How electricity works

1. **POWER SOURCE**
   - Electricity is generated here. Fuel, such as coal, uranium, or biomass heats water, making steam that drives a turbine, creating electrical energy. Power also can be generated from other renewable sources, such as wind. Transformers located near the power source ‘step up’ the voltage so that electricity can travel long distances.

2. **HIGH VOLTAGE TRANSMISSION LINES**
   - Transmission lines deliver electricity over long distances from power sources to transmission substations closer to homes and businesses. Voltage can be as high as 1,000-kV, but the most common high voltage lines are 230-kV or 345-kV.

3. **TRANSmission SUBSTATION**
   - Transformers at the substation ‘step down’ the voltage. From here electricity flows to a network of distribution substations closer to end users.

4. **DISTRIBUTION SUBSTATION**
   - Transformers here ‘step down’ the electric energy even further to a lower voltage for distribution over short distances.

5. **DISTRIBUTION LINES**
   - These lines carry the electricity to smaller transformers, usually attached to poles, which further reduce the voltage for delivery to homes, businesses and other end users.

6. **HOMES, FARMS, SMALL BUSINESSES AND LARGE INDUSTRIAL USERS**