

PROJECT NEED & BENEFITS

HAVILAND - VAN WERT
Transmission Line Rebuild Project



? WHY IS THE PROJECT IMPORTANT TO OUR COMMUNITY?

AGING INFRASTRUCTURE

The existing infrastructure in the area has reached an age where it needs to be replaced. Proactive improvements prevent power outages caused by an aging system.

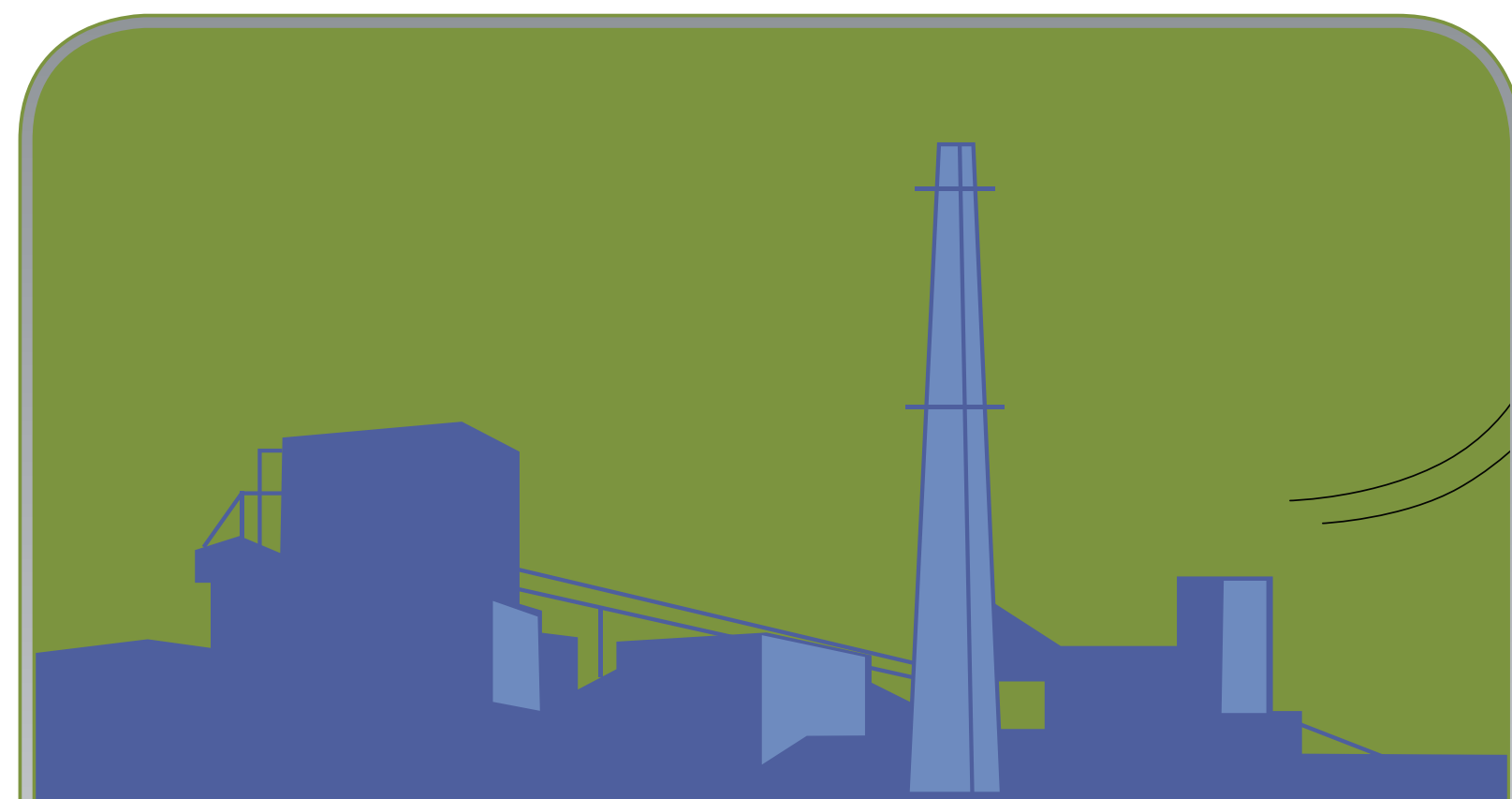
PERFORMANCE

The transmission system is the backbone of the power grid. Improving the performance of the system will speed recovery of service when outages do occur.

RELIABILITY

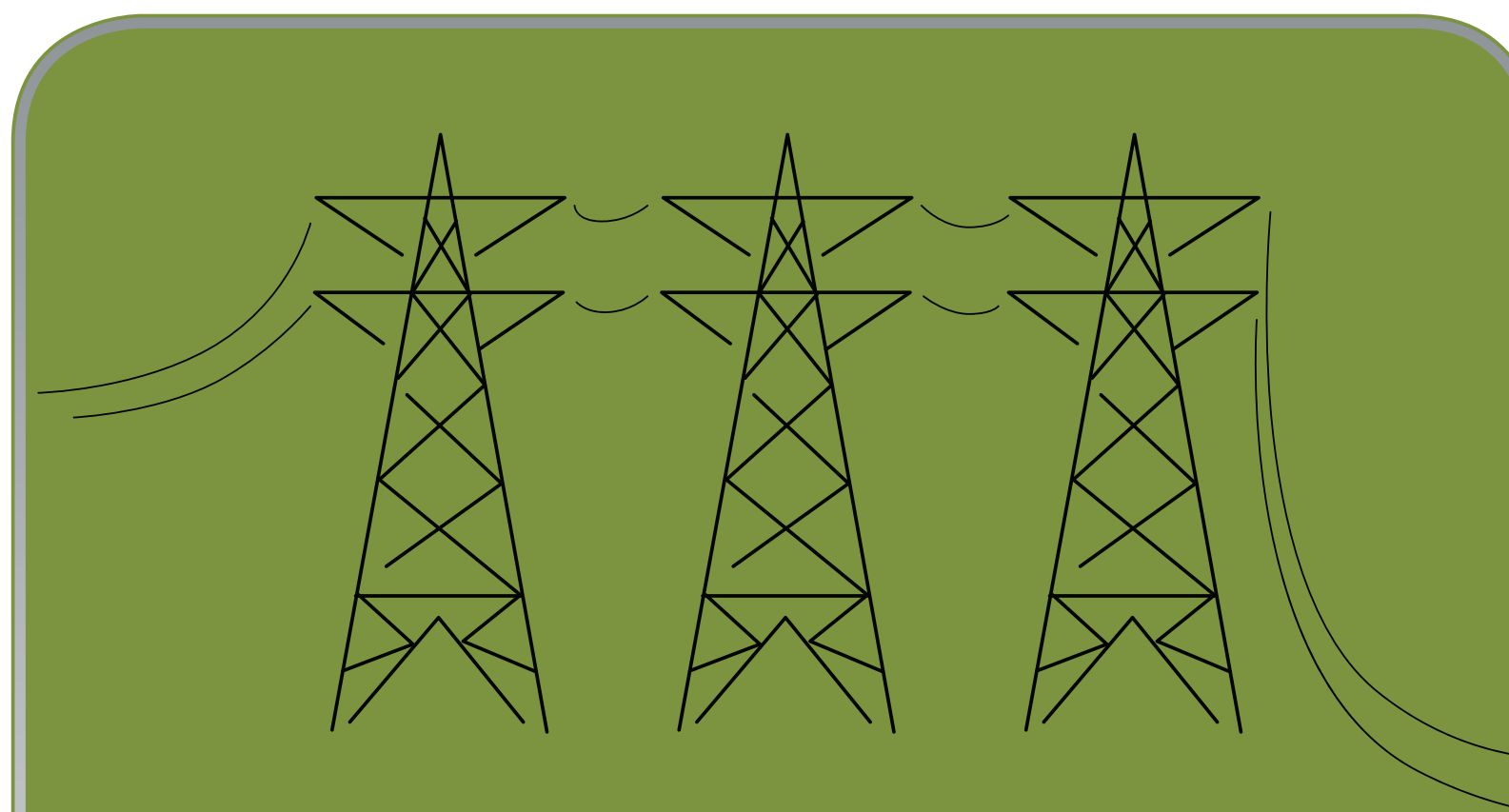
By rebuilding the infrastructure, AEP Ohio can improve the transmission reliability to the region's residential, commercial and industrial customers.

HOW THE SYSTEM WORKS



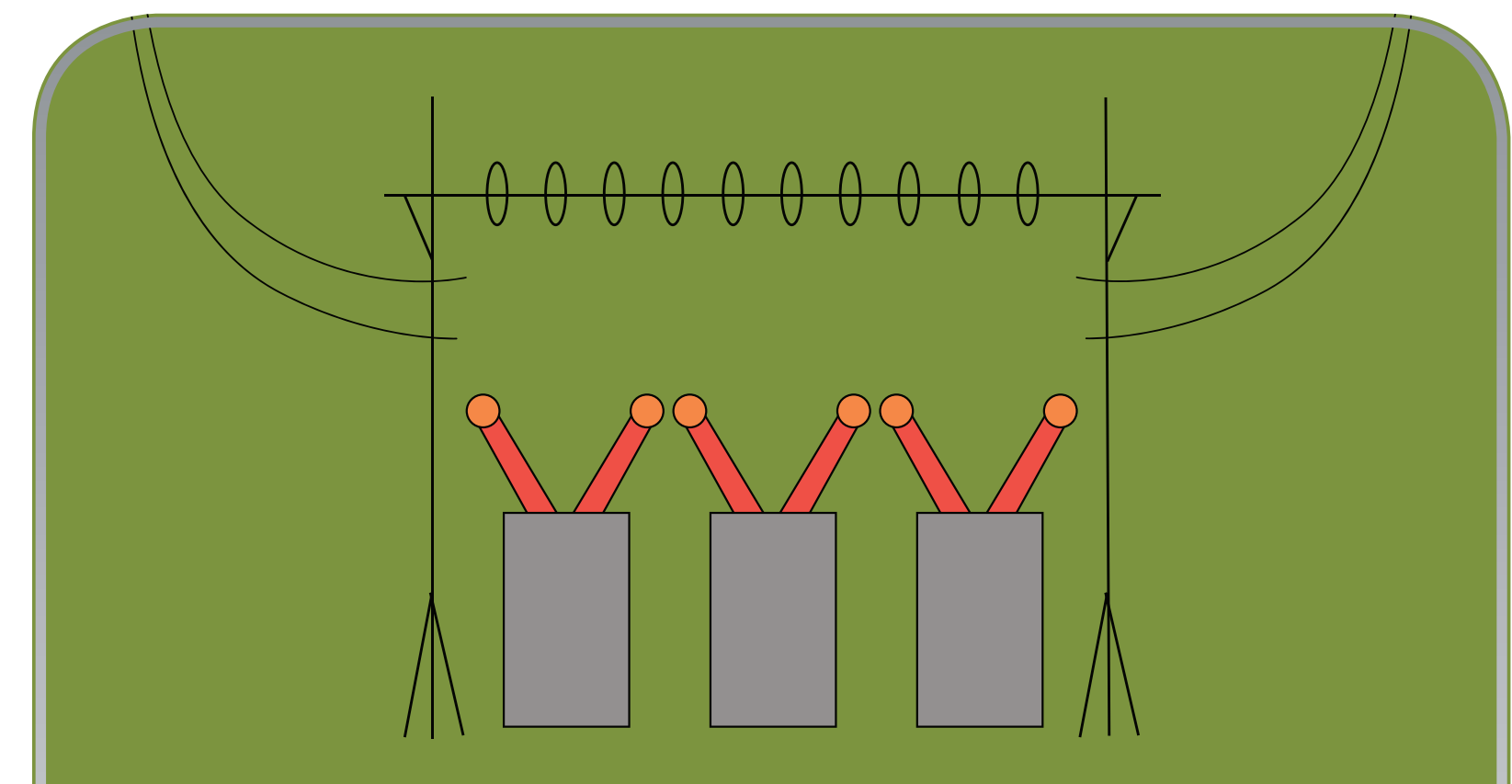
1 GENERATION STATIONS

AEP Ohio produces electricity at coal, natural gas, nuclear, wind and hydro-electric power stations and then transports it long distances over transmission lines.



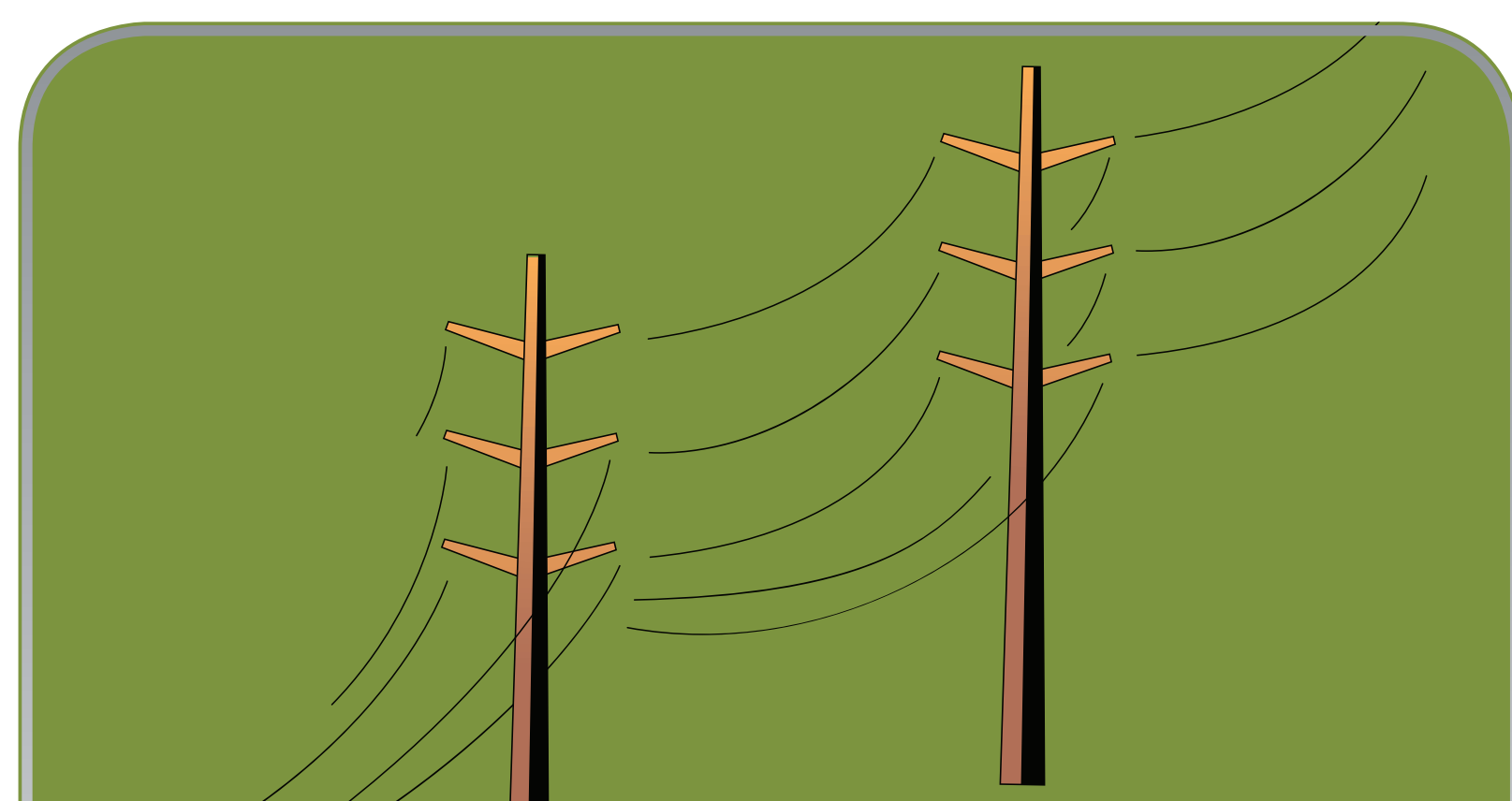
2 EHV TRANSMISSION

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



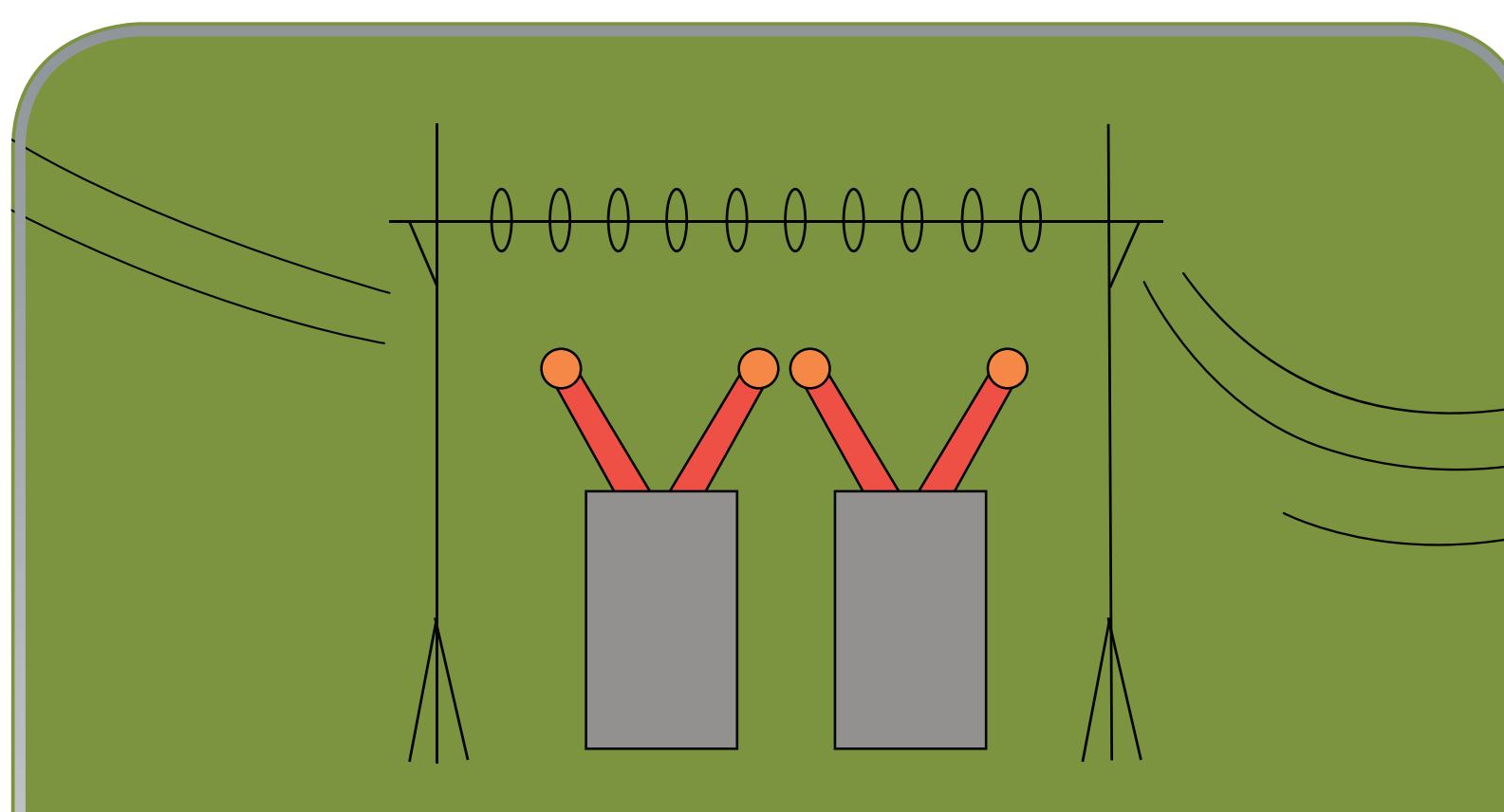
3 SUBSTATIONS

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



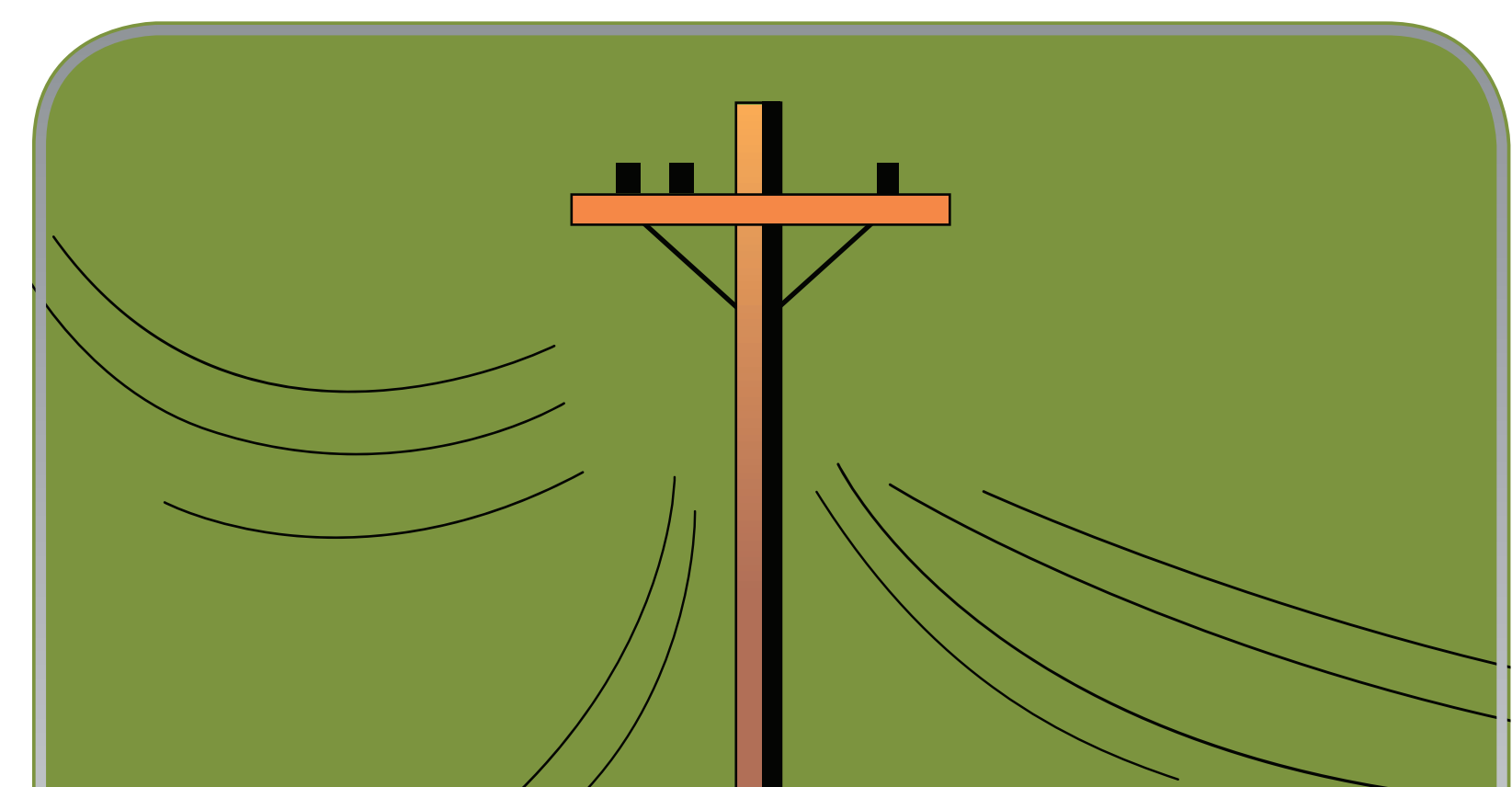
4 LOCAL TRANSMISSION

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.



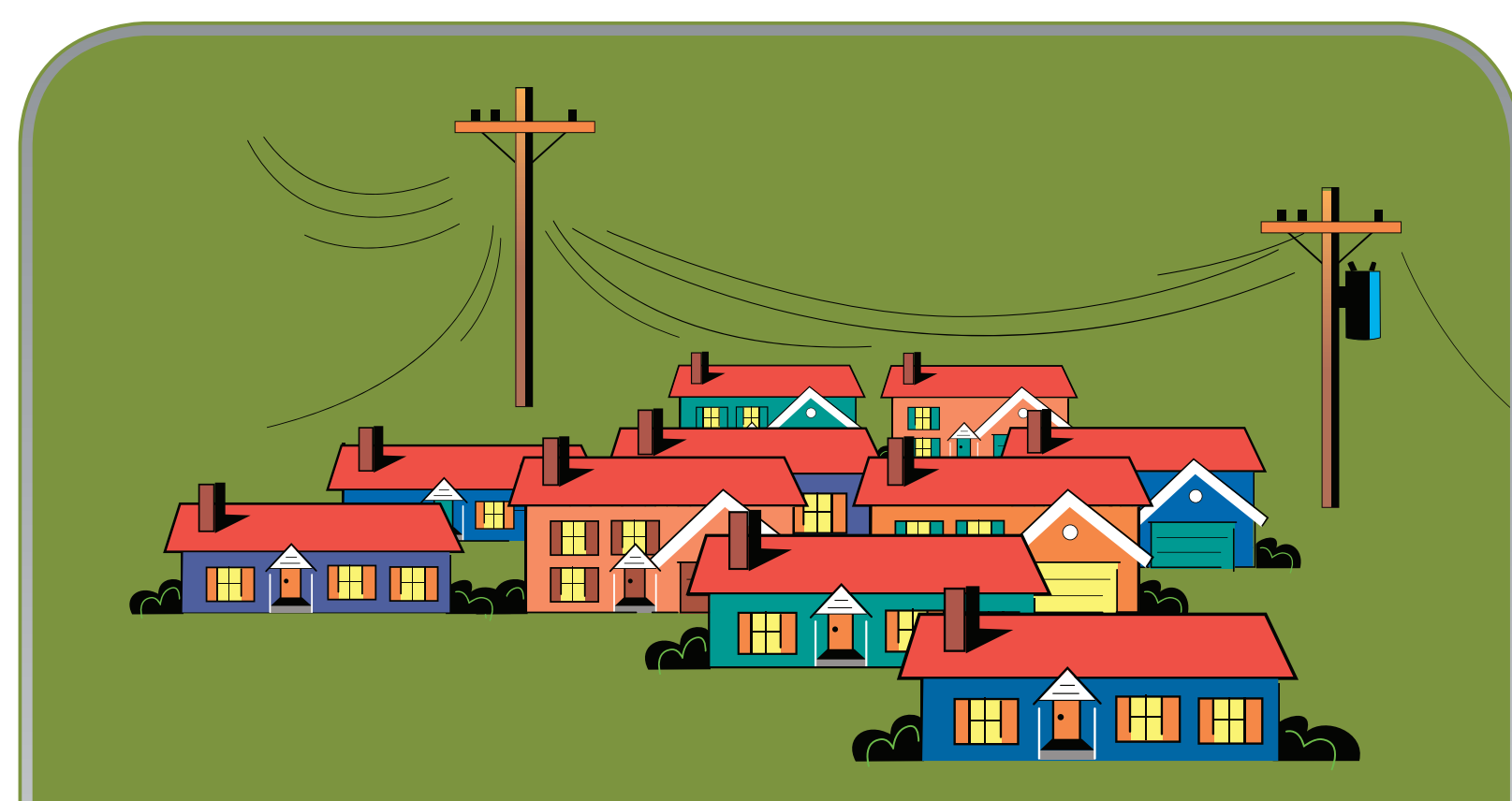
5 SUBSTATION

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



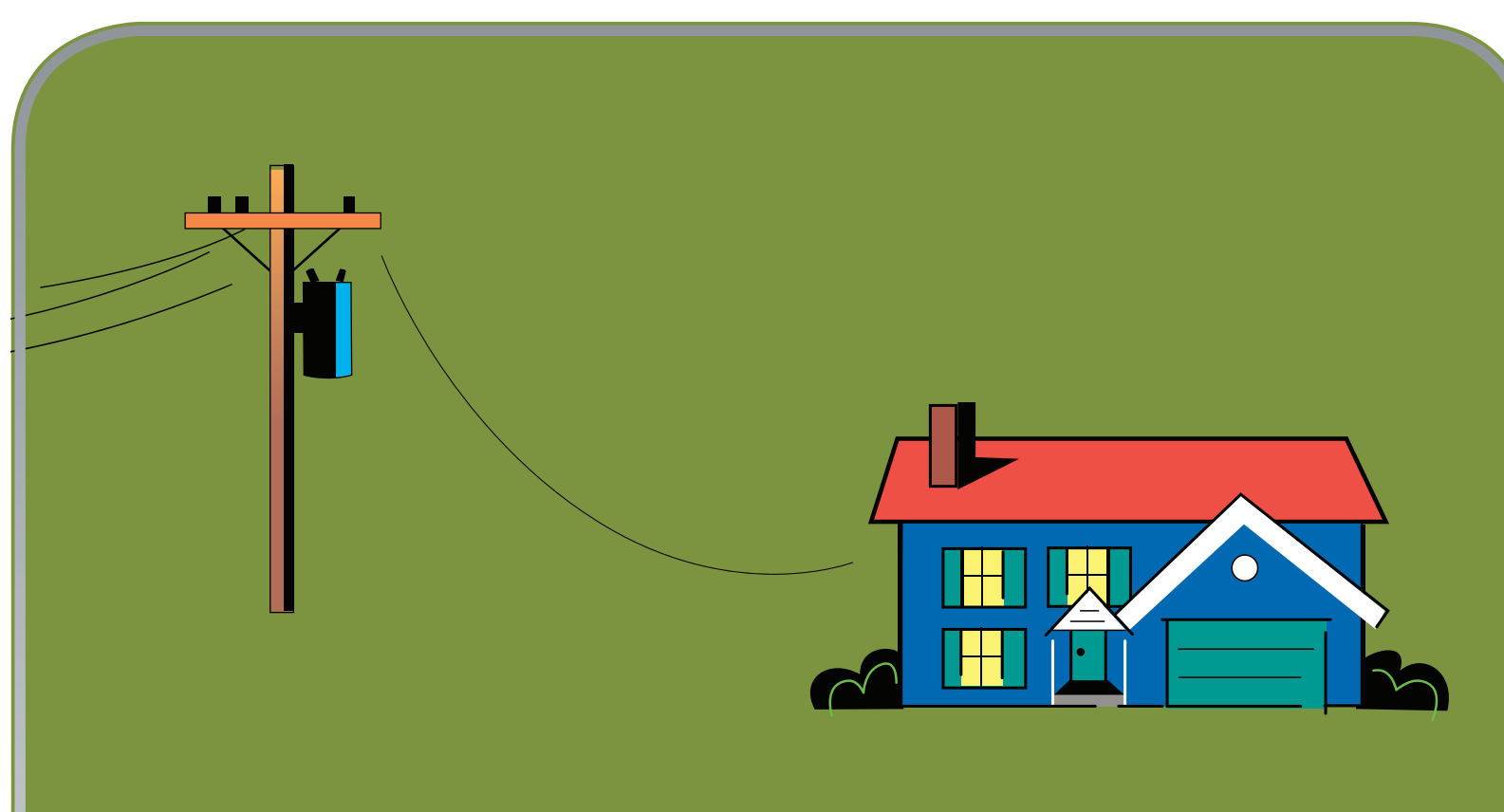
6 PRIMARY DISTRIBUTION

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. 120/240 volts is typical for an individual residence.

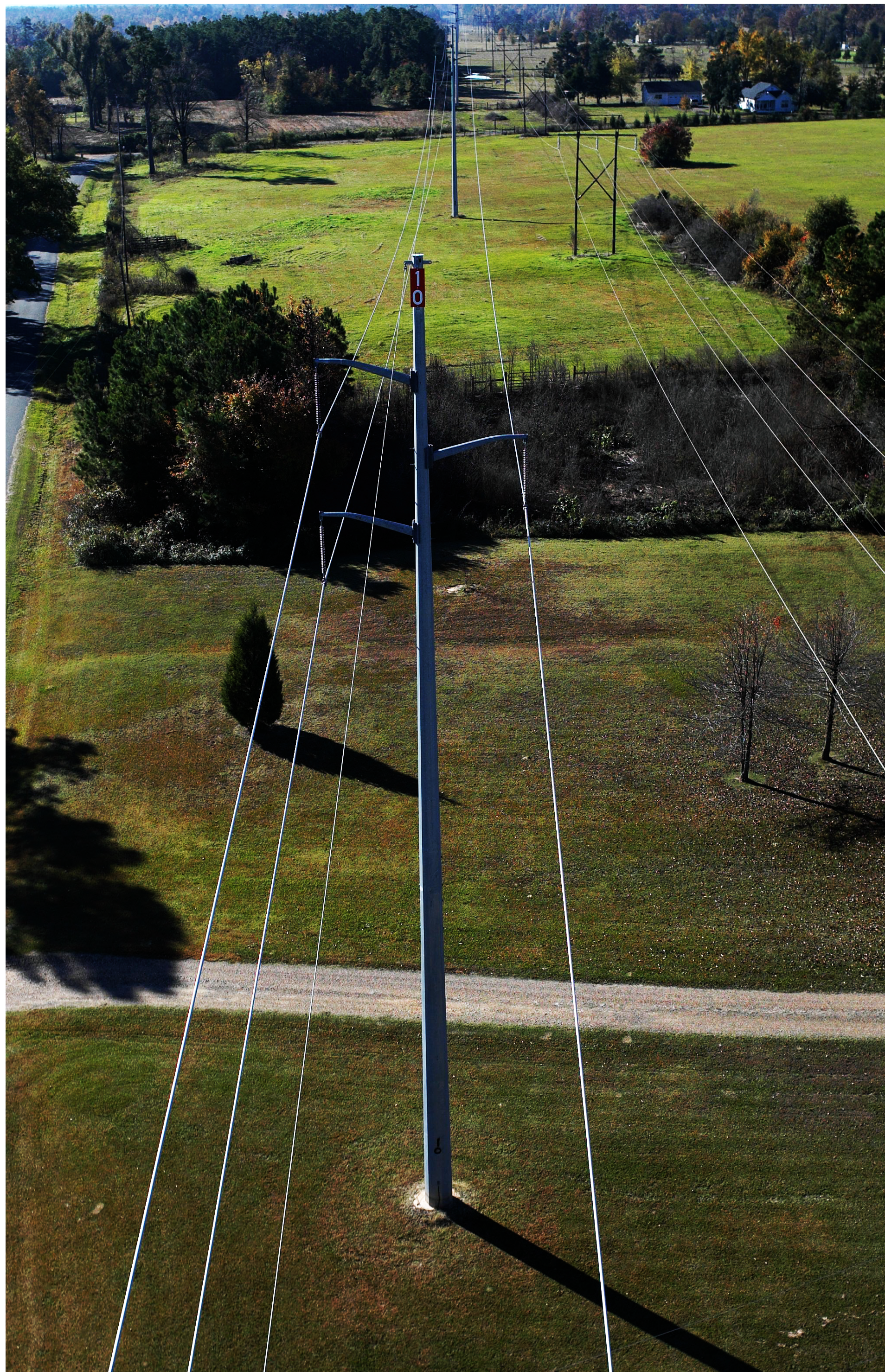
To use an analogy, electric transmission is similar to our national road system. Three kinds of power lines exist between power plants and homes and businesses:

- Extra High Voltage lines (EHV) 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.

THE ROUTING PROCESS FOR NEW TRANSMISSION LINES



AEP Ohio strives to strike a balance between building the new transmission lines that power our homes and economy while also protecting the environment.



WHEN PLANNING TRANSMISSION LINE PROJECTS*, AEP OHIO REVIEWS:

- Public and private land use, both current and proposed
- Aesthetics and visual impacts
- Water quality, including potential impacts on wetlands, streams and waterbodies
- Wildlife, vegetation and fisheries, including threatened and endangered species
- Soils and geology
- Communities and neighborhoods, growth and development
- Historic and archaeological sites
- Transportation and roads

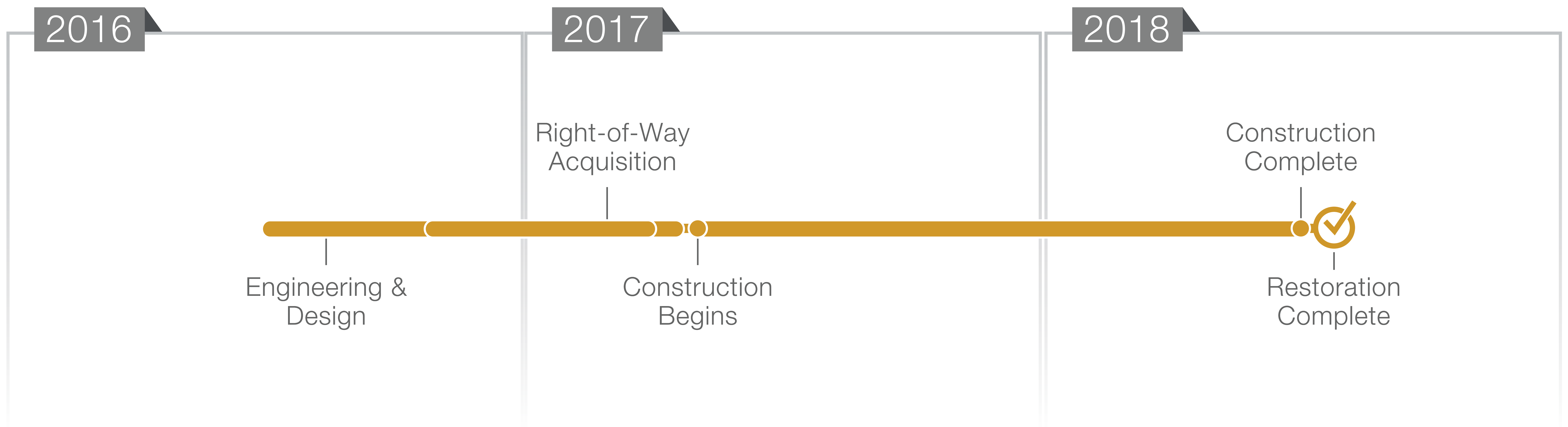
* Existing transmission lines that require upgrade or replacement are generally built on the same or an expanded right-of-way following the same line corridor.



AEP Ohio welcomes your involvement throughout the process. Once a project is identified, we work individually with property owners to locate the power line right-of-way and address concerns. AEP Ohio also identifies and complies with all required local, state and federal permitting agencies.

PROJECT TIMELINE*

HAVILAND - VAN WERT Transmission Line Rebuild Project



*Timeline is approximate and is subject to change due to weather and other factors.

AEP OHIO HAS TWO KEY PHILOSOPHIES THAT PERTAIN TO POWER LINE RIGHTS-OF-WAY:

1 Routes should cause the least possible disturbance to people and the environment, and

2 Property owners should be fairly compensated for any land rights that must be acquired.

AEP Ohio studies the land and wherever possible proposes routes that reduce impacts on property owners. AEP Ohio reaches out to landowners in the following ways:

TO GAIN RIGHT-OF-ENTRY TO BEGIN:

- Environmental assessments
- Appraisal work
- Land surveying, soil boring and below grade study
- Cultural and historic resource reviews

TO SECURE RIGHT-OF-WAY AND COMMUNICATE:

- Landowner compensation
- Terms and conditions of easement
- Width of the right-of-way

TO OUTLINE AEP OHIO'S CONSTRUCTION PROCESS WITH A SPECIFIC FOCUS ON:

- Property restoration
 - Damage mitigation as appropriate
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STRUCTURE



*Exact structure may vary from photograph

VEGETATION MANAGEMENT



WHAT IS VEGETATION MANAGEMENT?

The practice of controlling the growth of trees and other woody stemmed vegetation in line corridors and around substations, while maintaining respect for the environment.

WHY IS IT DONE?



To minimize power outages caused by trees and other plants coming into contact with power lines.

THE GOALS OF AEP OHIO'S VEGETATION MANAGEMENT PROGRAM ARE TO:

- Protect our system and minimize outages
- Minimize any adverse environmental impacts
- Ensure compliance with all applicable laws and regulations
- Perform our work as safely as possible, and
- Maintain a positive relationship with land owners and the public

