

# Ghost Pine Wind Energy Center



## About NextEra Energy Canada

- » A leading renewable energy developer in Canada
- » A subsidiary of NextEra Energy Resources, LLC, the largest generator of wind energy in North America.
- » Focused on developing electricity derived from clean, renewable sources throughout the provinces.
- » Headquartered in Toronto, Ontario
- » Current operating wind energy centers located in Alberta, Nova Scotia and Quebec
- » Visit us at www.NextEraEnergyResources.com

### How a wind turbine works

- 1 A computer turns the nacelle and the rotor (which consists of three blades and a hub) to face into the wind. The turbine blades turn a generator to produce electricity. For safety purposes, the turbine shuts down automatically if the wind speed exceeds 55 miles per hour.
- 2 The electricity travels down the inside of the tower through electrical cables to a transformer at the base of the wind tower.
- 3 From the transformer, the electricity flows through an underground collection cable to an on-site substation.
- 4 From the substation, overhead electrical cables take the electricity to an offsite substation and into high-voltage transmission lines.
- 5 The electricity goes from the highvoltage transmission lines into local distribution lines.
- 6 The electricity is then distributed to homes, schools, businesses and other consumers.

# Hub Gearbox Nacelle Generator Weather Station Nosecone 1 Blade Tower

## Overview

- » Located in Kneehill County, Alberta
- » Operated by a subsidiary of NextEra Energy Canada
- » 81.6-megawatt wind generation plant
- » 51 1.6-megawatt GE turbines that are capable of generating enough electricity to power more than 24,300 homes
- » Each turbine is approximately 262 feet tall from the ground to the hub in the center of the blades
- » Commercial operation began in 2010

## **Benefits**

- » Provides employment opportunities
- » Adds tax base to the county
- » Delivers landowner lease payments
- » Creates no air or water pollution
- » Uses no water in power generation
- » Allows land to remain in agricultural use
- » Supports economy through purchases of regional goods and services