

## What does a wind farm include?

A wind energy project involves important infrastructure, including wind turbines, a substation, underground cables, and access roads. Project construction will also include road improvements.

- The wind turbines are interconnected by a buried medium-voltage collector network (1.6 m underground).
- The collector system leads to an electrical substation, where the voltage of the electricity is increased (high voltage).
- The electricity generated by the project is transferred to the high-voltage grid.

### **Components of a Wind Farm**



#### **About BluEarth**

BluEarth Renewables Inc. is a leading, independent power producer that develops, builds, owns, operates, and acquires wind, hydro, solar, and energy storage facilities across North America. Our portfolio includes over 740 MWac (gross) in operation, under construction, and contracted pre-construction, and over 7 GW of high-quality development projects that are actively being advanced. In addition, we provide third-party operations for over 300 MW of wind and solar across North America.

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# What is the footprint of a turbine?

The footprint is less than 0.2 hectares per turbine, once the project reaches operations. During construction, the footprint is larger to accommodate equipment access and component delivery.

The land under option for a 150 MW project is between 3,000 and 3,500 hectares, however this encompasses the entire area of the project and the majority of this land (approximately 99.55%) will be unused.

### **Construction Phase**

- 1 ha per wind turbine
- 1.2 ha for the access road (approx. 800 to 1,000 meters long and 12 meters wide)
- The area required for turbine installation is returned to its original condition at the end of the construction period.
- Landowners are consulted to minimize the impact on their activities.

### **Operation Phase**

- 0.02 ha per turbine
- 0.6 ha for the access road (approx. 800 to 1,000 meters long and 6 meters wide)
- 95% of the area around the turbine is restored to cultivation.
- Road maintenance is the responsibility of the project.



Surface area occupied

in OPERATION phase

Working area: 200 m² (0.02 ha)

Restored land

Access road

# How do wind turbines impact agriculture?

Wind turbines occupy a small fraction of the land on which they are sited, so they work in harmony with existing and established land uses. In rural settings, farming and ranching continue undisturbed, and crops can be harvested up to the base of a turbine. In Quebec, projects are being developed in compliance with the Cadre de référence relatif à l'aménagement de parcs éoliens en milieux agricole et forestier developed by the UPA and Hydro-Québec. They are being developed with the objective of minimizing impacts on farming and forestry activities. Infrastructure positioning will be determined in consultation with landowners and the Commission de protection du territoire agricole du Québec (CPTAQ).

### Best practices will be used, such as:

- Use existing farm roads.
- Position wind turbines on land with lower agricultural and forestry potential.
- Protect high-potential farmland, maple groves, plantations, managed forests, and other woodlands with high conservation value.
- Position wind turbines along lot edges or near wooded areas, whenever possible.
- Respect lot orientation as much as possible.
- Ensure proper drainage.
- Facilitate the return to agricultural production or reforestation of areas used for construction.

## How big are the turbines?

The precise model of the wind turbines will be determined after signing a power purchase agreement with Hydro-Québec. At this stage, it is estimated that the height of the wind turbine tower would be about 120 meters. Adding the blade in the vertical position, the height would reach approximately 200 meters. Each wind turbine could generate around 6 MW.

For comparison purposes, the diagram below shows the height of turbines in Quebec, along with other structures.



# How far would the turbines be from homes and buildings?

The current regulations specify a minimum distance of 500 meters between the base of a wind turbine and a residence or building in the MRC des Sources, and 600 meters in the municipality of Wotton. The regulations also stipulate 1,000 meters from the urban perimeter. In addition, the wind turbines will be positioned to respect MELCCFP noise limits, which means that the minimum required distance may be more than 500 or 600 meters from residences.