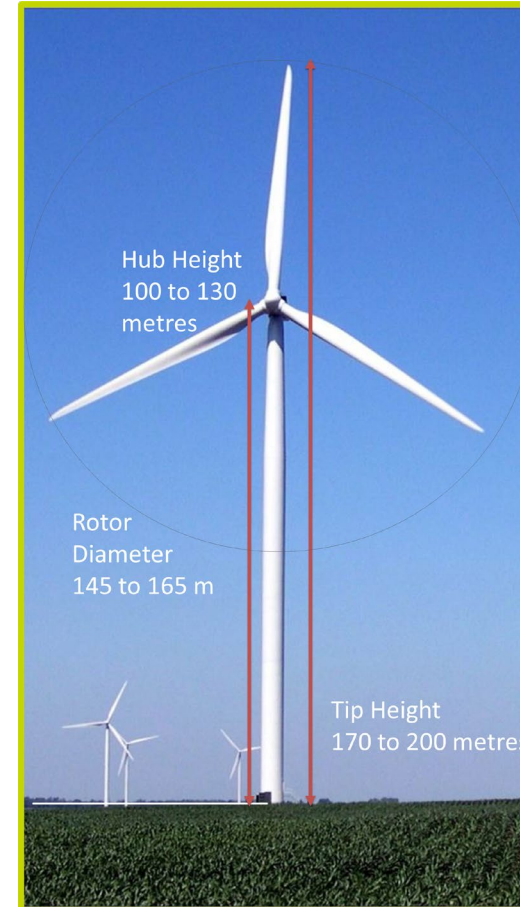


CONSTRUCTION & OPERATION

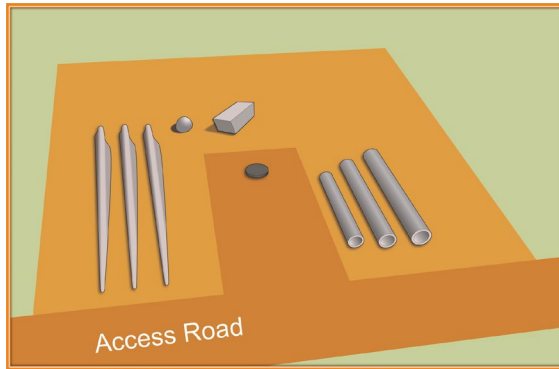
# Typical Project Infrastructure

- Wind Turbine
  - 16 to 19 turbines
  - Blades (70 to 83 metres)
  - Hub Height (100 to 130 metres)
  - Rotor Diameter (160 metres)
  - Capacity (5 to 6 megawatts per turbine)
- Access Roads
- Temporary Laydown Area
- Collector System and Project Substation
- Operation and Maintenance Building
- Temporary and Permanent Meteorological Towers
  - 1 temporary tower installed this year
  - 1-2 permanent tower to be installed during construction



# Access Road & Turbine Pad

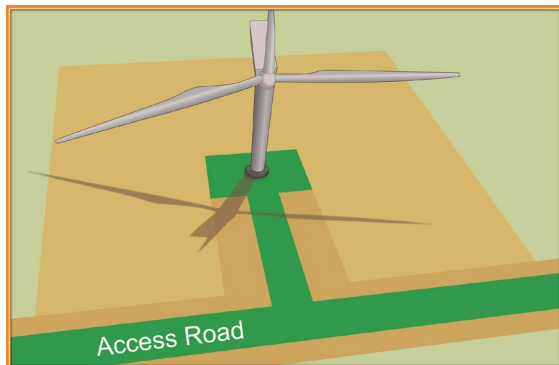
## Construction Phase – 2.5 acres / turbine (1 hectare / turbine)



A temporary turbine pad area of about 100 metres by 100 metres will be created at each turbine location, in order to deliver all the required turbine components to each turbine pad.



## Operational Phase – approximately 0.11 acres / turbine (0.05 hectares / turbine)



After construction, the access road width and the turbine pad will be reduced to limit impacts.



# Turbine Foundation & Electrical System Construction

**The turbines will be installed on top of a buried, cast-in-place reinforced concrete foundation.**



Foundation excavation. Diameter approx. 20 metres



Reinforcing steel installation. Between 40-50 tons of rebar



Each foundation requires approx. 400-600 m<sup>3</sup> of concrete

**The electrical system will consist of underground cables or overhead lines and a project substation. The cabling will be buried at a depth that will not interfere with normal agricultural practices.**

Buried collection



Substation connecting a project to a transmission line





# Turbine Assembly

## Transportation of turbine components

Approximately 12 trucks are required for the delivery of a complete turbine.



## Nacelle installation

The nacelle weighs about 60 tonnes.



## Blade assembly

The blades will be attached to the hub on the ground or lifted one at a time onto the hub.



## Tower assembly

Up to 6 tower sections.



# Operation and Maintenance Building & Permanent Meteorological Towers

- An operation and maintenance (O&M) building would be built or rented to allow operators to maintain the turbines and house spare parts.
- Wind speed, wind direction, temperature and humidity will be measured by permanent meteorological towers. We will permit a couple of locations but will install up to two permanent meteorological towers to monitor the wind resource during operations.



# Decommissioning & Reclamation

- The project is expected to be operational for up to 25 years.
- At the end of the project's life, we will evaluate whether the project should be decommissioned or repowered.
- Decommissioning:
  - The project is de-energized. Turbines and all other above-ground infrastructure is removed and the land is restored to its original land use.
  - Construction equipment will be utilized to remove infrastructure.
  - Underground infrastructure including electrical collector lines will typically be removed above 1 meter, or an agreed upon depth at the time of decommissioning.
  - Decommissioning and reclamation will be completed based on industry best practices.
- Waste and debris generated during decommissioning activities will be collected and disposed at an approved facility.

