

WIND

INFORMATION

Wind is air in motion. It is produced by the uneven heating of the earth's surface by the sun. As a rule, wind speed increases with altitude and over open areas with no windbreaks. Good sites for windmills are the tops of smooth rounded hills, open plains and shorelines, and mountain gaps that produce wind funneling.

Windmills work because they slow down the speed of the wind. The wind flows over the blades causing lift, like the effect on airplane wings, causing them to turn. The blades are connected to a drive shaft that turns an electric generator to produce electricity.

In the past, wind was used in Michigan to pump water and grind grain. Today small windmills are used by Michigan homes to generate electricity, and many windmills generate electricity that is sold to utility companies.

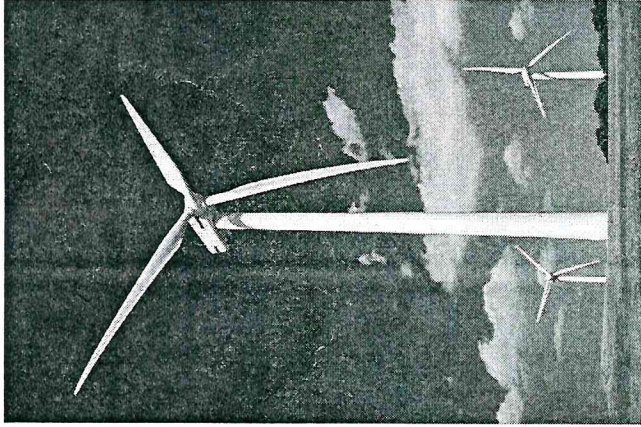


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energytopics.wordpress.com

ADVANTAGES/USES

- Inexpensive to operate and maintain.
- Leasing land for turbines may help save the family farm by providing additional income.
- Short installation time.
- Permanent energy source; once a system is purchased, maintenance is relatively cheap.
- Can be used on a small or a large scale.
- Cost-competitive against new fossil fuel plants.
- Produces little air or water pollution after turbine is manufactured.
- Does not create greenhouse gases that contribute to global warming and climate change.

DISADVANTAGES/LIMITS

- Production depends on the wind.
- Visually displeasing to some.
- Large wind farms may require new transmission lines.
- May kill birds and bats if placed in their migratory flight path.
- Turbines require rare earths that are becoming expensive.

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