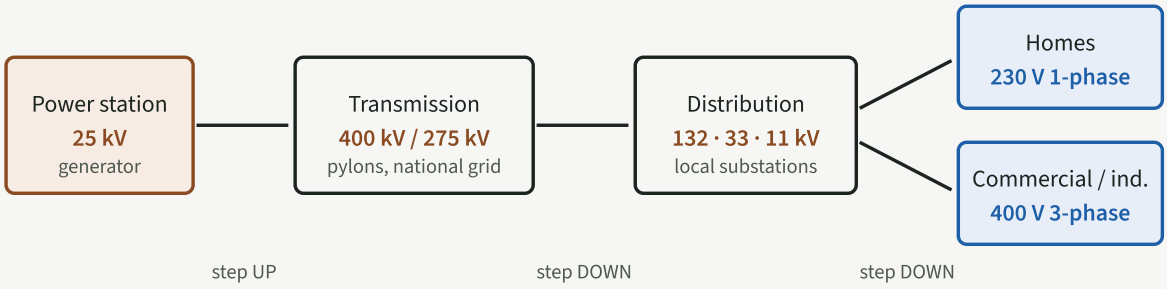
GENERATION, TRANSMISSION AND DISTRIBUTION

WHY SEND ELECTRICITY ACROSS THE COUNTRY AT 400,000 VOLTS?



1. **Generate:** fossil fuels or nuclear energy make steam, which drives a turbine and generator at about **25 kV**. Solar and hydro are other sources.
2. **Step up** to **400 kV** (275 kV is also used) to transmit across the country, say from Cornwall to Birmingham. A higher voltage means lower current for the same power, so thinner cables and smaller losses.
3. **Regional transformers** step down to **132 kV**, then local ones to **33 kV or 11 kV**. This is distribution. A big factory might take 11 kV directly.
4. **Step down again** for streets: **230 V** for domestic, and **400 V** for commercial and industrial properties (shops, schools, factories).

LEARN THESE	VOLTAGE
Generation voltage	25 kV
Transmission voltage	400 kV (also 275 kV)
Distribution voltages	132 kV · 33 kV · 11 kV
Supply to buildings	400 V 3-phase · 230 V single-phase

Most houses have a **60, 80 or 100 A** main fuse. Transformers only work on AC.

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