



Challenges of our time – discussing solutions for future energy and sustainable homes

Do our homes contribute to climate change?

We use energy every day – to heat our homes, take a hot shower, cook, switch on the lights or charge our phones. But where does this energy come from – and what does our home have to do with climate change?

PART A – Where does our energy go? ★

- Think about an ordinary day at home. Which of your household activities probably requires the most energy? Write down two examples.
- Then compare your ideas with a partner. Which activities did you both identify?

PART B – How much energy do buildings use? ★ ★

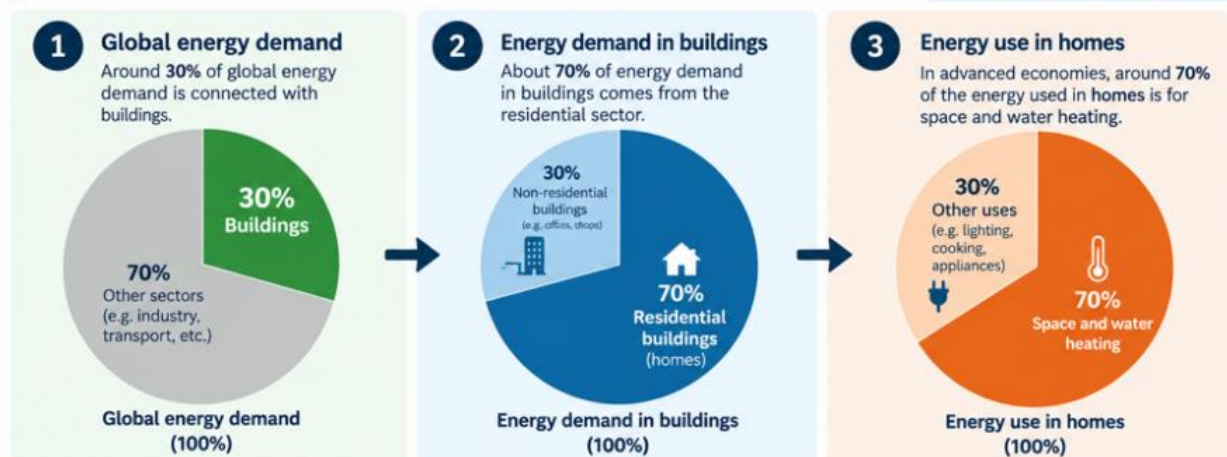
Study Material A.

- Describe the figures 1, 2 and 3 briefly.
- Explain what the figures suggest about the importance of homes for global energy demand.
- The figures in Material A describe millions of buildings. A chimney sweeper, however, encounters individual homes and heating systems. Which part of the energy use shown in Material A is particularly relevant to the everyday work of a chimney sweeper? Explain your answer.

Buildings are a major part of global energy demand – and in many countries, most of the energy used in homes goes to space and water heating.



The figures show global averages and data for advanced economies.



Material A: How much energy do buildings use?, based on [International Energy Agency](https://www.iea.org/), generated with AI

PART C – Germany and the UK: How do they compare? ★ ★

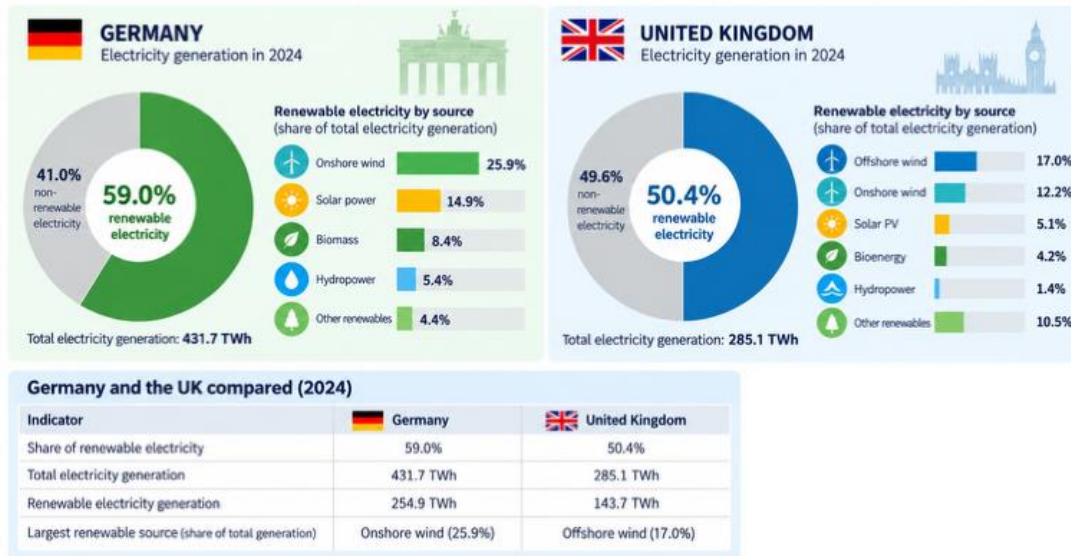
1. ANALYSE AND COMPARE

Use the figures in Material B.

- Identify the share of renewable electricity in each country.
- Identify one significant similarity between the two countries.
- Identify one significant difference. Consider both the renewable share and the renewable energy sources shown in Material B.



The charts show the share of renewable electricity and the main renewable energy sources in Germany and the United Kingdom in 2024.



Material B: Renewable electricity in Germany and the UK (2024), based on [Smard](#), [UK government](#), generated with AI

2. THINK BEYOND NUMBERS

National statistics show how an energy system is changing. But a chimney sweeper works with individual buildings.

- With a partner discuss the following question: "Can national statistics tell us whether one particular home is energy-efficient?"
- What information would you still need before you could judge the energy situation of an individual building? Think about the building, its heating system and the energy source it uses. Write down your ideas.

PART D – Renewable or non-renewable: why does it matter?

1. BUILD THE DISTINCTION

Watch the video until minute 1:18 and study Material C.

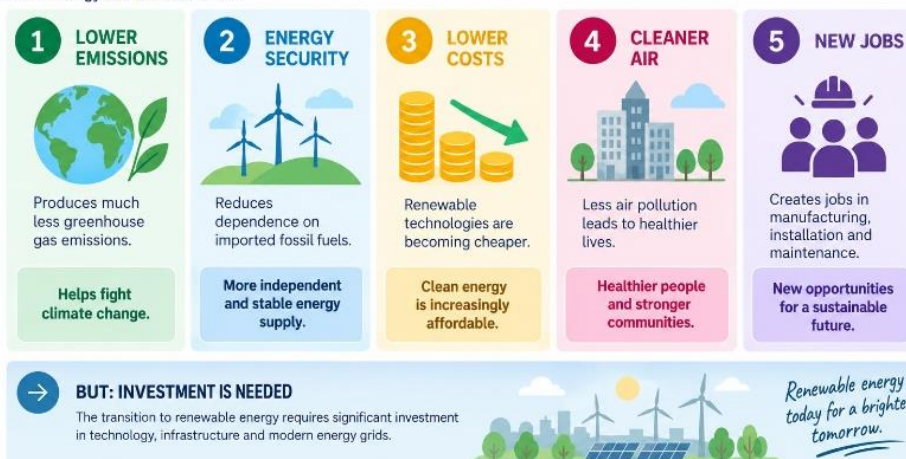
Take notes on renewable energies and non-renewable energies

- What are renewable and non-renewable energies?
- Give one advantage of renewable energies.
- Give one problem connected with fossil fuels.



What is renewable energy?

The United Nations highlights five key benefits of renewable energy. At the same time, the transition requires investment in technology and infrastructure.



Material C: Why renewables?, based on [United Nations](#), generated with AI



2. ENERGY CHANGE

- Use the video and Material C to explain how switching to renewables could address the problems connected with fossil fuels.
- Then formulate one shared conclusion: **Why is changing the energy system important – but not necessarily simple?**

PART E – From statistics to real buildings - a home visit ★ ★ ★

What can a chimney sweeper observe?

You have analysed statistics and information about energy sources on a global and national level. Now change your perspective to an individual level.

Imagine you are accompanying a chimney sweeper during several home visits.

Instead of looking at national averages, you are now looking at individual buildings and heating systems.

1. FROM DATA TO PROFESSIONAL OBSERVATIONS

Identify three things a chimney sweeper might observe that connect to the issues explored in Parts B – D. Consider:

- the type and condition of the heating system,
- the energy source used for heating,
- the age or condition of equipment,
- possible signs of inefficient energy use,
- possible opportunities for improvement.

Write down your ideas.



Did you know?

In Germany chimney sweepers inspect, clean and test chimneys and heating and ventilation systems to ensure they operate safely and efficiently. They measure emissions and check for dangerous carbon monoxide. They also advise homeowners on saving energy and help support the conversion of houses and heating systems to more environmentally friendly solutions.

2. EXPLAIN YOUR OBSERVATIONS

Choose two observations from your table. For each observation:

- Describe what the chimney sweeper might observe.
- Connect the observation to at least one fact or figure from Materials A – C and the video.
- Explain why it matters for the energy transition.

PART F – Reflection ★ ★ ★

Write a short comment to the topic: *Do our homes contribute to climate change?*

Write about 100-120 words.

Use evidence from at least three of the following:

- the IEA data on buildings from Part B,
- the Germany-UK comparison from Part C,
- renewable and non-renewable energy from Part D,
- the chimney sweeper's observations from Part E.

Support your opinion with specific evidence.