

Exercise walk-through

6.2

Global Energy Consumption

AP Environmental Science

Energy Resources and Consumption

AP Environmental Science ■ Unit 6

AP Environmental Science



80% fossil

Who uses the energy, and who has it

consumption

global use is rising, fastest in developing nations, and most of it is still **fossil fuels** ; wealthy nations use the most *per person*

distribution

resources are spread **unevenly** – oil here, coal there, and renewables wherever the sun, wind or rivers happen to be

Those two facts together drive trade, dependence and conflict: the countries that **use** the most are rarely the ones that **have** the most.

Check yourself

- 1 About what share of world energy is fossil fuels?
- 2 What process powers a nuclear plant?
- 3 Why do solar and wind need backup?
- 4 What is the only byproduct of a hydrogen fuel cell?



80%

Answers 1. about 80% 2. nuclear fission 3. they are intermittent 4. water

Exercises 2.1-2.3

2.1 Which use more energy per person: developed or developing countries? [1]

2.2 What is the world's dominant energy source? [1]

2.3 State one reason global energy use is rising. [1]

Exercises 2.1-2.3

2.1 Which use more energy per person: developed or developing countries? [1]

2.1

- Developed countries
-

2.2 What is the world's dominant energy source? [1]

2.2

- Fossil fuels
-

2.3 State one reason global energy use is rising. [1]

2.3

- Any one: population growth, industrialization, rising living standards

Exercise 3.1

3.1 Global energy consumption is rising mainly due to

[1]

☐

A falling population

B industrialization and rising living standards

C less transport

D fewer appliances

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3.1 B

- industrialization and rising living standards

Exercise 3.2 (a)

3.2 A developing country begins to industrialize rapidly.

(a) Predict what happens to its energy consumption.

[1]

Exercise 3.2 (a)

3.2 A developing country begins to industrialize rapidly.

(a) Predict what happens to its energy consumption.

[1]

(a)

- It rises (increases)

Exercise 3.2 (b)

3.2 A developing country begins to industrialize rapidly.

(b) Explain why.

[2]

Exercise 3.2 (b)

3.2 A developing country begins to industrialize rapidly.

(b) Explain why.

[2]

(b)

- Industrialization adds factories, transport, and appliances, and rising incomes increase demand, so energy use grows

Exercise 3.3

3.3 Explain why per-person energy use is higher in developed countries.

[2]

Exercise 3.3

3.3 Explain why per-person energy use is higher in developed countries. [2]

3.3

- Developed countries have more industry, cars, heating/cooling, and manufactured goods per person, all of which require large amounts of energy