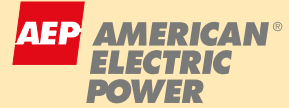
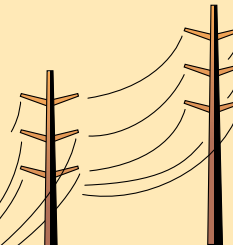
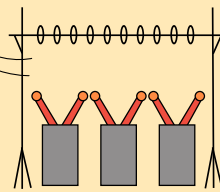
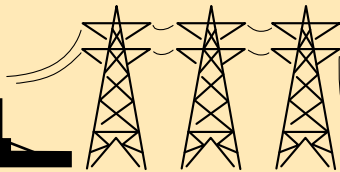
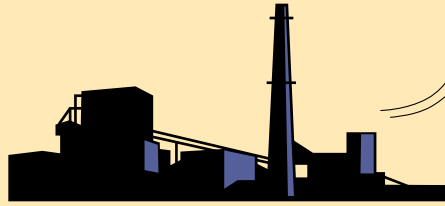


# How the AEP Electric System Works



Essentially three kinds of power lines exist between AEP customers' homes and businesses and the company's power plants — extra high voltage (EHV), high voltage and distribution lines. To use an analogy, EHV lines are like electrical interstates, high voltage lines are like limited-access four lane roads, and distribution lines are like two-lane roads that eventually connect to your driveway.



## 1 Generation Stations

Electric energy is created at a power plant. AEP has 38,000 megawatts of generating capacity.

## 2 EHV Transmission

AEP moves power long distances from where it is created to where it is consumed over electric transmission lines. Extra High Voltage (EHV) lines are generally 765 kilovolt (kV), 500 kV and 345 kV on the AEP system.

## 3 Substations

Substations direct the flow of electricity and transform the voltage to different levels. These substations reduce the EHV voltage to lower voltages.

## 5 Substation

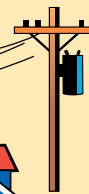
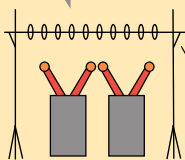
Substations transform the 138 kV electricity into lower, distribution level voltages such as 34.5 kV, 12 kV or 7.2 kV.

## 6 Primary Distribution

These main lines (also called circuits) connect substations to large parts of the community.

## 4 Local Transmission

138 kV is the primary local transmission voltage AEP uses to move power shorter distances, to different parts of a city or county, for example.



## 7 Lateral Distribution

These smaller capacity lines deliver electricity to neighborhoods and other smaller groups of customers.

## 8 Individual Service

This is the line to the individual customer. Smaller transformers step down the voltage to levels that customers use, typically 120/240 volts for residences.