FAQ

Glen Dhu 2 Wind Farm

Frequently Asked Questions

Last Updated: April 1, 2022

Project Design & Planning

1. Where will the Glen Dhu 2 Wind Farm be located? How big is it?

The proposed Glen Dhu 2 Wind Farm will be an expansion of our existing Glen Dhu Wind Farm, which is located near Barney's River Station in Pictou County, about 35 km east of New Glasgow along the TransCanada Highway. Capstone is preparing two proposed scenarios for the expansion of the Glen Dhu Wind Farm – one for approximately 50 MW and another for approximately 100 MW. The project is being planned on lands comprised of predominately privately owned property and a few parcels of Crown land and will connect to the Nova Scotia Power grid either at the same location as the existing facility or at a point on the grid further to the south.

2. When is the project being built?

The Glen Dhu 2 Wind Farm is in the early stages of the development process and has not yet been approved or gone through detailed design. Capstone intends to submit a bid for both the 50 MW and 100 MW expansion scenarios into the ongoing Nova Scotia Rate Based Procurement for 1,100 GWh of new renewable energy supply. Project proposals are due in May 2022 and successful projects will be announced around August 2022. If a project is awarded a contract, it would likely begin construction sometime in 2024 and enter commercial operation in late 2024 or early 2024.

3. Has the project already been approved?

The project has not been approved for construction yet. If a project scenario is selected in the procurement process, the development process will continue in the fall of 2022 and more information will be available about the exact number of turbines, location of the layout, as well as other key details on the engineering, and configuration of the site. The project will eventually be subject to a formal review under the Environmental Assessment process in Nova Scotia, which likely wouldn't start until sometime in 2023.

4. What happens at the end of the project's life? How will it be decommissioned?

The project will be contracted for at least 25 years, and likely will have a contract extension after that. In the event that the project can no longer operate, the equipment will be removed (decommissioned) and the lands will be remediated back to a similar land use to what was at the site prior to the project construction. The removal and land use remediation requirements are enshrined under contractual obligations with our landowners, as well as through the provincial and municipal permitting processes. It is also noted that since the site will have a renewable fuel source, then as long as the wind blows at the site, the wind farm will have some form of value to generate revenue, and this can ultimately pay for the final decommissioning of the site. As well, the salvage value of the reusable components and materials on the site (copper wiring, steel, etc.) will also potentially offset a large portion of the costs at that time.

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Site Benefits

5. *How much renewable energy will the project generate?*

The facility will have an installed capacity of up to 100 MW, which will produce approximately 300,000 MWh of electricity annually. This is enough new emissions-free energy to power more than 18,000 typical Nova Scotia households each year and will be part of the Province's overall plan to achieve a 53% reduction in greenhouse gas emissions by 2030 and 'net-zero' for the province by 2050.

6. *What are the economic benefits to the community if this project is built?*

On and off, a minimum of 100 local labourers and tradespeople will be needed during the construction period, which typically lasts 1 to 2 years. Construction materials such as concrete and gravel will be sourced within Nova Scotia, as close as possible to the site. In terms of long-term employment, a site manager and a handful of operations and maintenance staff will be required for the life of the project. Millions will be paid in local municipal taxes over the life of the project and millions more are paid to the host and adjacent landowners who have contracts for lease with the project.

Project Impacts

7. *What are the project impacts on wildlife?*

Wind farms are large-scale infrastructure projects, and all developments have some level of potential impact. That said, the impacts need to be properly evaluated and assessed early in the project planning. Wildlife such as birds and bats are most vulnerable, but with proper siting and design of the turbines, as well as thorough field surveys, impacts to wildlife can be quantified, avoided, or mitigated to an acceptable degree. Smart design decisions such as using existing roads, trails and clearings help reduce impacts, and the use of buffer distances between infrastructure and designated sensitive wildlife habitat areas and features (lakes, wetlands, nesting areas, etc.) all contribute to reducing the overall project impact. After years of assessment, the project will be thoroughly reviewed by experts in wildlife and habitat from the Ministry of Environment to determine if the total assessed impacts of the project are acceptable.

8. *Will every turbine tower have a light?*

Not every turbine will be lit, but many will. Typically, turbines on the perimeter of the wind farm require lighting and the 'highest' turbine every 900m or so will also require lighting. Transport Canada, the regulator for aviation lighting in Canada, assesses the lighting requirements based on the spacing and location of the turbines. Due to layout differences, each wind farm is assessed separately and may have slightly different lighting requirements. We always consult with Transport Canada and try to install as few lights as allowed by law. In order to minimize light pollution, we may also be able to use other technologies which can reduce the visibility of the lighting from the ground. For example, sensors and dimmers may be used to modify the intensity of lights based on aviation activity in the area as well as meteorological conditions.

9. Will noise pollution be a concern near the Wind Farm?

Modern wind turbine technology has greatly improved and mechanical noise from wind turbines is almost undetectable. Some aerodynamical blade noise will be generated as the blades glide through the air, however this is normally when the wind is blowing, and the sound of the wind often masks most of the noise from the blades. As well, the Glen Dhu project is close to a major highway which will already provides a lot of ambient noise in the area.

During the provincial environmental assessment process, we will be conducting a thorough noise impact assessment to ensure sound levels at all residences fall well within the provincial requirements, and this information will be presented to the public. The predicted sound level at each residence is done using computer modeling which considers worst-case scenario modeling for noise direction, as well as including cumulative impacts from other noise sources in the area.

10. Do wind turbines cause shadow flicker?

When the sun is in a particular position behind a turbine, and there is no cloud cover, rotating wind turbine blades may cast shadows in the windows of close by houses creating what is known as a 'flicker' effect. This occurs most often in the winter months early in the morning or close to sundown when the sun is low in the sky for longer periods. This effect is modeled and accounted for in the project design and shouldn't be a concern beyond about 1 km away from a turbine, or with homes that might have trees surrounding it. A layout and shadow flicker report will be prepared and shared with the community in the environmental assessment stage of the project.

11. Will the wind farm impact my property value?

The project will not have any significant impact on nearby land values. Market research at a number of wind farms across Canada and the United States has proven that value of sales in and around wind farms are not affected by the presence of the projects. In 2013, a comprehensive study in the United States assessed sales prices for 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 effect of wind turbines on the sale price for homes or farms.[1] Anecdotally, our existing Glen Dhu Wind Farm has been operating just west of Glen Dhu in Pictou County since 2011 and there are no reports of depreciating land values due to the wind farm to date.

[1] *"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).*