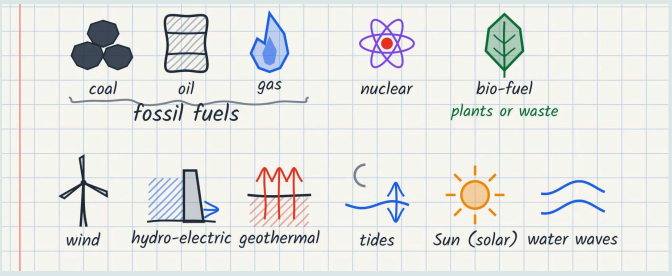
Energy resources

Renewable or not, and how they compare

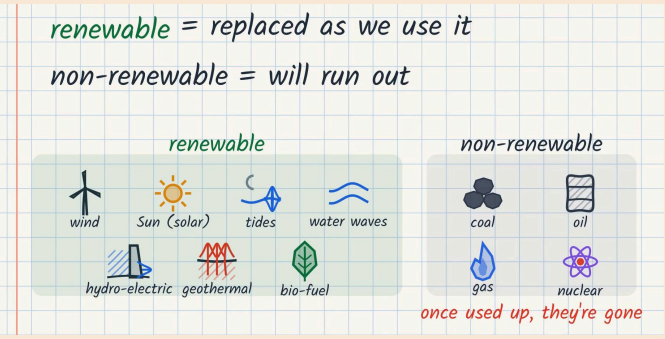
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Summary sheet

1 The main resources



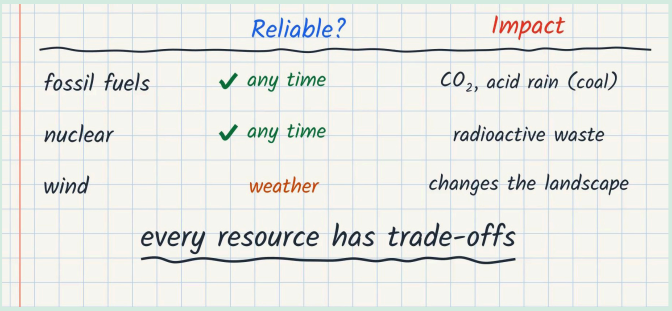
- **Energy resources**: fossil fuels (coal, oil, gas), nuclear fuel, bio-fuel, wind, hydro-electricity, geothermal, tides, the Sun, water waves.
- Three main uses: **transport**, **generating electricity** and **heating**.

2 Renewable or not?



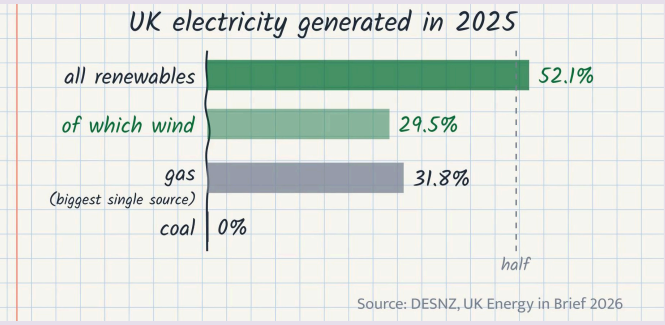
- **Renewable**: being replaced, or can be replaced, as we use it (wind, Sun, tides, waves, hydro, geothermal, bio-fuel).
- **Non-renewable** (fossil fuels, nuclear fuel): took millions of years to form or are mined. They will run out.

3 How they compare



- **Reliability**: fossil fuels and nuclear supply energy on demand, tides are predictable; wind and solar depend on the weather and time of day.
- **Impact**: burning fossil fuels releases carbon dioxide (global warming), coal can cause acid rain; nuclear makes radioactive waste; wind farms change the landscape; dams flood valleys.

4 Trends and hard choices



- UK 2025: renewables generated just over half of electricity (wind about 30%); gas was the biggest single source (about 32%). Coal: none.
- Science shows the problems, but choices also depend on **politics, money and what people think is fair**.

Exam tip

Compare, and be precise: "releases carbon dioxide" scores, "bad for the environment" doesn't. Solar gives more in summer because of longer days and more intense light, not heat.

Check yourself

- 1 Name two renewable resources and one non-renewable resource.
- 2 Give one advantage and one disadvantage of wind power.

Answers: 1. e.g. wind and solar; coal 2. No carbon dioxide while running; but depends on the weather