Electricity is a very cheap way to transfer energy.

Electricity can be generated from renewable sources such as Hydro or wind.

Alternating current (AC) electricity is used because it can be efficiently and easily converted between voltage levels as needed.

This allows the power lines from the generator to operate at high voltage with low current, and then with local power supplies at lower voltage and higher current.

A typical generation system will have 6 stages.

The rotating magnets within the row of field coils generate electricity. Rotational motion is provided by steam, liquid or wind.

Most of the world's energy is produced using steam, obtained from coal, oil, gas or nuclear energy sources. The national power grid is usually a high steel tower carrying several cables, with the support every 250-500 m in straight lines.

The LAN is usually on tall wooden poles with few cables for every 100 meters. Cities use underground wiring for safety reasons.