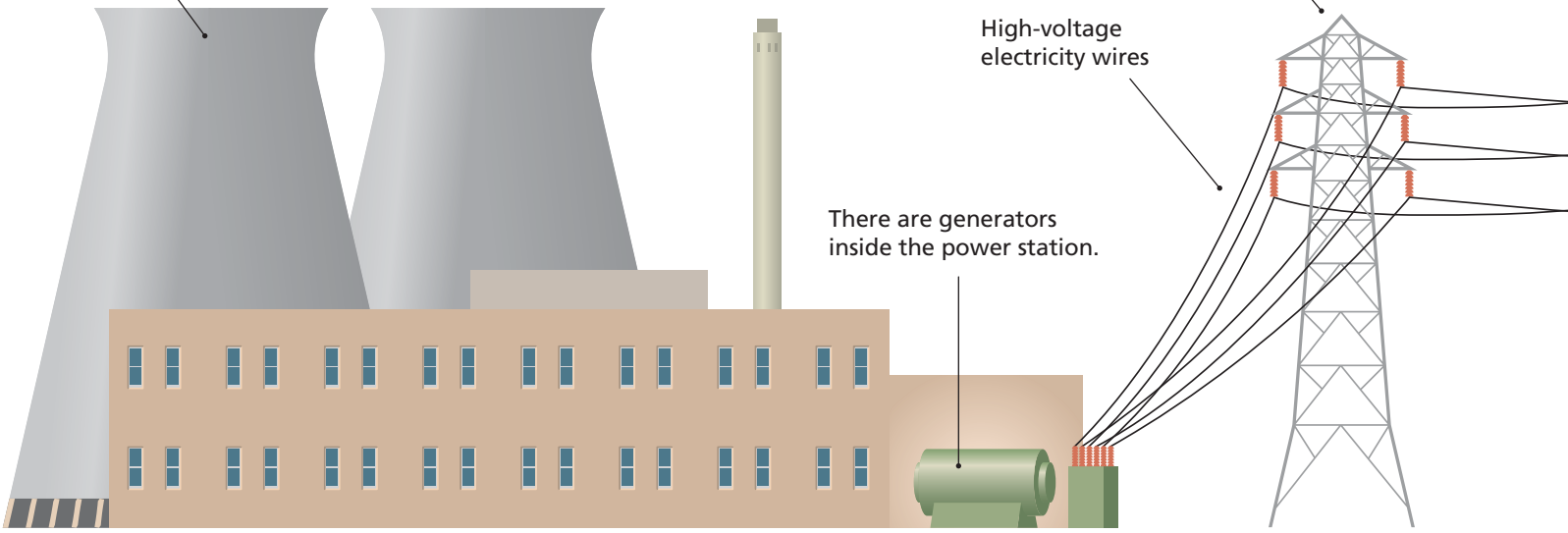
10 Power supplies

Most of the things we do in the modern world depend on a power supply. This is how electricity gets from a power station to homes and other buildings.



▼ **(Picture 1) The way electricity is carried from power stations to homes, offices and factories is called an electricity grid.**

MAINS ELECTRICITY is made, or generated, in a power station (Picture 1).

Getting power to our homes

Once the electricity has been generated, it must be moved to where it is needed. The wires from the power station carry a very high voltage so they must be kept safely away from people. This can be done by putting them in plastic sleeves and burying them in the ground (Picture 3), or by hanging them in the air (Picture 2). It is very expensive to bury cables, so outside cities most cables are hung in the air from towers, or pylons. Air is used as a cheap insulator (Picture 2).

Picture 1 shows how power is taken from a power station to factories, offices and homes. The pattern of cables is called an **ELECTRICITY GRID**. The voltage in the cables from a power station is often as much as 400,000 volts. This is the best voltage to carry electricity long distances.

When the electricity supply gets near to the place where it is needed, the voltage is stepped down to about 240V.

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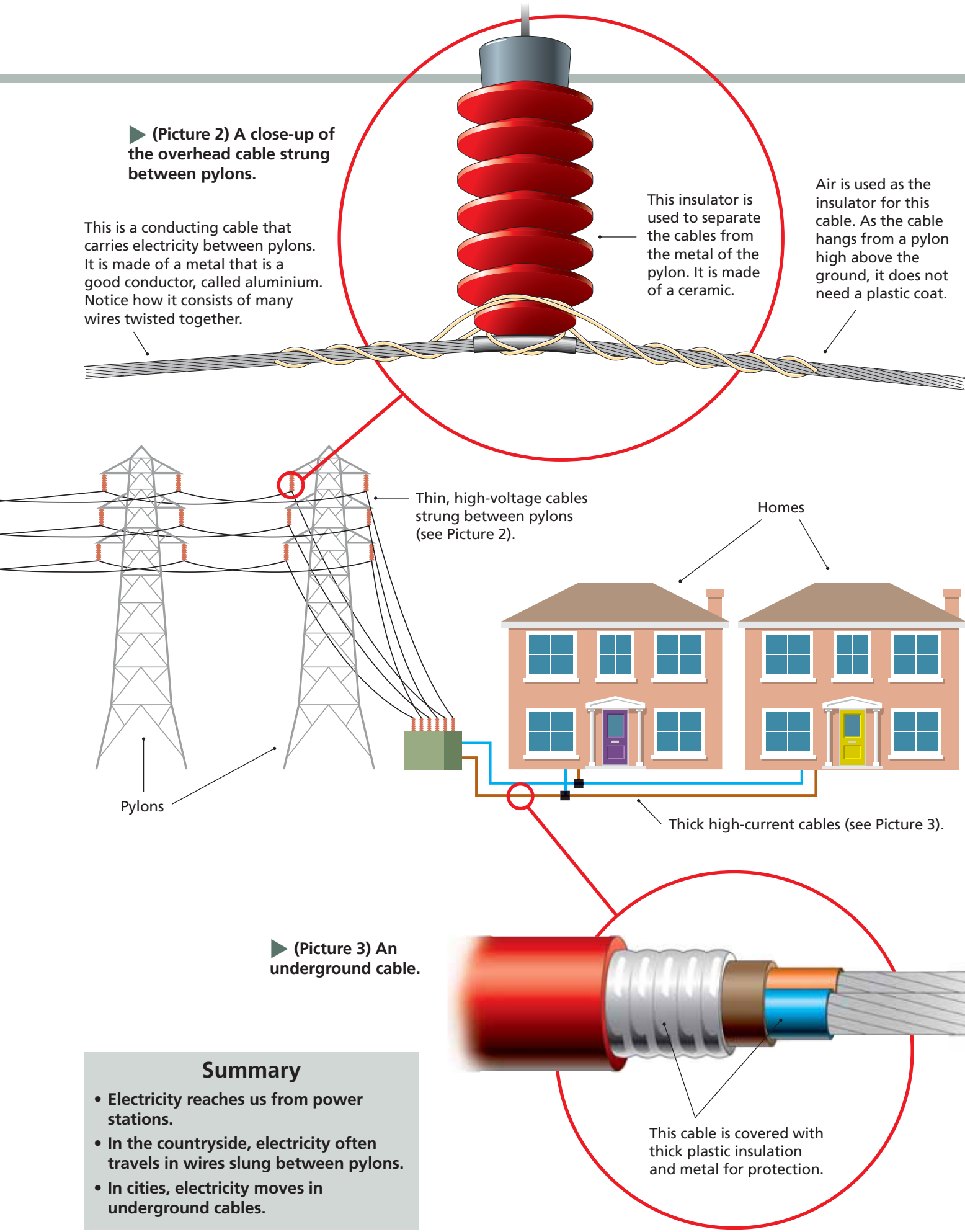

▶ (Picture 2) A close-up of the overhead cable strung between pylons.

▶ (Picture 3) An underground cable.

Summary

- **Electricity reaches us from power stations.**
- **In the countryside, electricity often travels in wires slung between pylons.**
- **In cities, electricity moves in underground cables.**

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