

# Oxford Revise | Geography | Answers

## Chapter 43 Reducing reliance on fossil fuels

All exemplar answers given are worth full marks.

1. a)

- i) Energy conservation is preventing the wasteful use of energy, but energy efficiency is reducing energy waste by using less energy to perform the same task.
- ii)
  1. Energy-efficient LED lighting
  2. Solar panels
- iii)
  1. Electric trams and greener hybrid buses, which have lower emissions
  2. Car-sharing, which reduces the number of cars on the road
- iv) This question is level-marked:

Level	Marks	Description
3	6–8	<ul style="list-style-type: none"> <li>• Accurate understanding of concepts and the interrelationship of places, environments and processes.</li> <li>• Applies understanding to deconstruct information and make logical connections throughout.</li> <li>• A balanced, well-developed argument. Judgements are supported with evidence throughout.</li> <li>• Uses geographical skills to obtain accurate information that supports arguments.</li> </ul>
2	3–5	<ul style="list-style-type: none"> <li>• Some understanding of concepts and the interrelationship of places, environments and processes.</li> <li>• Applies understanding to deconstruct information and make some logical connections.</li> <li>• Imbalanced argument with mostly relevant information. Judgements are occasionally supported with evidence.</li> <li>• Uses geographical skills to obtain accurate information that occasionally supports arguments.</li> </ul>
1	1–2	<ul style="list-style-type: none"> <li>• Isolated elements of understanding of concepts and the interrelationship of places, environments and processes.</li> <li>• Attempts to apply understanding to deconstruct information but this is flawed.</li> <li>• Unbalanced or incomplete argument with limited understanding. Judgements are supported with limited evidence.</li> <li>• Uses some geographical skills to obtain information with limited relevance and accuracy.</li> </ul>
	0	No acceptable response

Example answer: *Becoming more energy efficient results in using less energy for the same task. Energy conservation is preventing wasteful use of energy. Both allow for energy supplies to better meet demand, now and in the future. Energy conservation and efficiency result in energy supplies lasting longer. It takes a considerable amount of time to change a country's energy mix to include greater use of renewables, so there will continue to be a reliance on fossil fuels for some time. Since fossil fuels are in finite supply, prices will continue to increase and so will fears over energy security. It is therefore important that energy is not wasted, either in the production process or by people in their homes, in industry, or in transport use.*

**2. a)**

**i)** Energy security is the uninterrupted availability of energy sources at an affordable price.

**ii)** For example: the UK

Energy production in the UK peaked in 1999, largely from North Sea oil and gas. Since then there has been a sharp rise in imports. The Ukraine conflict in 2022 highlighted concerns over energy security and the need to increase the rate of energy diversification. Gas and oil remain important sources of energy for electricity generation.

In 2021 the UK obtained 19.4% of its primary energy from renewable and non-fossil fuel sources, with 39% of this from bioenergy, 30% from nuclear, and 17% from wind. The increasing use of energy from low-carbon sources is a trend that has been taking place throughout this century. The UK is committed to using energy from low-carbon sources and reducing reliance on imports. As a result, more electricity will come from wind power and from new nuclear power stations.

**3. a)**

**i)** A

**ii)** The level of energy consumption per person varies across the world. People in Canada, the USA, Europe, and Australia consume the most overall, at more than 2501 kg of oil equivalent. Less developed countries throughout Central and South America, Africa, and Asia mostly consume less than 2500 kg of oil equivalent, with the bulk of Sub-Saharan, Central, East, and West African countries consuming less than 500 kg of oil equivalent.