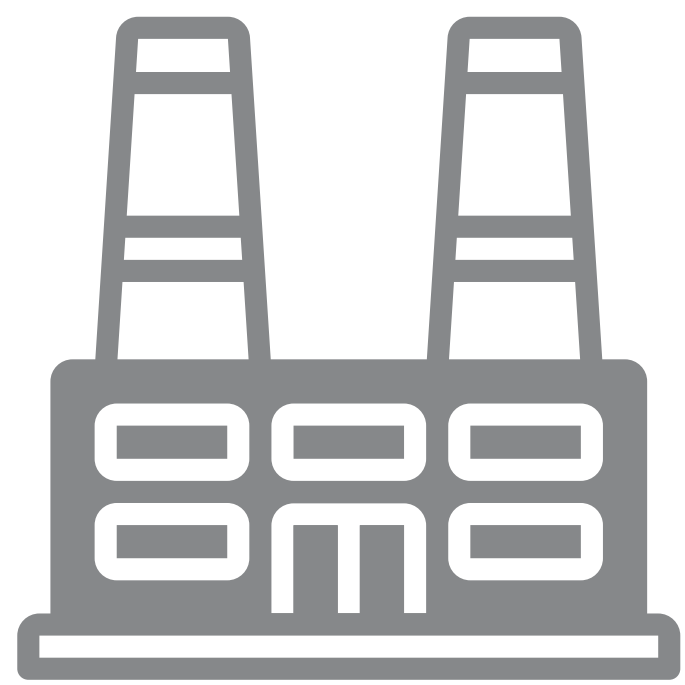


HOW THE SYSTEM WORKS



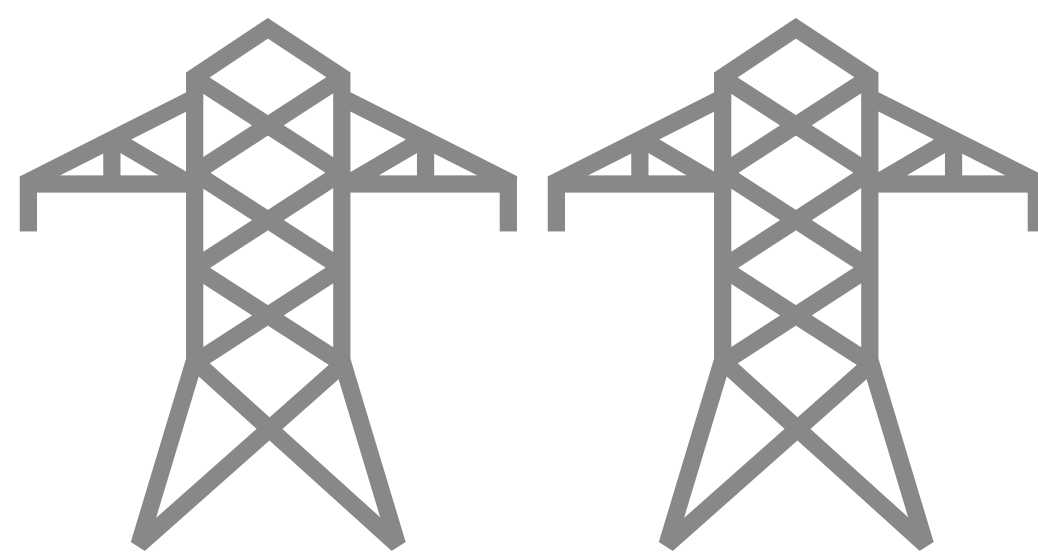
An **AEP** Company

BOUNDLESS ENERGY™



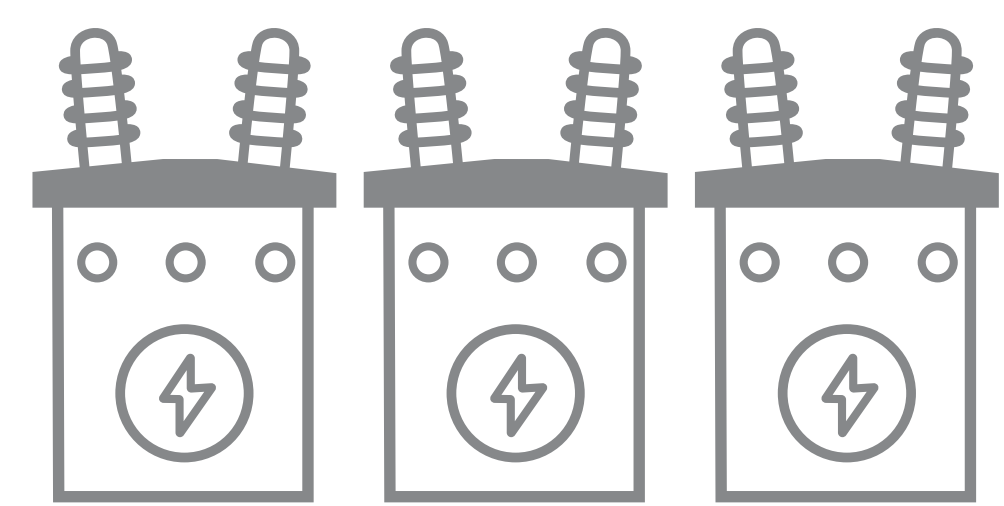
1) GENERATION STATIONS

Utilities produce electricity at coal, natural gas, nuclear, wind and hydroelectric power stations and then transport it long distances over transmission lines.



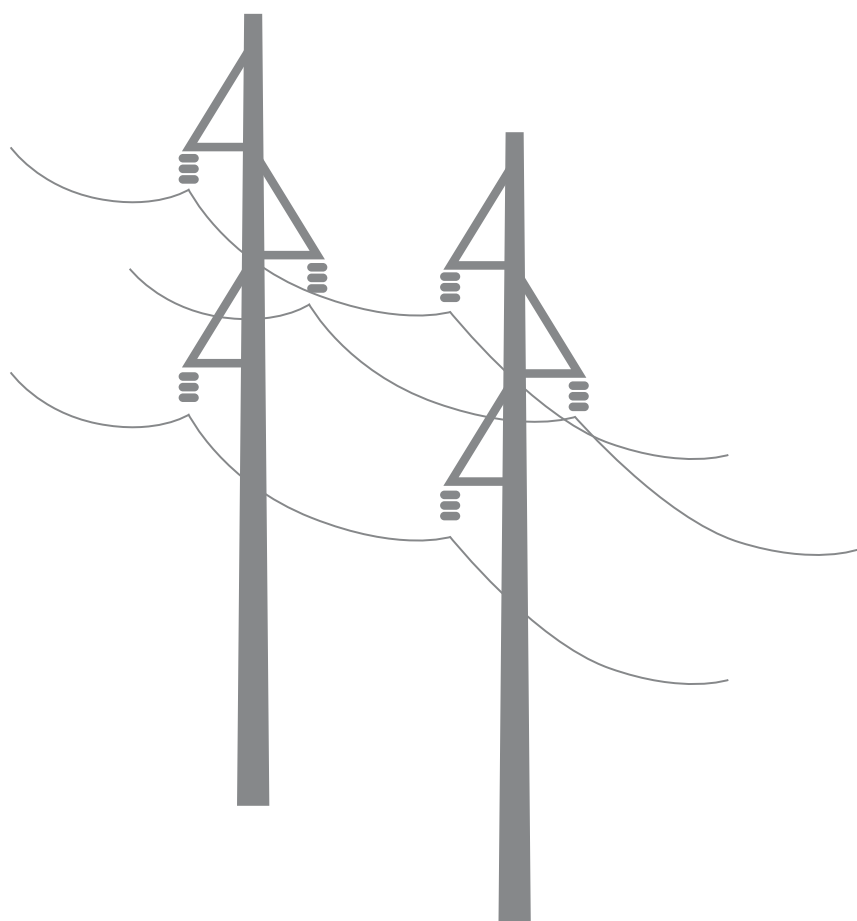
2) EHV TRANSMISSION

Extra-high Voltage electric transmission lines are generally 765 kilovolt (kV), 500 kV, and 345 kV on AEP Ohio's system.



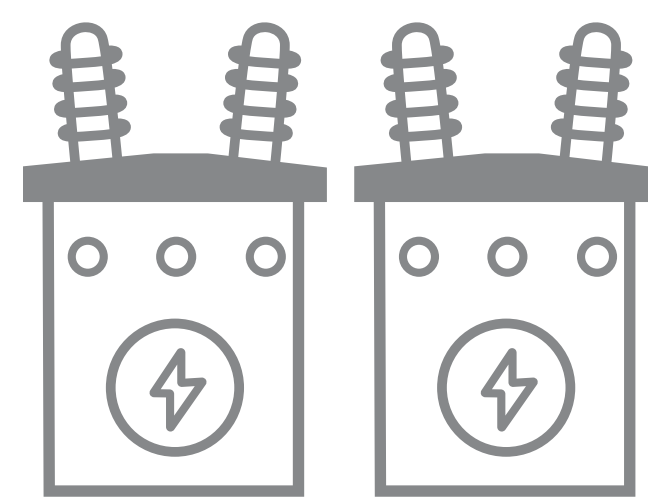
3) SUBSTATIONS

Substations direct the flow of electricity and either decrease or increase voltage levels for transport.



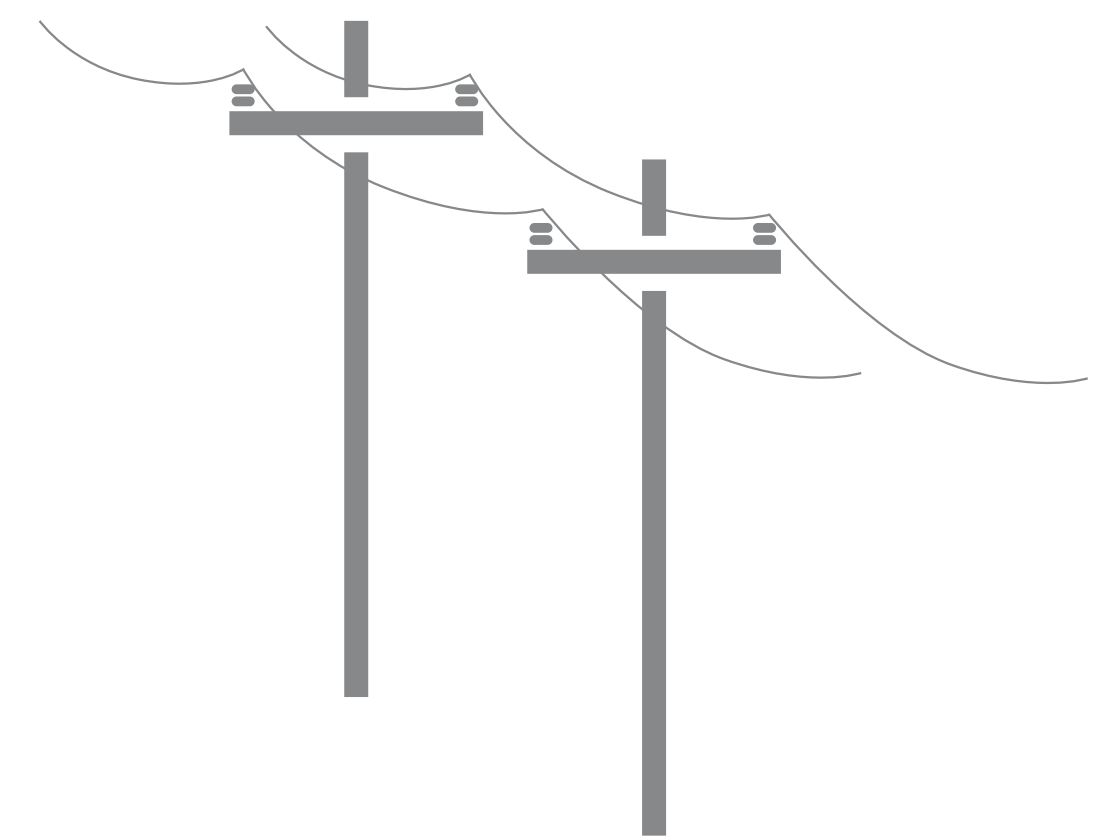
4) LOCAL TRANSMISSION

AEP Ohio typically uses 69 kV and 138 kV transmission lines to move power shorter distances - for example, to different parts of a city or county.



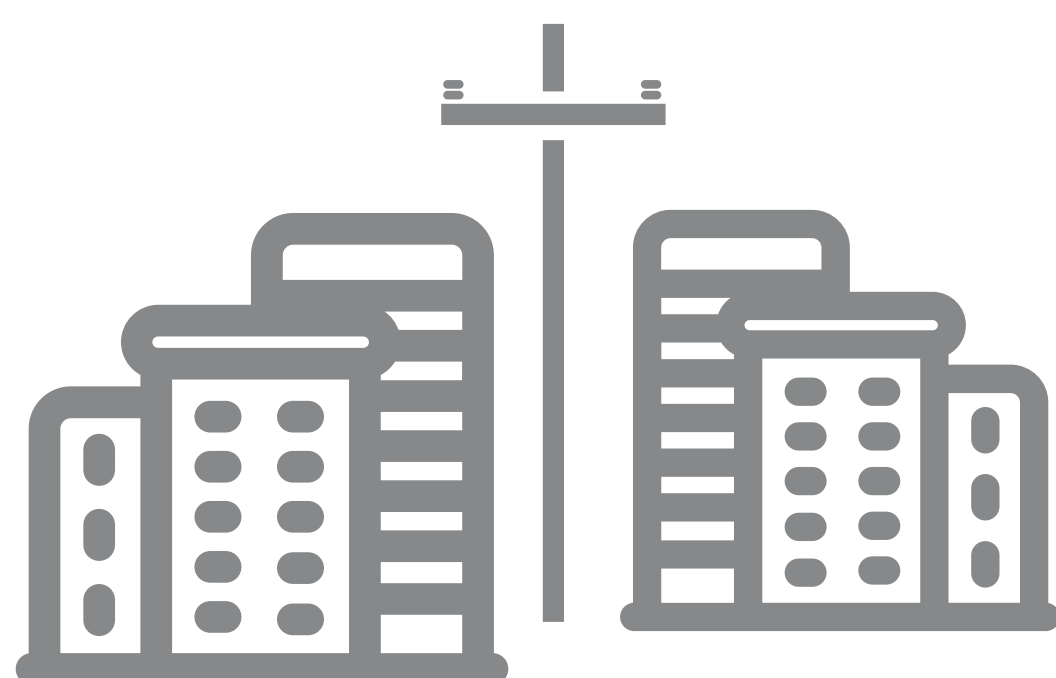
5) SUBSTATION

Substations transform 69 kV and 138 kV electricity into lower distribution level voltages such as 34.5 kV, 12 kV, or 7.2 kV.



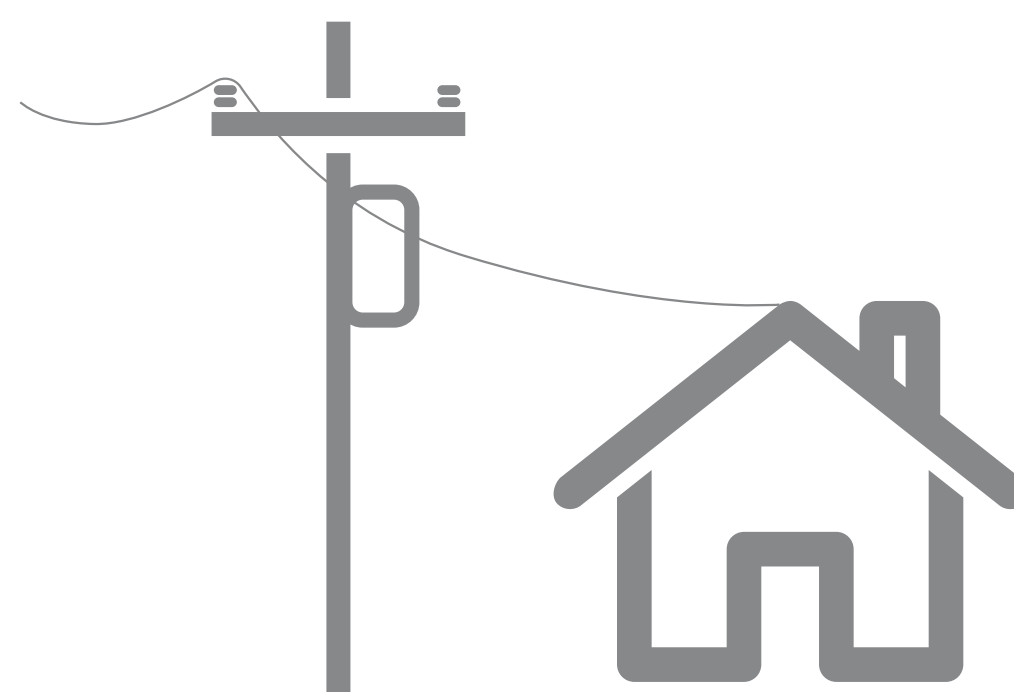
6) PRIMARY DISTRIBUTION

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



7) LATERAL DISTRIBUTION

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



8) INDIVIDUAL SERVICE

Smaller transformers step down voltage to levels customers can use. Individual residences typically use 120/240 volts.

TO USE AN ANALOGY, ELECTRIC TRANSMISSION IS SIMILAR TO OUR NATIONAL ROAD SYSTEM. THREE KINDS OF POWER LINES EXIST BETWEEN POWER PLANTS AND HOMES AND BUSINESSES:

- Extra-high Voltage lines are like electrical interstate highways.
- High-voltage local transmission lines are like four-lane roads.
- Distribution lines are like two-lane roads that eventually connect to your driveway.