



## Using Renewable Energy Resources 3

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Q1 Tick the boxes to show whether each statement applies to wave power or tidal power or both.

	Wave	Tidal
a) Is usually used in estuaries.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Suitable for small-scale use.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Is a reliable way to generate electricity.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) The amount of energy generated depends on the weather.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) The amount of energy generated depends on the time of the month and year.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Q2 Tidal barrages can be used to generate electricity.

a) Explain how a tidal barrage works.

When the tide comes in the water flows through the turbines (making electricity) and then build up behind the barrage.

When the tide goes out the water can then be released at the desired rate to make electricity on demand as it turns the turbines

b) Give two reasons why people might object to a tidal barrage being built.

Initial costs are high - barrages can look unattractive and prevent access for boats and damage animal/bird habitats

No energy available at the turn of the tides - tide heights vary during the year.

What happens to make turbines go round?

Q3 Wave-powered generators can be very useful around islands, like Britain.

a) Number these sentences 1 to 6, to explain how a wave-powered generator works.

- 4 The spinning generator makes electricity.
- 2 The moving air makes the turbine spin.
- 5 The water goes down again.
- 6 Air is sucked downwards, spinning the turbine the other way and generating more power.
- 1 A wave moves water upwards, forcing air out towards a turbine.
- 3 The spinning turbine drives a generator.

b) Give two possible problems with using wave power.

1. High initial costs - spoiling the view - unreliable (depends on wind strength)
2. Only suitable for small - scale use at the moment - can be a hazard to boats



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