

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

**Prior to making decisions or confirming opinions, it is useful to consider all of 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.