

Wind Power **Pros and Cons**



PROS



CLEAN & RENEWABLE

- Emits no air pollutants or greenhouse gases unlike one of its main alternatives (fossil fuels).
- Creates **no physical waste**, requires no water, and does not contaminate bodies of water.
- The wind is unlimited, its energy can be harnessed day and night, in overcast/rainy weather, and all year round.

RELIABLE IN CANADIAN WEATHER

- Wind power can operate efficiently in harsh weather conditions.
- The installation process is more affordable and easier in comparison to other renewable energy sources.





HYBRID SYSTEM

 Wind turbines and solar panels working in tandem create large amounts of renewable energy that can significantly reduce carbon emissions and the reliance on fossil fuels.

LITTLE MAINTENANCE REQUIRED

- After the microgeneration wind turbine is assembled and raised, they are very low-costs to run and maintain.
- Wind energy is now the lowestcost option for new electricity generation in Canada.



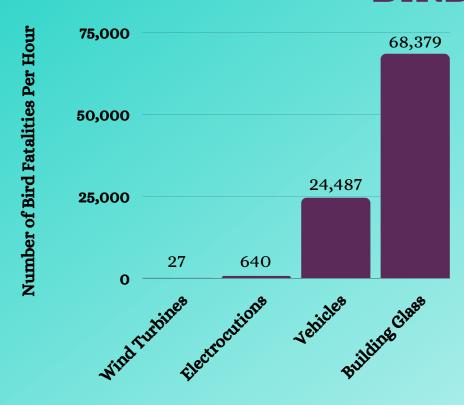
Feel free to reach out to us with any questions you may have or

learn more here!



CONS

BIRD FATALITIES



- The adjacent chart shows USA bird fatalities per hour in 2017.
- Black blades on a wind turbine can greatly reduce the number of bird collisions.

INITIAL COST

- There is an **initial cost** to acquire the turbine and tower system.
- Turbines can range in price depending on their size, with higher capacity turbines usually costing more.



VISUAL & AUDITORY CONCERN



- Many people are concerned with the **visual effects** that wind turbines have on the beautiful scenery of nature.
- Individuals are opposed to the sound generated by wind power. There is a multitude of factors that affect the noise level. Click here for more details.

INTERMITTENCY

- Turbines can only generate energy when the wind is blowing at least 14.4km/h (4m/s).
- Some areas do not have the wind speeds necessary to make wind power viable.
- Canada is blessed with **good winds** which can be seen here.





Sources:

- http://large.stanford.edu/courses/2014/ph240/lloyd2/
- https://windexchange.energy.gov/projects/economic-impacts
- $\underline{https://canwea.ca/wind-facts/affordable-power/}$
 - https://www.energy.gov/eere/wind/advantages-and-challenges-wind-energy
- https://nergica.com/en/study-solar-pv/

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