

Activity Sheet 3: Debate the advantages and disadvantages of wind energy.

Prior to making decisions or confirming opinions, it is useful to consider all the facts. This activity focuses on debating the advantages or disadvantages of wind energy.

Scenario

In teams of either two or four people decide which viewpoint about wind energy you will debate;

- advantages or
- disadvantages

Set up your debating style, will you address the class or debate amongst yourselves? That is, will you have a formal or informal debate?

Explore

Read the information provided below to help inform your position. Review other credible sources of information to help gather your facts.

Hint: Write your facts on small cards that you can refer to during your debate.

Advantages of wind energy

- Once wind devices are installed, only maintenance costs are involved – the wind resource itself is free.
- Wind is renewable – it cannot be used up and will always be available.
- Wind can be used as a source of energy for people who live far from conventional sources or power supplied through power lines.
- Wind energy causes no polluting waste products.
- Wind farms can coexist with farming operations.
- It is much easier and faster to build a wind farm from many wind turbines than to build a power plant or hydropower station and dam to generate the same amount of electricity.

- It is impossible for a company or a nation to ration or boycott wind energy for its own purposes.
- Electricity from many wind turbines can be combined to generate large amounts of electricity.
- Wind farms need large areas of land but the footprint on the roads, turbines and power lines is less than 3% of the total land area.
- New technology is being developed to reduce the amount of bird deaths.

Disadvantages of wind energy

- Electricity generated from wind energy is more expensive than coal and gas generated power – but the cost is decreasing.
- The strength of wind is variable and unpredictable.
- Because wind does not blow steadily, the direct supply of electricity from turbines is unreliable.
- In isolated areas, people using wind power have to store electricity in batteries or use other ways to make up for changeable supply.
- Building wind turbines uses many resources and manufactured products. Each step causes some environmental damage.
- Wind turbines can have visual impact because they need to be located in open and exposed places (the visual effect is subjective – many people admire their aesthetic appeal).
- Sometimes birds are blown or fly into the blades.

Extension

Were there words or descriptions that you didn't understand? Research the definitions or talk to an engineer or project manager who can help provide an explanation or example.