

# Wind Energy Facts



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## *Is wind energy more expensive than conventional energy?*

No, wind energy is now the lowest-cost option for new electricity generation in Canada. In December, a competitive electricity-supply auction in Alberta yielded the lowest-ever rate paid for wind energy in the country, a weighted average of \$37/MWh.

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## *Are wind farms noisy?*

The continued development of wind farm technology over the past decade has rendered mechanical noise from turbines almost unnoticeable. At a distance of 500 meters the noise from one wind turbine is comparable to a quiet conversation or the noise emitted by a modern fridge (approx. 40 db).

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## *Are wind farms inefficient and work only for a fraction of the time?*

Efficient turbines that are installed today are a result of decades of research and development. A wind turbine can produce electricity 90-95% of the time. The average installed turbine generates enough power for approximately 1000 homes.

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### *Are wind farms dangerous to human health?*

A growing number of scientific, medical and acoustical experts have studied the subject of wind turbines and health around the world and published more than 25 comprehensive reviews on potential health effects. They conclude that there is no scientific evidence for any negative effects of wind turbines on human health. In fact, wind energy provides electricity without emitting greenhouse gases or air pollutants, and uses no freshwater to generate electricity – creating a healthier environment for people and wildlife. Health Canada published its own study in 2014, which found that wind turbine noise exposure was not associated with self-reported medical illnesses and health conditions.

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### *Are wind farms a danger for birds?*

A series of 10 scientific papers in the Canadian journal Avian Conservation and Ecology found that cat predation and collisions with windows, vehicles, and transmission lines caused more than 95 per cent of all avian mortality. During the assessment phase of any new wind energy project, a series of environmental studies is conducted. The proposed site will be monitored and bird populations evaluated. Project developers put mechanisms in place such as setbacks around nests or shutdown during bird migration to reduce potential risks to birds.

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### *Does a wind Farm lower property value?*

In 2013, the US Department of Energy funded a study that looked at more than 50,000 home sales in 9 states. All of the home sales were within 10 miles of a wind farm, and about 1,200 of the sales were within 1 mile. The study found “no statistical evidence that home values near turbines were affected”.

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### *Does wind energy need more back up than conventional power?*

All forms of power generation require backup and no energy technology can be relied upon 100%. It is a myth that equal amounts of additional power, such as natural gas or hydro generation, must be built solely to manage the variability of wind energy generation. Independent of wind energy, a certain level of reserve power is maintained to manage existing grid variability, and is needed for all types of electricity generation on the grid. The incremental reserve power required to manage the additional variability from wind represents only a small fraction of the total amount of wind energy added to the grid.

**Learn more about wind energy in Canada: [www.canwea.ca](http://www.canwea.ca)**

**Sources: CanWEA, IWEA, [www.energy.gov](http://www.energy.gov)**