

Click on this link to watch a video on Green Power production in BC <http://www.vimeo.com/3048515>



FACT SHEET

Wind

Wind Power

What is It?

- Wind power has long been used to drive water pumps on Canadian farms – and for centuries in Europe to grind grain.
- Modern wind turbine technology is a result of advancements in aerodynamics, electrical engineering, electronics, instrumentation and meteorology, all of which have immensely improved the performance and efficiency of the modern wind turbine.
- Typical wind turbines can now generate up to 3 megawatts (MW) of electricity each and are 200 times more efficient than they were two decades ago.
- Efficiency gains from technological advancements have also made wind power more competitive, with the cost of wind generated electricity dropping by 80% in just 20 years.
- The generation of energy using wind creates no emissions. Properly designed and sited, wind power is one of the cleanest, greenest energy generation technologies in the world.

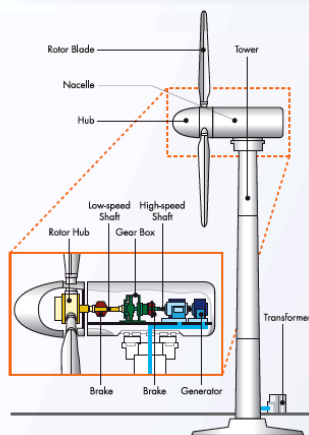
Why Wind?

- British Columbia has some of the best wind resources in Canada.
- Wind generated power is clean, renewable, proven and cost competitive.
- Wind energy projects are operating in over 70 countries around the world as well as in every other province in Canada.
- Wind supports hydro storage projects, allowing water to be stored when the wind is blowing. Conserved hydro power can then generate in hours when wind resources are not available.

The Technology

- Modern wind turbines spin the blades and convert wind into electricity. Wind turbines sit atop towers so that the blades of the turbine are free of obstacles and take advantage of higher and more constant wind speeds. When the blades turn in the wind the mechanical power is used to turn a generator and produce electricity. Cables carry this electrical current to transmission lines that then carry it to homes and businesses.
- The modern commercial scale onshore wind turbine typically stands 70 to 138 meters tall, with three blades each 35 to 45 meters in length. Offshore turbines can have blades exceeding 50 meters in length.
- A 2 MW turbine can generate the equivalent annual power usage of over 500 BC homes.
- The most economical and environmentally responsible way of generating wind energy is to develop wind projects with multiple wind turbines that use only one transmission line right-of-way; providing more power with a smaller environmental footprint.

¹ Based upon an average 30% capacity utilization factor and annual average electricity consumption of a typical BC home of 10 MWh per home per annum. See Gov't of BC source: www.gov.bc.ca/empr/down/energy_for_our_future_sept_27.pdf.



Cross-section of typical wind turbine.

Our mandate is to develop a viable independent power industry in British Columbia that serves the public interest by providing cost-effective electricity through the efficient and environmentally responsible development of the Province's energy resources.