup>

<sup>4</sup> **“A Spatial Hedonic Analysis of the Effects of Wind Energy Facilities on Surrounding Property Values in the United States,”** (Ben Hoen, et. al., Ernest Orlando Lawrence Berkeley National Laboratory, 2013).

<sup>5</sup> **“The Effects of Wind Turbines on Property Values in Ontario: Does Public Perception Match Empirical Evidence?,”** (Richard J. Vyn and Ryan M. McCullough, University of Guelph, 2014).

<sup>6</sup> **“Impact of Industrial Wind Turbines on Residential Property Assessment in Ontario: 2012 Assessment Base Year Study,”** (Municipal Property Assessment Corporation, Ontario, 2014).

<sup>7</sup> **Alberta Utilities Commission, Proceeding 22966, exhibit 22966\_X0202\_RESResponsetoUndertakingEight-ExternalSt\_0215.**

## Q.7. Will there be a fund for decommissioning the project at the end of life?

Capstone commits to the full decommissioning and remediation of the project lands at the end of life of the projects, and is required to do so under the requirements for conservation and reclamation under the Environmental Protection and Enhancement Act. This includes a requirement to obtain a reclamation certificate from AEP.<sup>8</sup> Decommissioning the wind farms and reclaiming the land to the prior use is also a contractual obligation we have with our landowners in our leases.

As part of the AUC approval, we will be required to provide a decommissioning plan along with an estimate of the costs of decommissioning at the time of decommissioning, likely in 30 to 40 years. We will be required to comply with all applicable reclamation standards and laws in Alberta at the time of decommissioning.

For recent wind farm approvals, the AUC has not required a decommissioning fund to be set up at the start of operation. An upfront fund is not required for wind farms, compared with oil and gas activity, because of two key differences in these resources: the resource for wind is renewable, and therefore the project revenue from the market will never run out; and there is a substantial salvage value for the wind project components at the time of decommissioning (steel, copper, gravel, transformers, etc) located above-ground, which is easily accessible and reusable.

As long as the wind blows, the wind farms will have revenue to pay for the final decommissioning, and the salvage value of the reusable components and materials on site will offset a large portion of the costs at that time.<sup>9</sup>

<sup>8</sup> **“Conservation and Reclamation Directive for Renewable Energy Operations**

<sup>9</sup> **Andersen, P. D., Bonou, A., Beauson, J., & Brondsted, P. (2014). “Recycling of wind turbines,” in H. Hvidtfeldt Larsen, & L. Sonderberg Petersen (Eds.), DTU International Energy Report 2014: Wind energy — drivers and barriers for higher shares of wind in the global power generation**

## Q.8. Will the turbines vibrations dry out my nearby land?

No, wind farm vibration will not dry out your land. All structures, including wind turbines, have a natural vibration, and so some very imperceptible vibrations will be created. However, a recent study by Natural Resources Canada specifically studying wind turbines found that ground motion at 125 metres (410 feet) from a turbine was 100 times lower than the threshold of human perception. The report further concluded that it was unlikely that seismic 'noise' generated by the turbines would be perceived by residents.<sup>10</sup> At this level of vibration, no scientific evidence exists to suggest this would have any impact on the land.

**<sup>10</sup>Analysis of Measured Wind Turbine Seismic Noise Generated from the Summerside Wind Farm, Prince Edward Island," Natural Resources Canada,2015**

## Q.9. How will the wind farm support the local Community? [Updated]

The project proponents, Capstone Infrastructure and Sawridge First Nation, are committed to ensuring that the Buffalo Atlee Wind Farm projects are a net benefit to the host community. Capstone has been requesting feedback from all stakeholders in the community on how the Project might best benefit the local residents, and direct feedback is always welcome.

Based on feedback from the first Open House, Capstone is providing donations on behalf of the community to the Jenner School, for the purpose of procuring an AED device, as well as to the HALO rescue medevac helicopter organization, which services the Jenner community.

## Q.10. What will happen if there is an emergency at the Wind Farm? [New]

The wind farm will have a comprehensive Emergency Response Plan (ERP) that will be developed in close consultation with the Special Areas Emergency Services group and the regional fire departments in Jenner and Buffalo.

The operational risks are low at the wind farm, because the turbines are monitored 24/7 from a remote control centre. Any irregular operation is identified and stopped as soon as it is observed to prevent damage to the equipment. The site is located on private lands, and the towers are locked and secured, so nobody will have access other than authorized personnel.

In the event of a fire on site, normal emergency actions should be taken (stay in a safe place, call 9-1-1 and wait for authorities). Meetings have been held with local volunteer fire chiefs and deputies to discuss protocols and actions in the event of fire, and a final ERP will be prepared for the workers on site and distributed to emergency response teams, and can be made available for the broader community if desired, prior to the start of operations.

## Q.11. What will be done about large loads damaging local roads and creating dust during construction? [New]

Prior to the start of construction, local roads planned for hauling equipment and materials to site will be surveyed to assess the existing condition, and identify needed upgrades or improvements to ensure safe travel over the roads. Any road damage caused by construction vehicles will be repaired at the end of the construction period.

Dust suppression, including wetting gravel or topsoil piles, and limiting vehicle speeds on gravel or dirt road during very dry times will be implemented to control the amount

of dust created during construction. Furthermore, a Capstone site representative will monitor any concerns raised by the public.

### Contact Us

Jody Refvik, Consultation Manager

P: 403 290 8877

E: [buffaloatlee@capstoneinfra.com](mailto:buffaloatlee@capstoneinfra.com)

W: [www.buffaloatlee.com](http://www.buffaloatlee.com)

### Mailing Address

Buffalo Atlee Stakeholder Engagement

Suite 600, 322 - 11 Avenue S.W.

Calgary, AB T2R 0C5