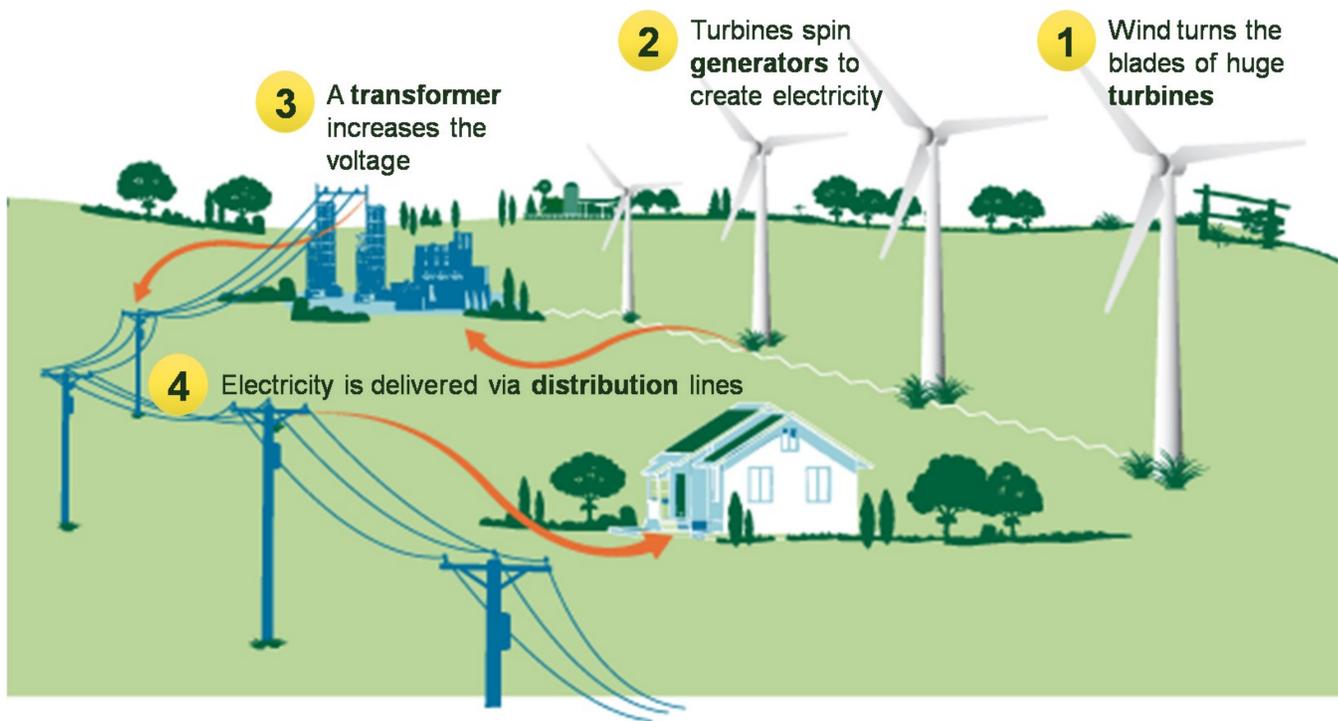# Wind Energy

What Is Wind Energy?

Wind is actually a form of solar energy caused by the uneven heating of the atmosphere by the sun, the changes in the Earth's surface, and the rotation of the earth. The wind is used to create energy with the help of wind turbines. Although there are no wind turbines in Bridgewater, the nearby Whynotts Community Wind farm has two turbines which can create enough power for more than **1,200 homes**.

1 Wind turns the blades of huge **turbines**

2 Turbines spin **generators** to create electricity

3 A **transformer** increases the voltage

4 Electricity is delivered via **distribution** lines

Myths About Wind Turbines:

• They are too loud!

Modern large-scale wind turbine manufacturers have virtually eliminated sound from mechanical sources due to improved design.

The World Health Organization has established that a sound level of around **30 decibels (dB)** in the room where people sleep is desirable.
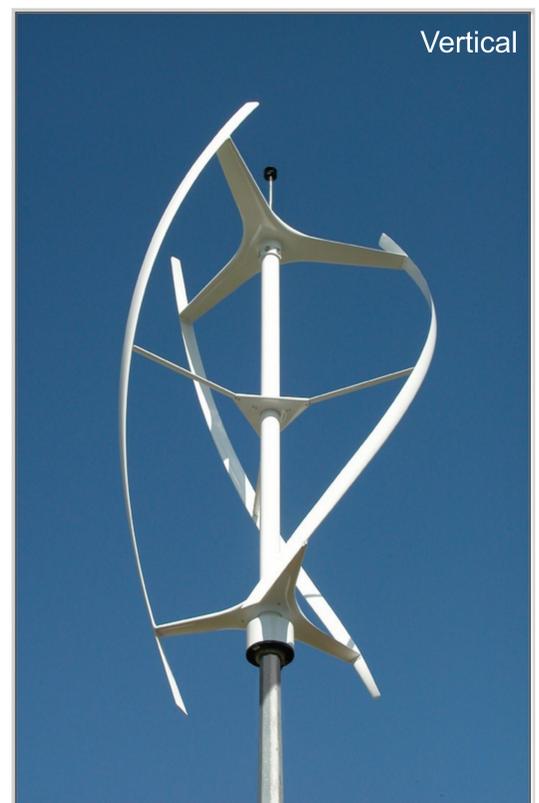
The compressor from a refrigerator operates between **40 to 45 dB**.

At a distance of 350 metres outside, a wind turbine would have a noise level of between **35 and 45 dB**.

• What about the birds?

A 2005 study by the USDA Forest Service found that wind turbines are responsible for less than 0.01% of all human-caused bird deaths.

Mortality Source Percent of Total

Buildings **58.2 %**

Power Lines **13.7 %**

Cats **10.6 %**

Automobiles **8.5 %**

Pesticides **7.1 %**

Communications Towers **0.5 %**

Wind Turbines **<0.01%**

Airplanes **<0.01%**

Vertical

Horizontal

Why Is Wind Power a Great Option?

It's clean: Wind energy does not result in emissions
It's local: it creates jobs and puts money back into the community though land leases and taxes
It's renewable: Wind energy does not use up natural resources
It's pays you back: through the enhanced net metering program, You get credit for any electricity you feed into the grid and are paid for producing more than you need

Wind produces approximately 14% of the electricity used in Nova Scotia!

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References:
Leon de Vreede (2014)
Nova Scotia Department of Energy
Nova Scotia Power
The Office of Energy Efficiency and Renewable Energy (EERE) United States Government