

TRANSFORM are used to step electric voltage up or down before it makes its way to its final destination. Original power (DISTRIBUTE) voltage can range from 7,200 to 24900 volts depending on:

- your electric utility (PROVIDE) practice;
- the distance to the furthest member;
- the amount of load served.

That's much too high a voltage for safe home, or business, use. (TRANSMIT) lines connect the power to (STATION) brimming with transformers and control equipment; this is the first place where they transform the voltage to more (MANAGE) levels. The voltage then travels through distribution lines, takes one or two more steps down and arrives at your home. Power beats into your home's (ELECTRIC) outputs and lights at 120 volts, while water heaters and HVAC (heating, ventilation and air conditioning) systems receive 240 volts, both considerably lower than the original voltage.

Here's a quick look at how transformers actually work for a (TYPE) American home. Transformers start with an iron core; on two sides of this iron core, wire is coiled; on the high voltage side the coil is wrapped around the core many times, this side receives or produces high voltage. On the other side the coil is wrapped around fewer times receiving or producing (LOW) voltage; as the electricity flows through the high voltage coil, it creates a (MAGNET) field and induces a lower voltage in the other coil. That's how transformation takes place. Transformers are everywhere in our (DAY) lives, not just on your utility providers lines. Take your cell phone (CHARGE), for example; charging your cell phone with 120 volts will fry it (INSTANT), so the charger converts the voltage to a more tolerable 5 volts, or so. The use of electricity touches nearly every aspect of our modern lives and we have transformers to thank for bringing it (SAFE) into our homes.