

Energy Resources and Energy Transfer: Fossil Fuels

Year 7

WC 6th January 2013

Energy Sources and Fossil Fuels

- **WALT: Define fossil fuels and know where energy originates. Describe some renewable energies.**
- I must be able to define the term 'fossil fuel' and list some examples
- I should be able to list some advantages and disadvantages of different energy sources
- I should also be able to analyse some data and draw a graph

Can you think of some energy types?

- Now think about where the energy for each of these things originated.
- Facts about energy:
 1. Energy cannot be created or destroyed – only converted from one form to another
 2. All energy originates from the Sun
 3. Energy is measured in joules (j)

Fossil Fuels

- Come from the bodies of prehistoric animals and plants
- E.g Coal, oil and gas
- These are non-renewable (i.e. they cannot be replenished within our lifetime)
- Some people say that these will run out within the next 100 years.

Why are we running out
of fossil fuels so fast?

Because we have changed from a world population that mostly lives like this....



To a situation where the majority of the world's population lives like this...



Fossil Fuel Usage per Capita

(world's 20 largest populations)

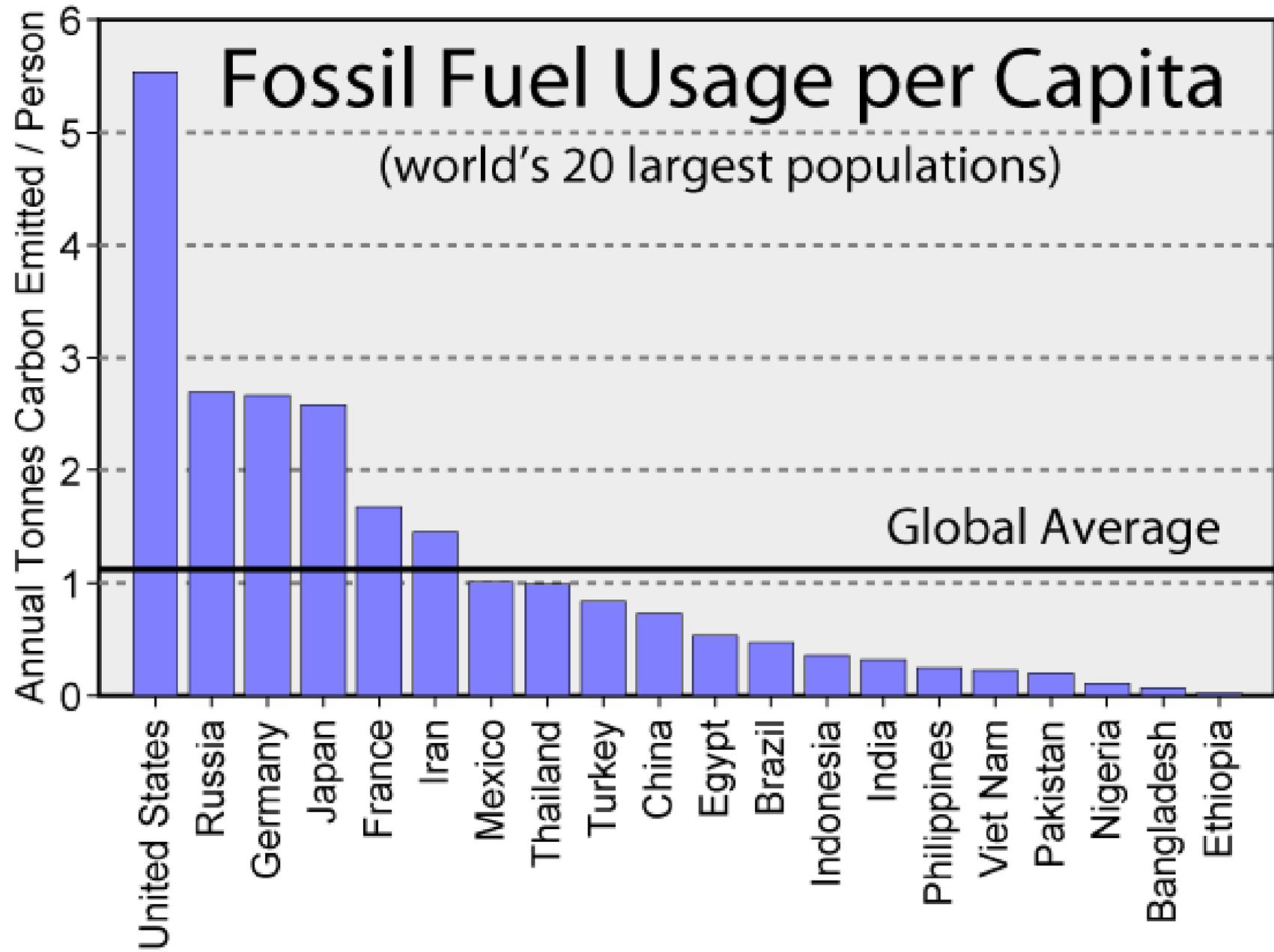
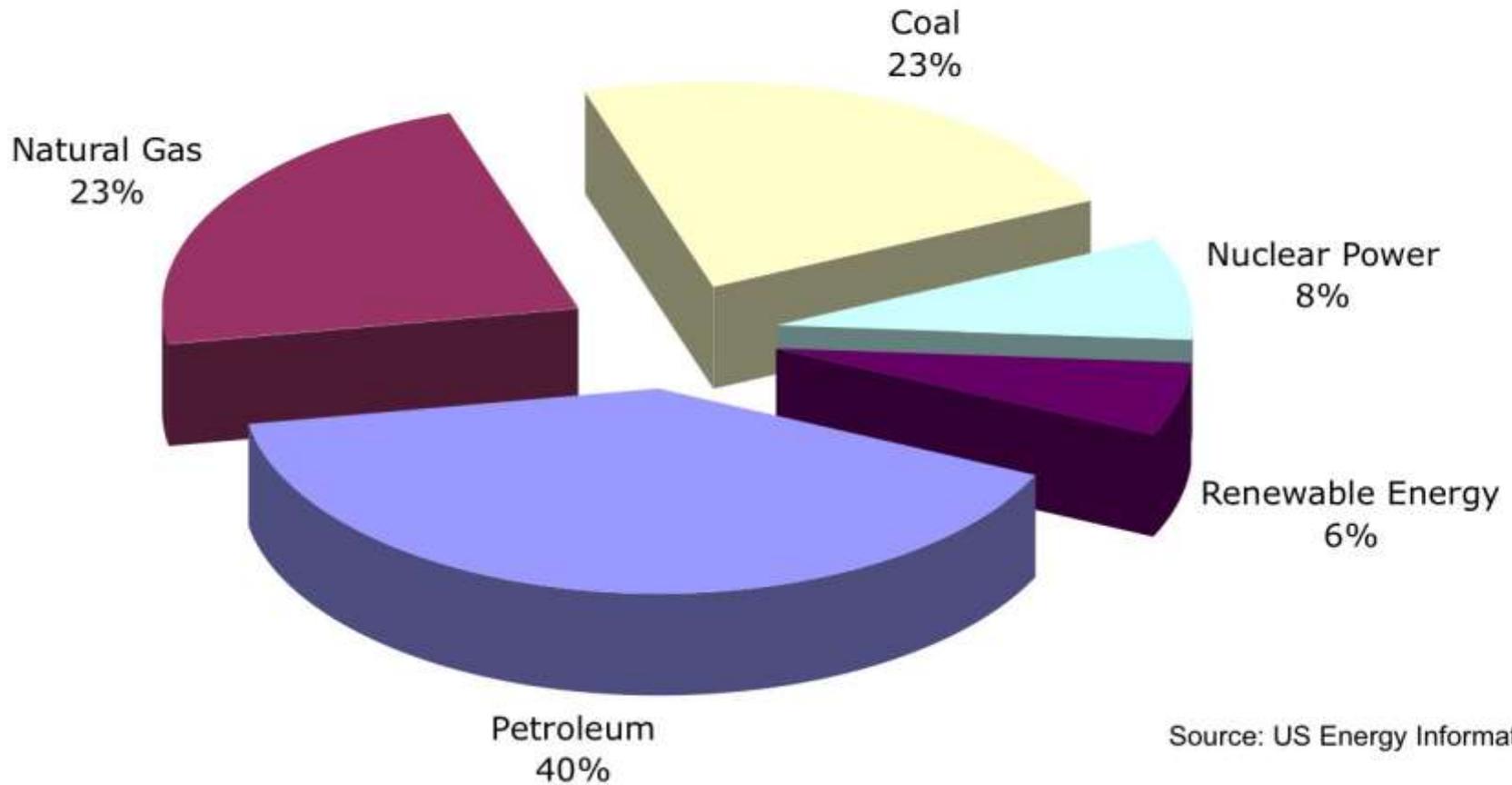
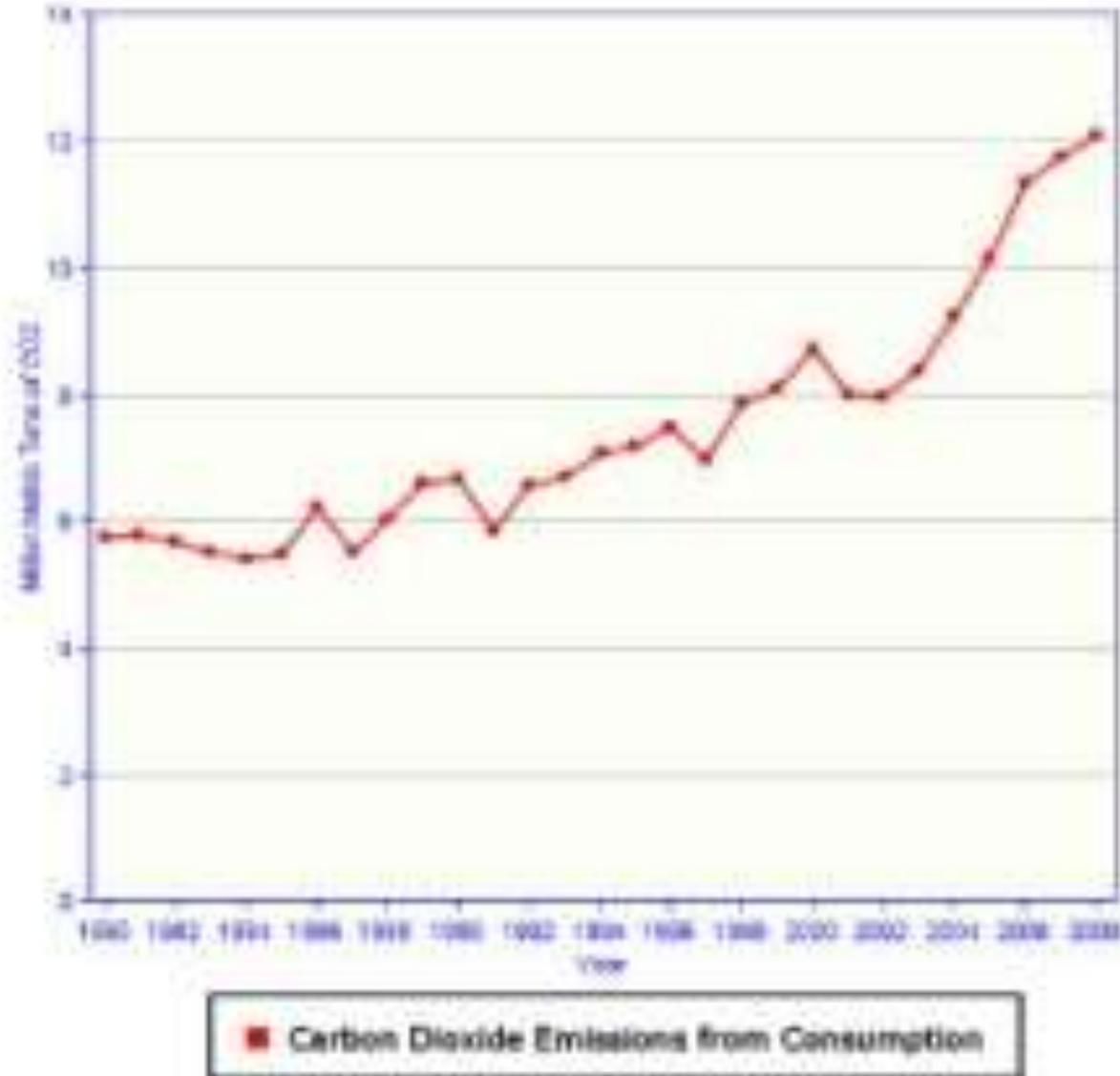


Figure 1: 86% of US Energy Consumption Is Fossil Fuels



Source: US Energy Information Agency

Kenya CO2 emissions between 1990 and 2008



Renewable Energies

- Can be replaced naturally therefore cannot run out
- E.g. solar, wind, wave
- Not so polluting?
 - Can use up non-renewable in the process of manufacturing and maintenance of its equipment

- Fill in the gaps on your handout sheet about energy sources
- Answer these questions:
 - What are the things people need to consider when choosing to use one of the energy sources?
Use p. 263 to help you
 - Do Exercise 18.2 on pp. 258-259 – questions 1 and 2 only (you will need graph paper)
 - Do questions 1 and 2 on p.264

Plenary

- You are given the choice of solar energy or gas to power your house. Write a short summary explaining which you would choose and why.