# NORTHEAST OKLAHOMA
## TRANSMISSION ENHANCEMENT PROJECT

**Welcome!** Thank you for visiting our virtual open house to learn more about the project and share your input to help us develop project plans. We welcome feedback through the project website, phone, email and mail as we strive to make the most informed decisions possible.

The virtual open house includes details on the following information:

- Project Need & Benefits
- Project Map
- Project Timeline
- Routing Process
- Transmission Line Review Process
- Engineering
- Right-of-Way Practices
- The Construction Process
- Vegetation Management

# PROJECT NEED & BENEFITS

## The Project Involves:

- Building approximately 100 miles of 345-kilovolt (kV) transmission lines and upgrading equipment at the Delaware Substation to accommodate the new transmission lines.

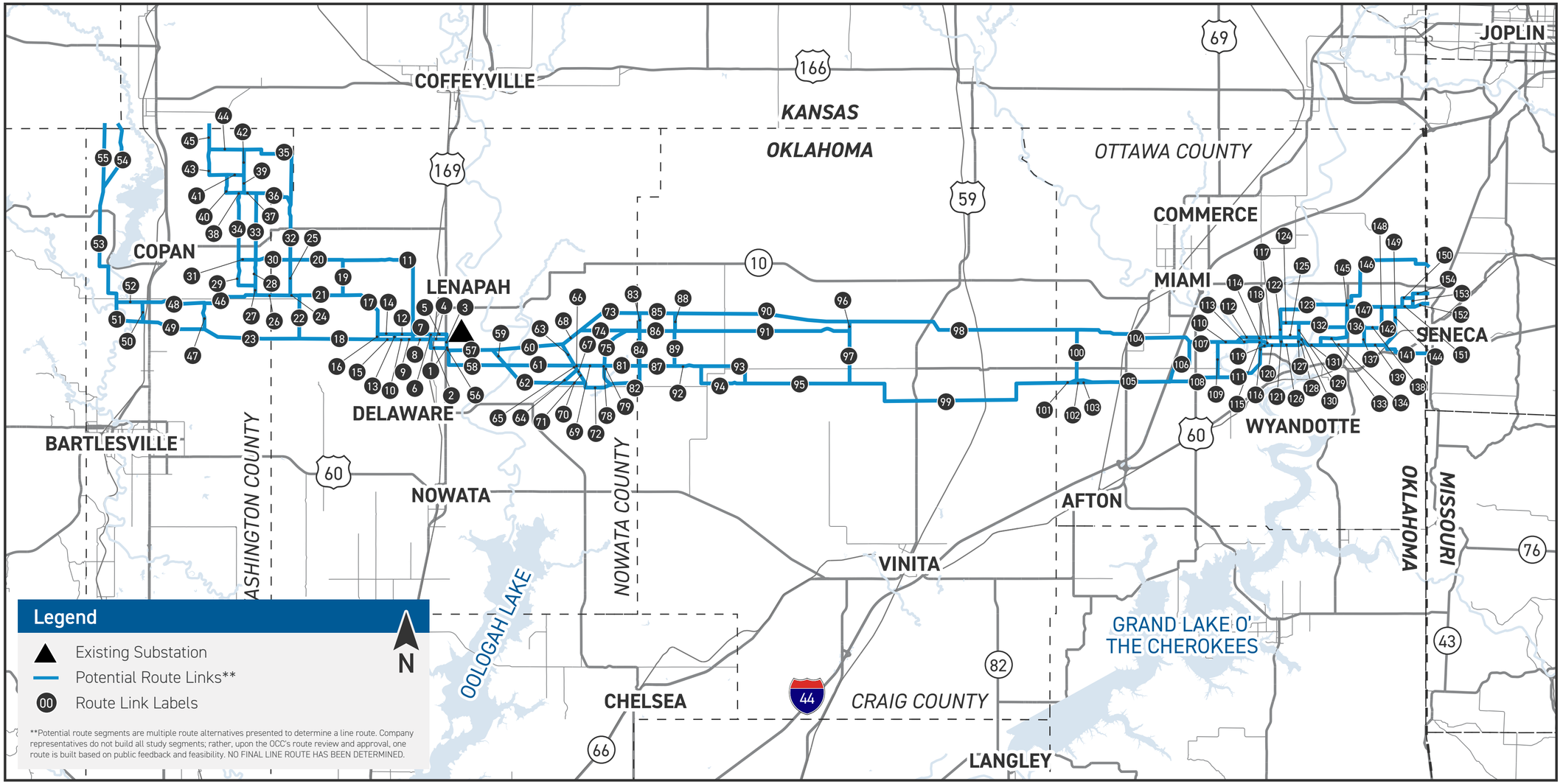
## Why is the project important to our community?

Southwest Power Pool (SPP), the regional transmission operator (RTO) who oversees and monitors the power grid across 14 states, mandated this project as a regional effort to enhance grid reliability in Oklahoma, Kansas and Missouri.

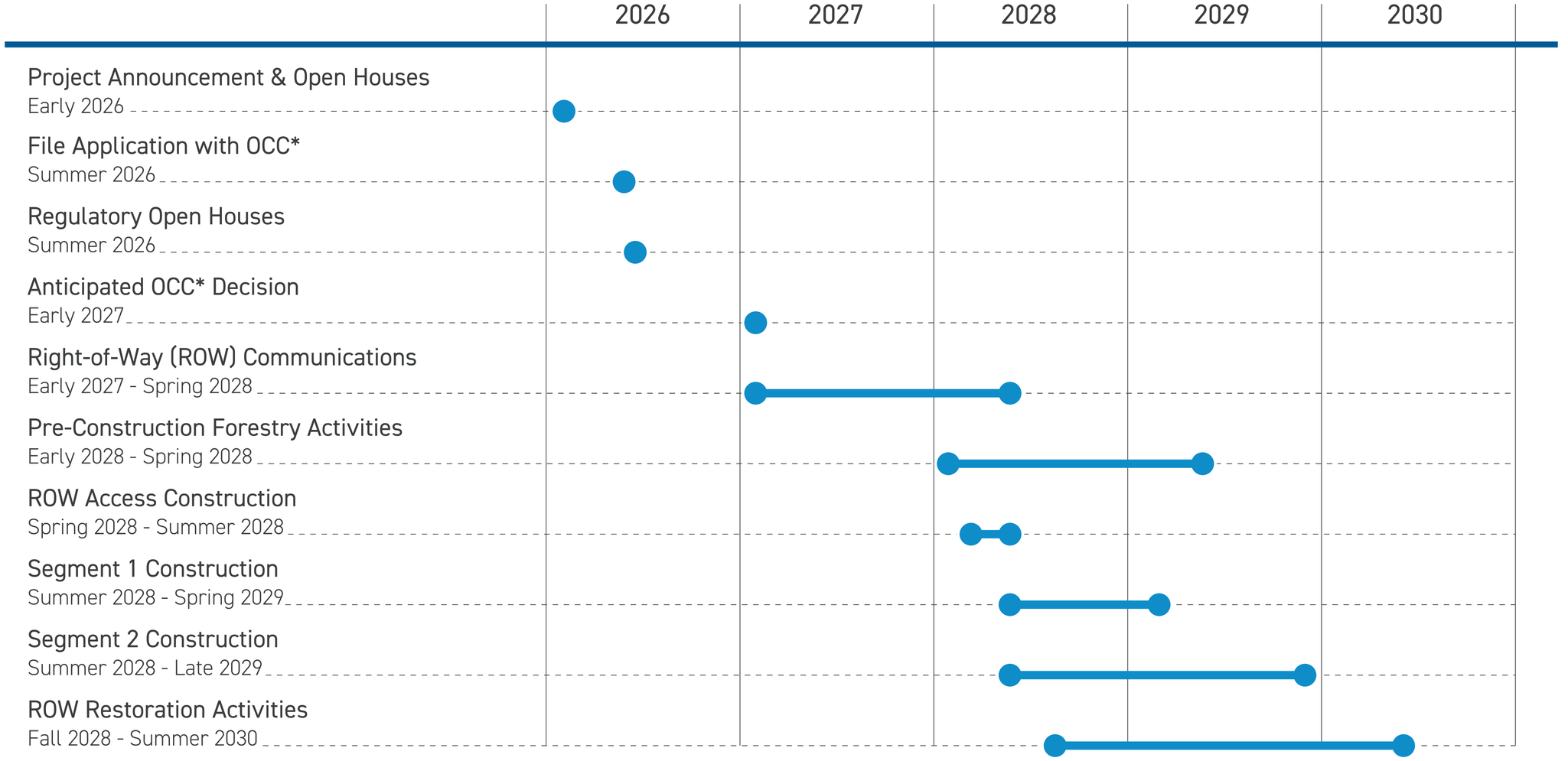
The improvements:

- Enhance electric service reliability and resiliency.
- Reduce the frequency and duration of power outages.
- Improve ability to deliver power during extreme weather events.
- Optimize operations and lower the cost to deliver power across the region.
- Improve the transmission of low-cost energy to eastern areas of the SPP footprint, including northeast Oklahoma.

# PROJECT MAP


COFFEYVILLE
JOPLIN
KANSAS
OKLAHOMA
OTTAWA COUNTY
COMMERCE
COPAN
LENAPAH
MIAMI
SENECA
DELAWARE
WYANDOTTE
BARTLESVILLE
NOWATA
AFTON
VINITA
CHELSEA
CRAIG COUNTY
LANGLEY
GRAND LAKE O' THE CHEROKEES
OOLOGAH LAKE
WASHINGTON COUNTY
NOWATA COUNTY
OKLAHOMA
MISSOURI
166
69
169
59
10
60
82
66
76
43
44
Legend
Existing Substation
Potential Route Links**
00 Route Link Labels
N
**Potential route segments are multiple route alternatives presented to determine a line route. Company representatives do not build all study segments; rather, upon the OCC's route review and approval, one route is built based on public feedback and feasibility. NO FINAL LINE ROUTE HAS BEEN DETERMINED.

# PROJECT TIMELINE




**Oklahoma Corporation Commission.*

*Timeline subject to change.*

# ENVIRONMENTAL AND LAND USE CRITERA

## FOR TRANSMISSION LINE EVALUATION

### Land Use

Length of alternative route
Number of habitable structures[a] within 300 feet[b] of the right-of-way (ROW) centerline
Length of ROW using existing transmission line ROW
Length of ROW parallel to existing transmission line ROW
Length of ROW parallel to other existing compatible ROW (roads, highways, railways, etc. – excluding oil and gas pipelines)
Length of ROW parallel to apparent property lines (not following existing ROW)[c]
Sum of evaluation criteria 4, 5, and 6
Percent of evaluation criteria 4, 5, and 6
Length of ROW across parks/recreational areas[d]
Number of additional parks/recreational areas[d] within 1,000 feet of ROW centerline
Length of ROW across cropland
Length of ROW across pastureland/rangeland
Length of ROW across land irrigated by mobile irrigation systems (rolling or pivot type)
Length of ROW across conservation easements and/or mitigation banks (Special Management Areas)
Length of ROW across gravel pits, mines, or quarries
Length of ROW parallel to existing pipeline[e] ROW <500 feet from route centerline
Number of pipeline[e] crossings
Number of transmission line crossings
Number of Interstate, United States, and State highway crossings
Number of Farm-to-Market (FM)/Ranch-to-Market (RM) road crossings
Number of FAA-registered public/military airfields[f] within 20,000 feet of ROW centerline (with runway >3,200 feet)
Number of FAA-registered public/military airfields[f] within 10,000 feet of ROW centerline (with runway <3,200 feet)
Number of private airstrips within 10,000 feet of ROW centerline
Number of heliports within 5,000 feet of ROW centerline
Number of commercial AM radio transmitters within 10,000 feet of ROW centerline
Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline
Number of recorded water wells within 200 feet of ROW centerline
Number of recorded oil and gas wells within 400 feet of ROW centerline

### Aesthetics

Estimated length of ROW within foreground visual zone[g] of Interstate, United States, and State highways
Estimated length of ROW within foreground visual zone[g] of FM/RM roads
Estimated length of ROW within foreground visual zone[g] of parks/recreational areas[d]

### Ecology

Length of ROW through upland woodlands/brushlands
Length of ROW through bottomland/riparian woodland/brushland
Length of ROW across National Wetland Inventory-mapped wetlands
Length of ROW across designated critical habitat for federally endangered or threatened species
Number of stream crossings
Length of ROW parallel (within 100 feet) to streams
Length of ROW across open water (ponds, lakes, etc.)
Length of ROW across Edwards Aquifer Contributing Zones

### Cultural Resources

Number of recorded cultural sites crossed by ROW
Number of additional recorded cultural sites within 1,000 feet of ROW centerline
Number of cemeteries within 1,000 feet of ROW centerline
Number of NRHP-listed or determined-eligible sites crossed by ROW
Number of NRHP-listed or determined-eligible sites within 1,000 feet of ROW centerline
Length of ROW crossing areas of high archeological/historical site potential

(a) Single-family and multifamily dwellings and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, places of worship, hospitals, nursing homes, schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis.
(b) Due to the potential inaccuracies of the aerial photography and data utilized, all habitable structures within 520 feet have been identified.
(c) Property lines created by existing road, highway, or railroad ROW are not double counted in the "Length of ROW parallel to property lines" criterion.
(d) Defined as parks and recreational areas owned by a governmental body or an organized group, club, or place of worship.
(e) Pipelines 8.0 inches diameter or greater.
(f) As listed in the Chart Supplement South Central U.S. (formerly known as the Airport/Facility Directory South Central U.S.).
(g) 0.5 mile, unobstructed.

# AGENCIES AND OFFICIALS

## FEDERAL

- Bureau of Indian Affairs
- Federal Aviation Administration
- Federal Emergency Management Agency
- Military Aviation and Installation Assurance Siting Clearinghouse
- Natural Resources Conservation Service
- U.S. Army Corps of Engineers
- U.S. Department of Agriculture
- U.S. Environmental Protection Agency
- U.S. Fish & Wildlife Service

## STATE

- Commissioners of the Land Office
- Grand River Dam Authority
- Oklahoma Archaeological Survey
- Oklahoma Conservation Commission
- Oklahoma Department of Agriculture, Food and Forestry
- Oklahoma Department of Commerce
- Oklahoma Department of Environmental Quality
- Oklahoma Department of Mines
- Oklahoma Department of Transportation
- Oklahoma Department of Wildlife Conservation
- Oklahoma Geological Survey
- Oklahoma Historical Society
- Oklahoma Water Resources Board
- State Historic Preservation Office

## CRAIG COUNTY

- Craig County Commissioners
- Town of Welch
- Bluejacket Public Schools
- Vinita Public Schools
- Welch Public Schools

## NOWATA COUNTY

- Nowata County Commissioners
- Town of Lenapah
- Town of South Coffeyville
- Nowata Public Schools
- Oklahoma Union Public Schools
- South Coffeyville Public Schools

## OTTAWA COUNTY

- Ottawa County Judge
- Ottawa County Commissioners
- Town of Fairland
- Town of Wyandotte
- City of Miami
- Miami Public Schools
- Afton Public Schools
- Fairland Public Schools
- Turkey Ford School District
- Wyandotte Public Schools

## WASHINGTON COUNTY

- Washington County Commissioners
- Washington County Community Development Department
- City of Dewey
- Town of Copan
- Copan Public Schools
- Dewey Public Schools

## TRIBAL ORGANIZATIONS

- Cherokee Nation
- Delaware Nation
- Delaware Tribe of Indians
- Eastern Shawnee Tribe of Oklahoma
- Miami Tribe of Oklahoma
- Modoc Nation
- Ottawa Tribe of Oklahoma
- Peoria Tribe of Indians of Oklahoma
- Quapaw Nation
- Seneca-Cayuga Nation
- Shawnee Tribe
- United Keetoowah Band of the Cherokee Indians
- Wyandotte Nation

## NON-GOVERNMENTAL ORGANIZATIONS

- Grand Gateway Economic Development Association

# TRANSMISSION LINE REVIEW PROCESS

Oklahoma Corporation Commission (OCC) Review Process

## Here's How It Works:

### AEP files Certificate of Authority (COA) application at OCC

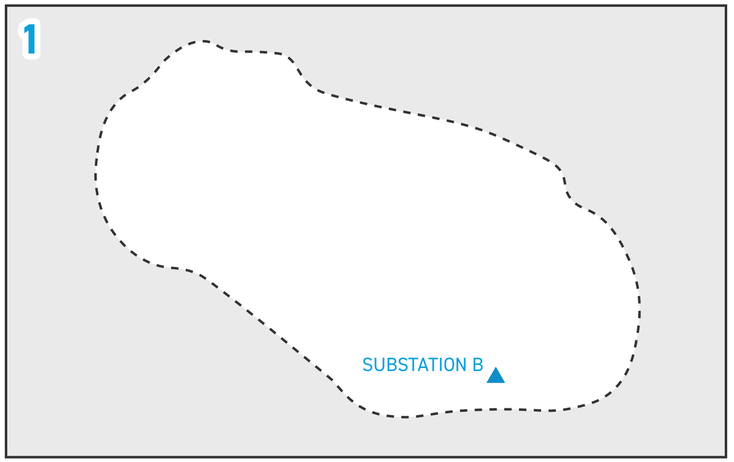
1. **Within 30 days** of the application filing, AEP will publish a public notice of the filing and upcoming public meetings in local newpapers.
2. **Within 60 days** of the application filing. AEP will mail certified notices of the application filing to affected landowners, local officials and oil and gas operators.
3. **Within 90 days** of publishing public notice of the COA application filing, AEP will host public meetings in each county the line will traverse.

### OCC Review Timeline

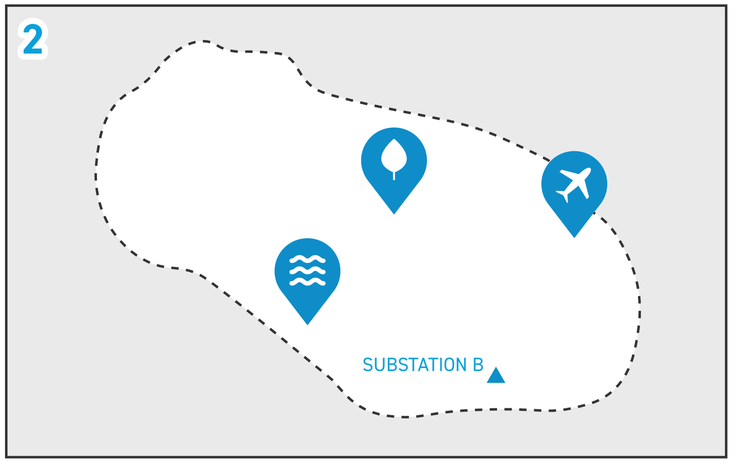
1. Affected landowners and stakeholders can intervene and/or provide public comment in the OCC docket.
2. All case documents can be found on the OCC's website.
3. The OCC is required to make a determination regarding the COA within 200 days of application filing. If the OCC takes no action on the application, the COA is granted automatically **after 200 days**.

# ROUTING PROCESS

We implement a comprehensive routing process that takes land use, the environment, public input and engineering guidelines into account to develop a transmission line route. The information below illustrates each stage of the routing process.

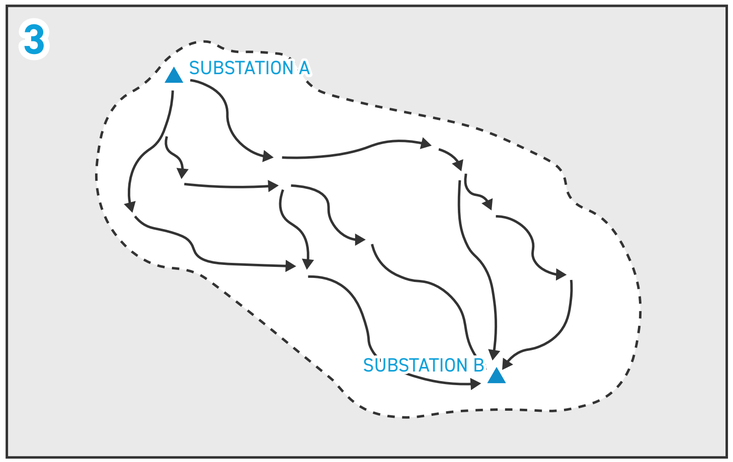



**1. Study Area:** Develop a study area for the project that incorporates both end points of the power line and the area between.

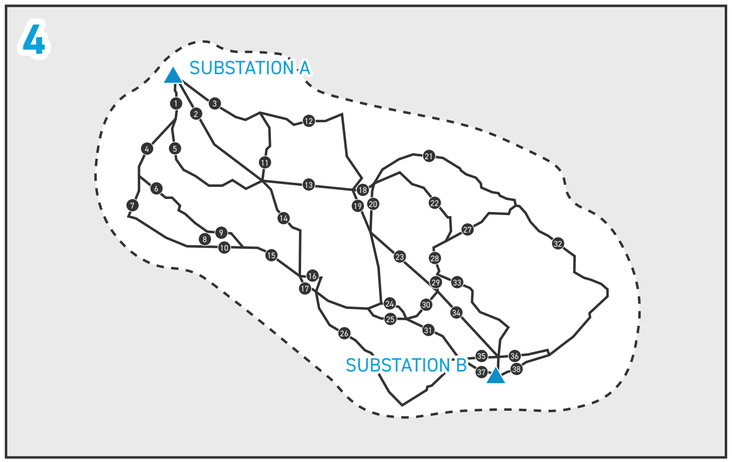



**2. Information Gathering:** Data is gathered for the defined study area including environmental, land use, historic and cultural resources, existing infrastructure and sensitive areas.

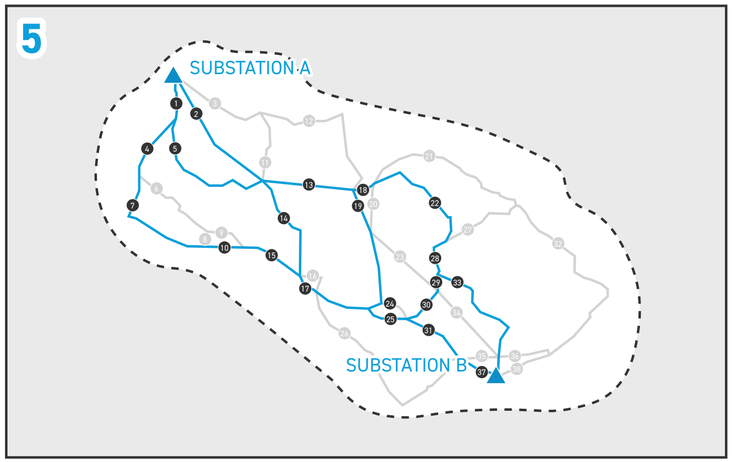
# ROUTING PROCESS




**3. Conceptual Routes:** The routing team uses data gathered to develop conceptual routes adhering to a series of general routing and technical guidelines.

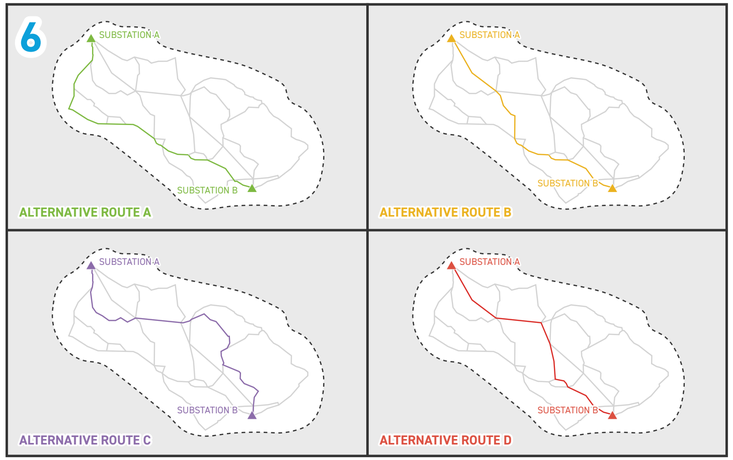



**4. Study Segments:** Study Segments are derived from conceptual routes. Study segments are formed between two common points of intersection. Together, the collection of study segments is referred to as the study segment network.

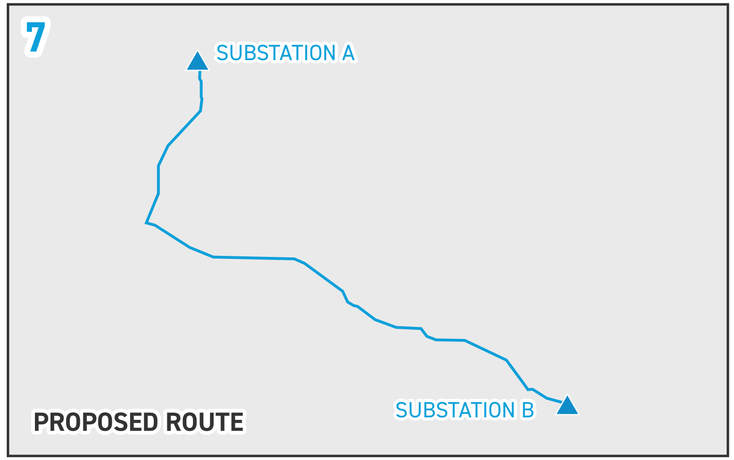



**5. Refined Study Segments:** As more information is gathered, the study segments are refined. Some study segments are eliminated or modified, leaving the refined study segments for further consideration.

# ROUTING PROCESS




**6. Alternative Routes:** After public input is gathered, study segments are further refined and evaluated. The most suitable segments are selected and assembled into alternative route options.




**7. Proposed Route:** Alternative routes are assessed, and a proposed route is chosen. The proposed route minimizes impact to the community and environment, while considering cost, line length, and design requirements.

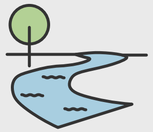
# ROUTING CONSIDERATIONS

We aim to build transmission lines that power communities and the economy while minimizing community and environmental impacts.

Our project teams review a variety of environmental factors including:

Current and proposed public and private land uses

Aesthetics and visual impacts



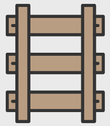
Water quality, including potential impacts on wetlands, streams and water bodies

Wildlife, vegetation and fisheries, including threatened and endangered species

Soils and geology

Community and neighborhood growth and development

Historic and archaeological sites



Existing Infrastructure, such as power lines, roads, railroads, pipelines and renewables

Environmental & Social Justice Impacts

We identify and comply with all required local, state and federal permitting agencies.

# TYPICAL STRUCTURE

OK Transco representatives are considering single steel poles or steel lattice towers as the primary structures on this project.

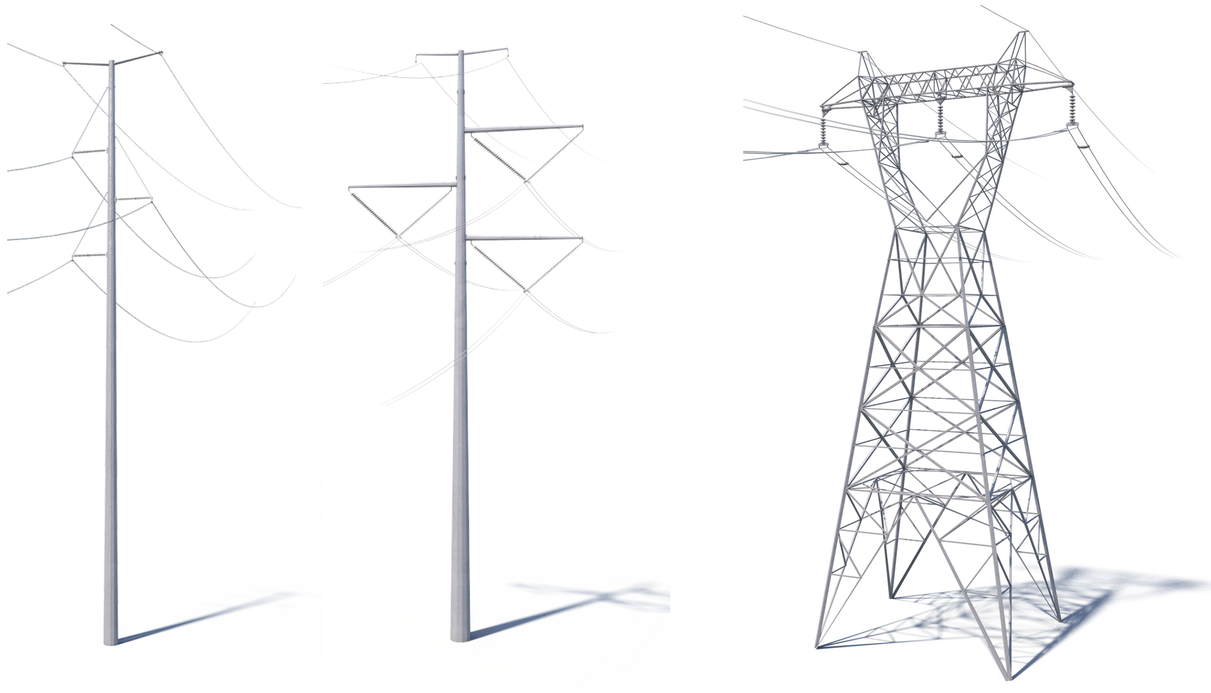
**Typical Structure Height:**
Approximately 100 – 135 feet*

**Typical Right-of-Way Width:** 150 feet*

**Typical Distance Between Structures:**
Approximately 850 – 1300 feet*

**Exact structure configuration, height and right-of-way requirements may vary.*

Approximately
**100-135**
feet tall*



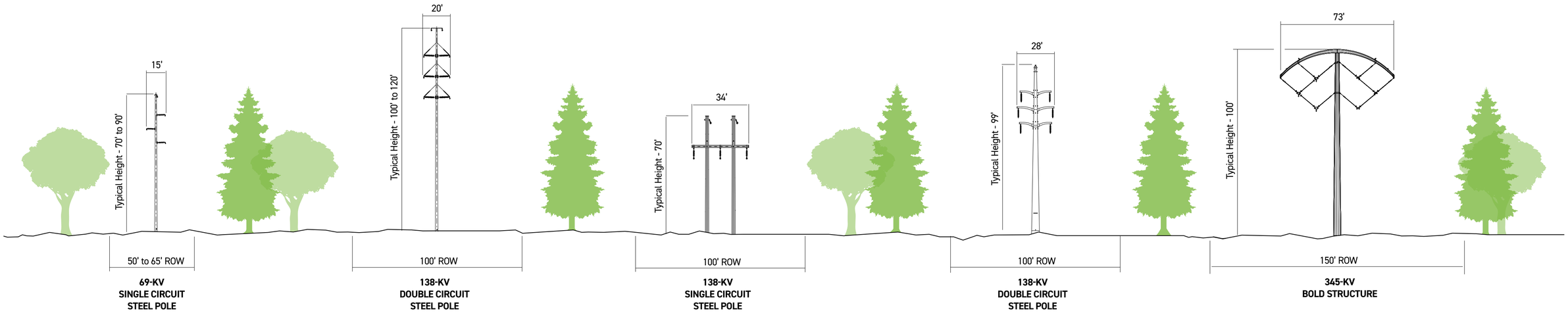
Monopole

Monopole

Lattice Tower

# STRUCTURE COMPARISON

Typical structure type, height, and right-of-way (ROW) width vary depending on kilovolts (kV), terrain and engineering. These structures are not to scale but are shown in proportion to one another. Structure heights are based on voltage and configuration.



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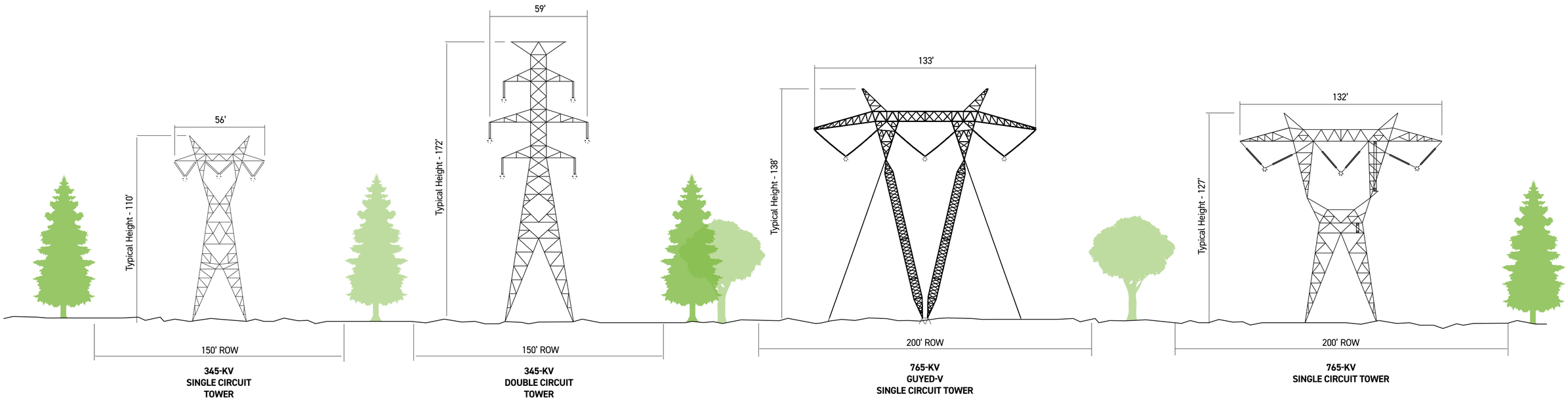
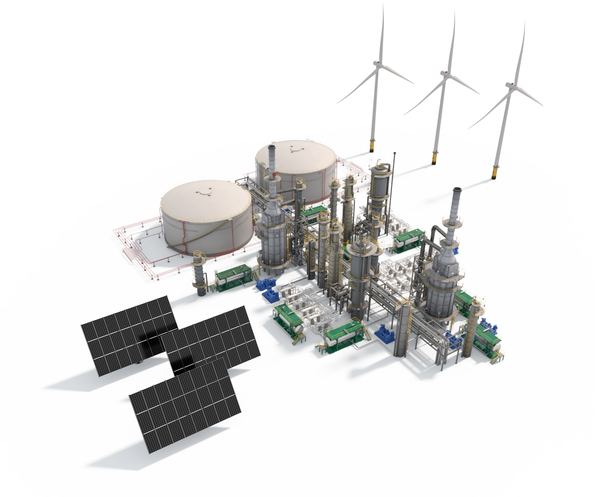
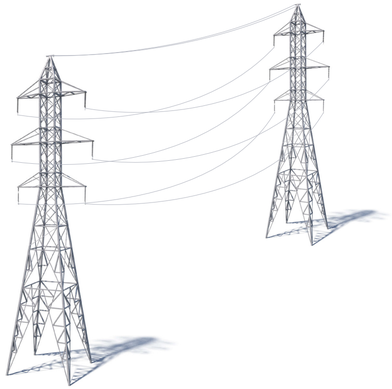
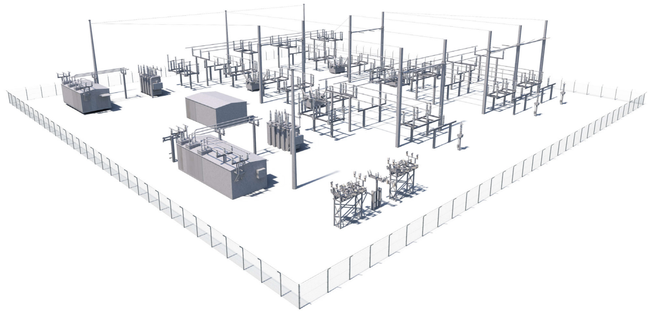


# HOW THE SYSTEM WORKS





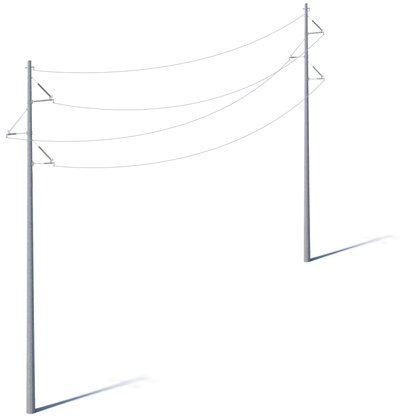


**1. Generation Stations:**
A generation station produces power to be transported long distances through transmission lines.

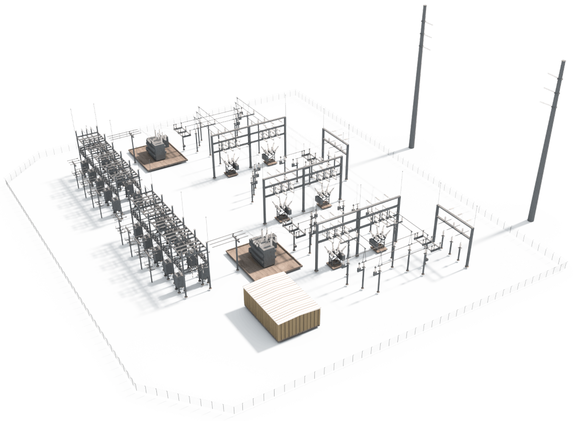
**2. EHV Transmission:**
Extra-high voltage (EHV) electric transmission lines are generally 765-kilovolt (kV), 500-kV and 345-kV.

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

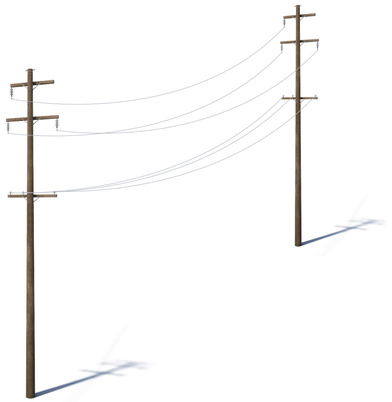
# HOW THE SYSTEM WORKS



**4. Local Transmission:**
We typically use 69-kV and 138-kV transmission lines to move power shorter distances – for example, to different parts of a city or county.

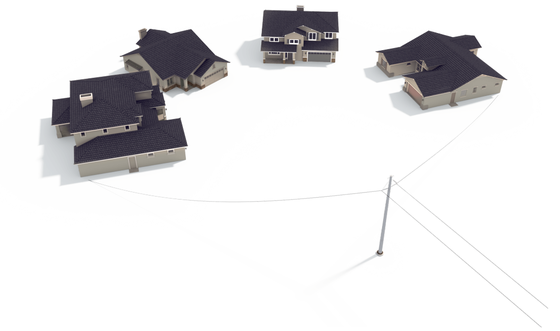


**5. Distribution Substations:**
Substations transform 69-kV and 138-kV electricity into lower distribution-level voltages such as 34.5-kV, 12-kV, or 7.2-kV.

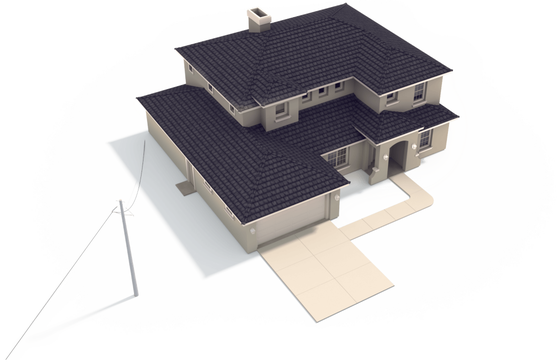


**6. Primary Distribution:**
These main lines (also called circuits) connect substations to large parts of the community.

# HOW THE SYSTEM WORKS



**7. Lateral Distribution:**
These lower-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 homes typically use 120/240 volts.

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

- EHV lines are like interstate highways.
- High-voltage local transmission lines are like four-lane roads.
- Distribution lines are like two-lane roads that eventually connect to a driveway.

# RIGHT-OF-WAY ACTIVITIES

We have two key philosophies regarding power line rights-of-way:

1. Routes should minimize disturbance to the community and the environment.
2. Property owners should be fairly compensated for any acquired land rights.

Once we study the land and propose line routes, we reach out to landowners for the following:

**To obtain permission to access your property for activities such as:**

- Environmental assessments
- Appraisal work
- Land surveying, soil boring and other field activities
- Cultural and historical resource reviews

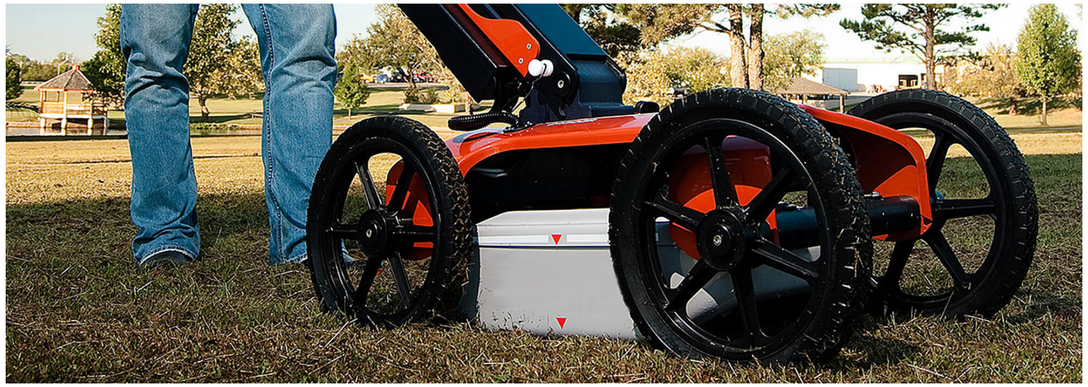
**To secure rights-of-way and communicate:**

- Easement compensation
- Easement terms and conditions
- Right-of-way width

**To outline our construction process with a specific focus on:**

- Property access and special conditions
- Property restoration
- Damage mitigation as appropriate

# FIELD ACTIVITIES

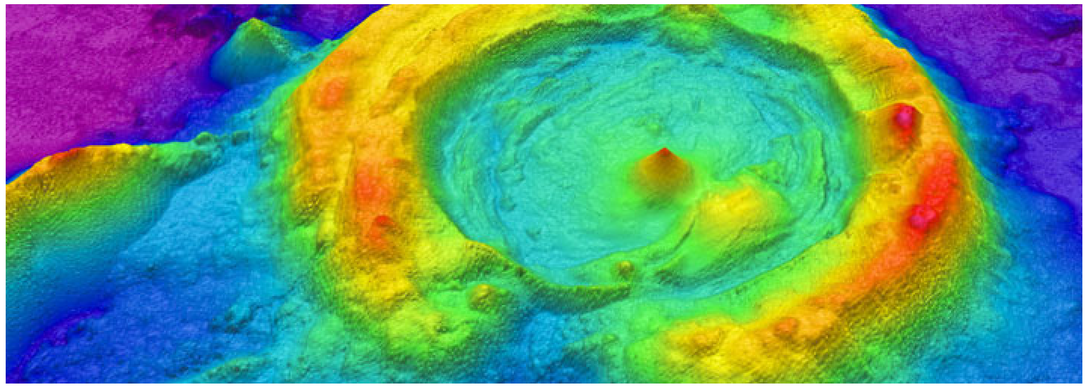


**Ground Penetrating Radar:** Ground Penetrating Radar (GPR) helps identify the location of underground utilities. A device that looks similar to a lawnmower, and is nondestructive to the soil, uses radio frequencies to detect objects below the ground's surface. Maps and images are created from the data.

**Helicopter:** Challenging terrain or other restrictions/obstructions can make accessing certain parts of a project area difficult. In these locations, crews use helicopters to install structures, string conductors, perform line work and maintain electric facilities. Company representatives work with local media outlets to communicate these activities to the public.

# FIELD ACTIVITIES

**Hydro Excavation:** Crews use hydro excavation (hydrovac) in areas where many underground utilities are located near  each other. This process involves using pressurized water to break down soil to expose underground utilities. Afterward, crews backfill the area. The process helps prevent damage to underground infrastructure while gathering important information.



**LiDAR:** LiDAR (Light Detection and Ranging) uses laser pulses to measure the distance of an object to the source. The data points result in digital 3D maps for accurate design and engineering. LiDAR surveying crews use mobile (car or aerial vehicle) or static (tripod) equipment.

# FIELD ACTIVITIES

**Soil Borings:** Field crews use a drill to bring up soil samples and then backfill the holes. Testing the core samples helps determine soil conditions in the area. Soil conditions and types can affect structure location and foundation design.

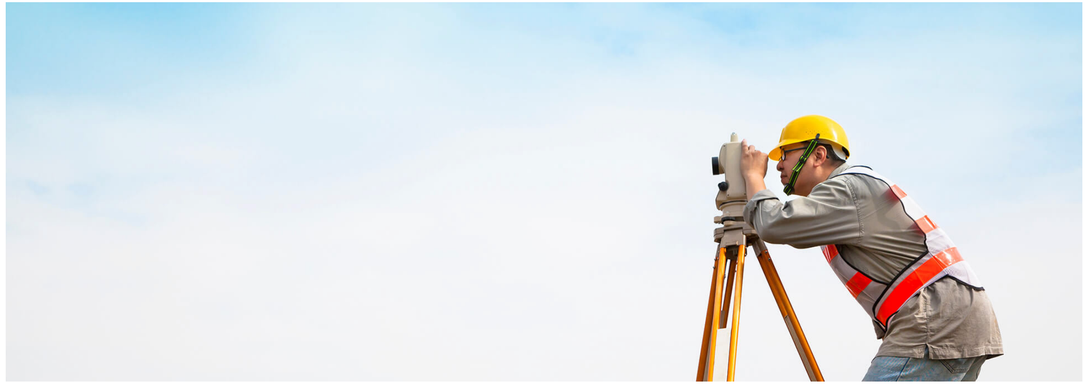
**Cultural Resource Study:** Field crews walk the area and conduct multiple excavation tests to identify historical and archaeological artifacts. Landowners also provide information about their property to survey crews.

# FIELD ACTIVITIES

**Environmental Survey:** Surveyors collect information about the habitats and physical attributes of the project area. They also look for ecological concerns like wetlands, flood plains and forests. This process can help protect endangered species, such as the Indiana Bat and American Burying Beetle.

**Unmanned aerial vehicles:** Unmanned aerial vehicles (UAVs), or drones, perform aerial inspections and safely gather data and detailed images of electric facilities. Company employees and vendors comply with all commercial Federal Aviation Administration (FAA) guidelines. Company representatives work with local media outlets to communicate these activities to the public.

# FIELD ACTIVITIES



## Staking:

- Field crews use staking to mark the project area, identify utility equipment and pinpoint future structure locations. This process essentially transfers engineering and construction plans to the field.
- Right-of-way crews use staking to identify parcel boundaries, easement boundaries and other utility locations within the company's rights-of-way.
- Environmental crews use staking to identify wetlands or other environmentally sensitive areas.

## Field Survey:

- Field survey crews help determine an appropriate route for a new transmission line by identifying constraints within the project area.
- Engineers conduct extensive studies of the terrain and soil to determine what types of structures and foundations are most suitable. They also gather information to create digital 3D maps of the project area to help engineer and design the project.

# VEGETATION MANAGEMENT

**What is vegetation management?** AEP's vegetation management approach involves controlling the growth of trees and other vegetation in transmission rights-of-way, the sections of land where transmission power lines are located.

AEP Transmission's vegetation management program helps balance the need for reliable service with respect for the natural environment. The company uses contract forestry crews to complete vegetation management work.

**Why is it done?** To reduce power outages caused by trees and other plants contacting power lines.

**Our vegetation management program aims to:**

Work safely and efficiently

Protect the electric grid and reduce power outages

Foster positive relationships with customers and communities

Comply with federal, state and local regulations

Minimize negative impacts to the environment

The North American Electric Reliability Corporation (NERC) sets standards that require utilities to establish minimum clearance distances between transmission lines and the nearest vegetation. Non-compliance can lead to significant community-wide power outages.

- Crews may clear identified danger trees outside the right-of-way as allowed per easement language.
- When possible and practical, crews use selective clearing practices to retain low-growth shrubs and bushes.

*Landowners should speak with a company representative to identify plants that are safe to place in the right-of-way.

# WHAT TO EXPECT DURING CONSTRUCTION

## Construction Corridor Development

**Crews prepare for construction by:**

- Installing right-of-way access, safety and environmental controls like gates, culverts and fencing.
- Marking utilities and pole locations along the power line route using stakes and flags.
- Removing obstructions from the right-of-way easement area.

**As part of this process, crews clear the right-of-way:**

- Where necessary, forestry crews prepare for transmission line construction by clearing trees and woody-stemmed vegetation from the right-of-way.
- Crews may clear identified danger trees outside the right-of-way as allowed per the easement language.

# WHAT TO EXPECT DURING CONSTRUCTION

## Pole Installation

At most pole locations, crews:

- Assemble the pole and place it near the installation area.
- Install and stabilize the base of the new pole.
- Install and secure the new pole.

# WHAT TO EXPECT DURING CONSTRUCTION

### Wire Installation

Crews install new wires on the new poles along the power line route.

# WHAT TO EXPECT DURING CONSTRUCTION

### Facilities Placed In Service

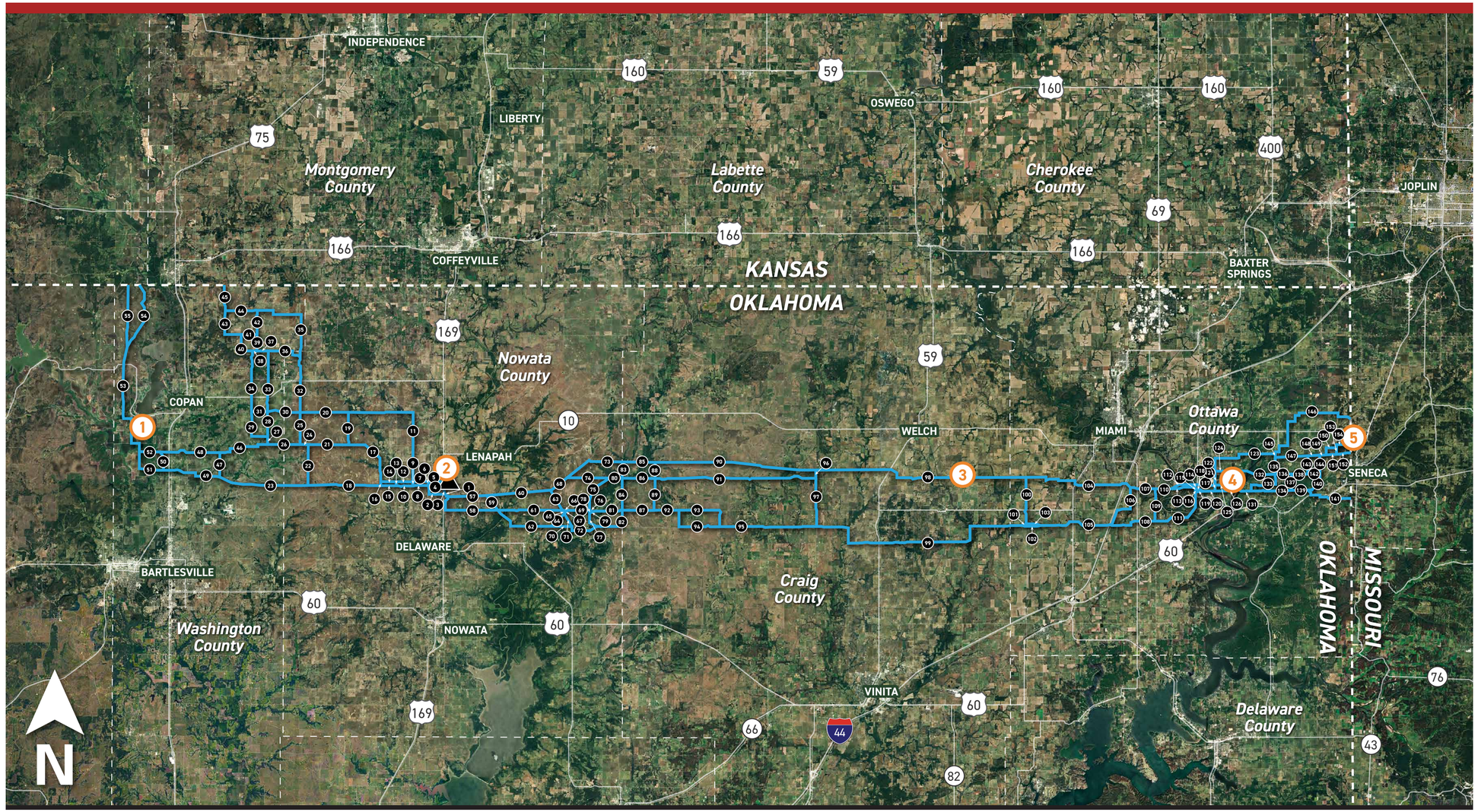
Crews energize the equipment after finishing pole and wire installations.

### Post-Construction & Site Restoration

We restore properties to as close to their pre-construction condition as possible. Our teams work with individual landowners to address any property damage.

# NO FINAL LINE ROUTE HAS BEEN DETERMINED

## WE VALUE YOUR INPUT.




# Northeast Oklahoma

Transmission Enhancement Project

## Viewpoint Location Map

- ▲ Existing Delaware Substation
- Potential Route Segments*
- (#) Photo Viewpoint Location
- (#) Route Segment Label

*Potential route segments are multiple route alternatives presented to determine a line route. Company representatives do not build all study segments; rather, upon the OCC's route review and approval, one route is built based on public feedback and feasibility. **NO FINAL LINE ROUTE HAS BEEN DETERMINED.***

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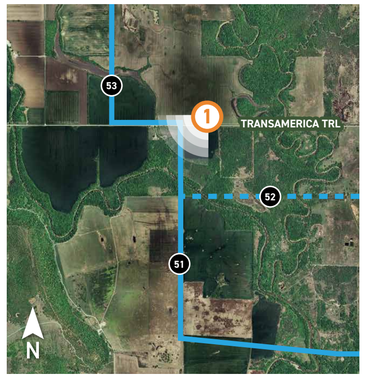
# Northeast Oklahoma

Transmission Enhancement Project

## Viewpoint 1

Date: 1/11/2026 Time: 1:41 p.m.

Viewing Direction: Southwest




- # Route Segment Label
- Potential Route Segment(s) being Simulated
- Other Potential Route Segments
- 1 Photo Viewpoint Location

*The visual simulation is an approximation using the best available data. Final engineering, permitting, and construction details are not complete.*

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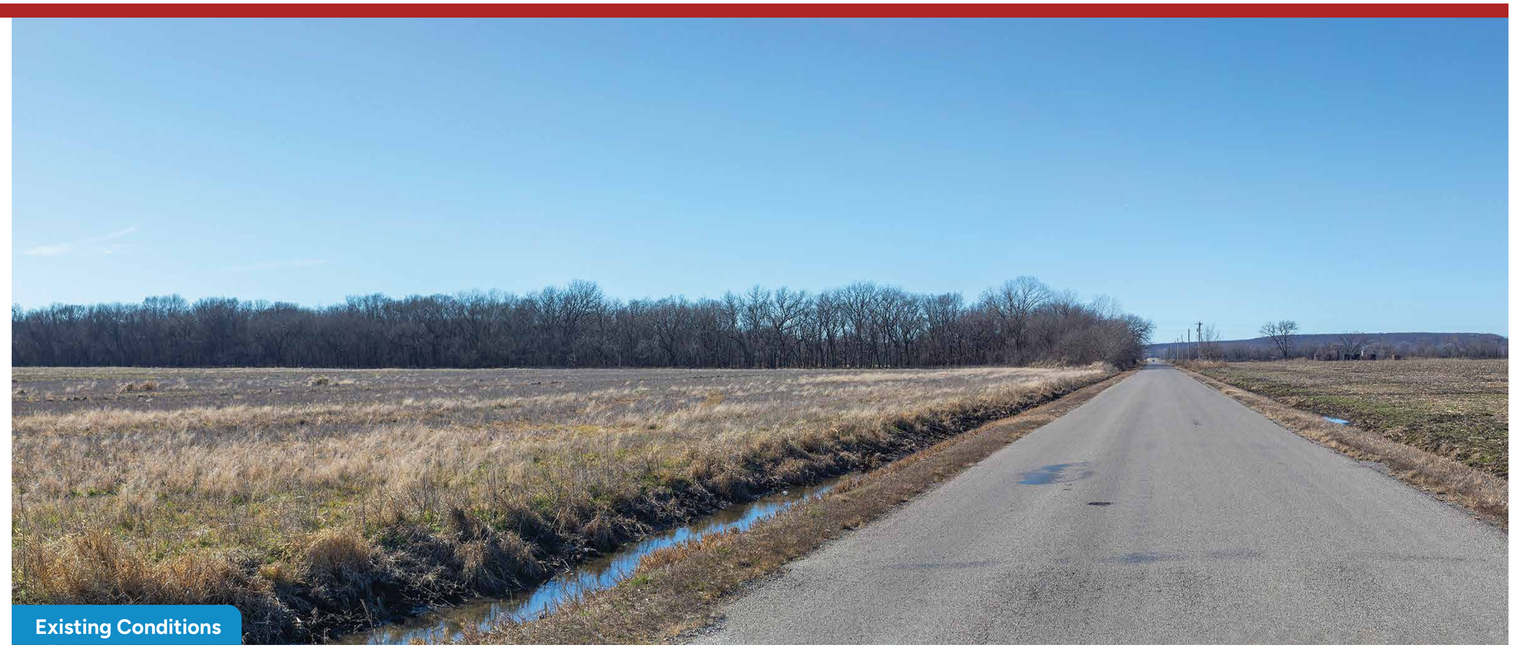


Existing Conditions

Proposed Conditions

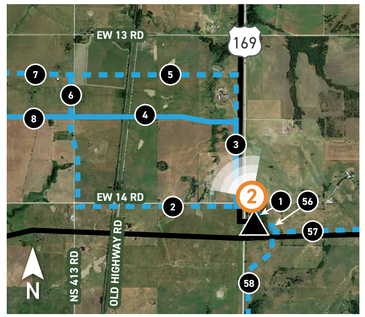
# Northeast Oklahoma

Transmission Enhancement Project

## Viewpoint 2

Date: 1/12/2026 Time: 3:30 p.m.

Viewing Direction: Northwest




- # Route Segment Label
- Potential Route Segment(s) being Simulated
- Other Potential Route Segments
- Existing Transmission Line
- ② Photo Viewpoint Location
- Existing Delaware Substation

*The visual simulation is an approximation using the best available data. Final engineering, permitting, and construction details are not complete.*

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Existing Conditions


Proposed Conditions

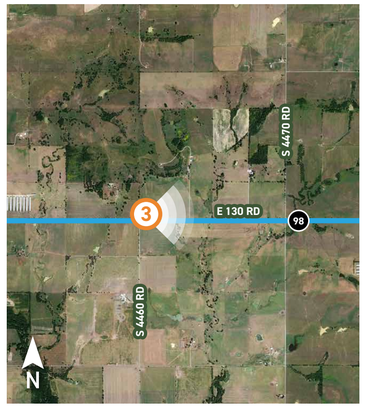
# Northeast Oklahoma

Transmission Enhancement Project

## Viewpoint 3

Date: 1/12/2026 Time: 12:20 p.m.

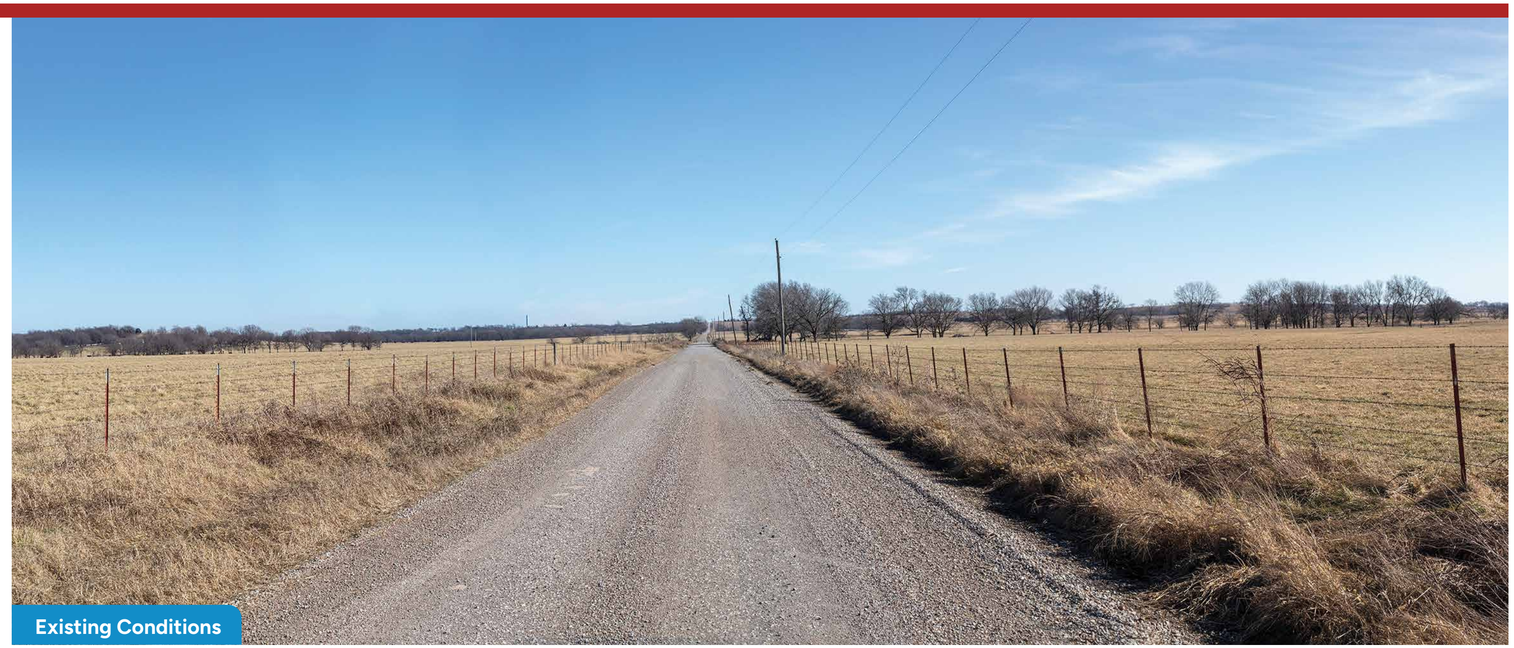
Viewing Direction: East




- # Route Segment Label
- Potential Route Segment(s) being Simulated
- 3 Photo Viewpoint Location

*The visual simulation is an approximation using the best available data. Final engineering, permitting, and construction details are not complete.*

AMERICAN ELECTRIC POWER



Existing Conditions

Proposed Conditions

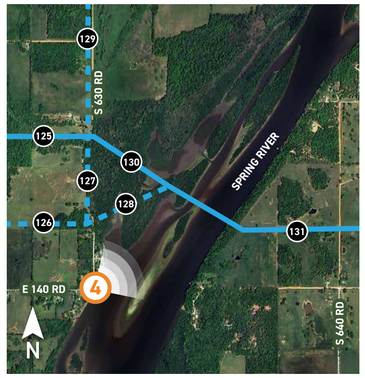
# Northeast Oklahoma

Transmission Enhancement Project

## Viewpoint 4

Date: 1/12/2026 Time: 11:19 p.m.

Viewing Direction: Northeast




- # Route Segment Label
- Potential Route Segment(s) being Simulated
- Other Potential Route Segments
- 4 Photo Viewpoint Location

*The visual simulation is an approximation using the best available data. Final engineering, permitting, and construction details are not complete.*

AMERICAN ELECTRIC POWER

Existing Conditions

Proposed Conditions

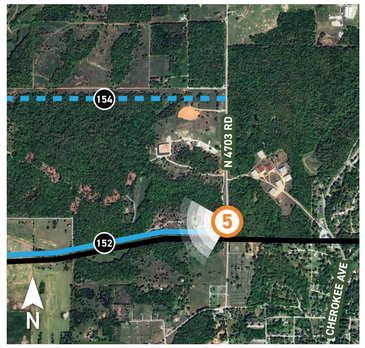
# Northeast Oklahoma

Transmission Enhancement Project

## Viewpoint 5

Date: 1/12/2026 Time: 10:24 a.m.

Viewing Direction: West




- Route Segment Label
- Potential Route Segment(s) being Simulated
- Other Potential Route Segments
- Existing Transmission Line
- Photo Viewpoint Location

*The visual simulation is an approximation using the best available data. Final engineering, permitting, and construction details are not complete.*

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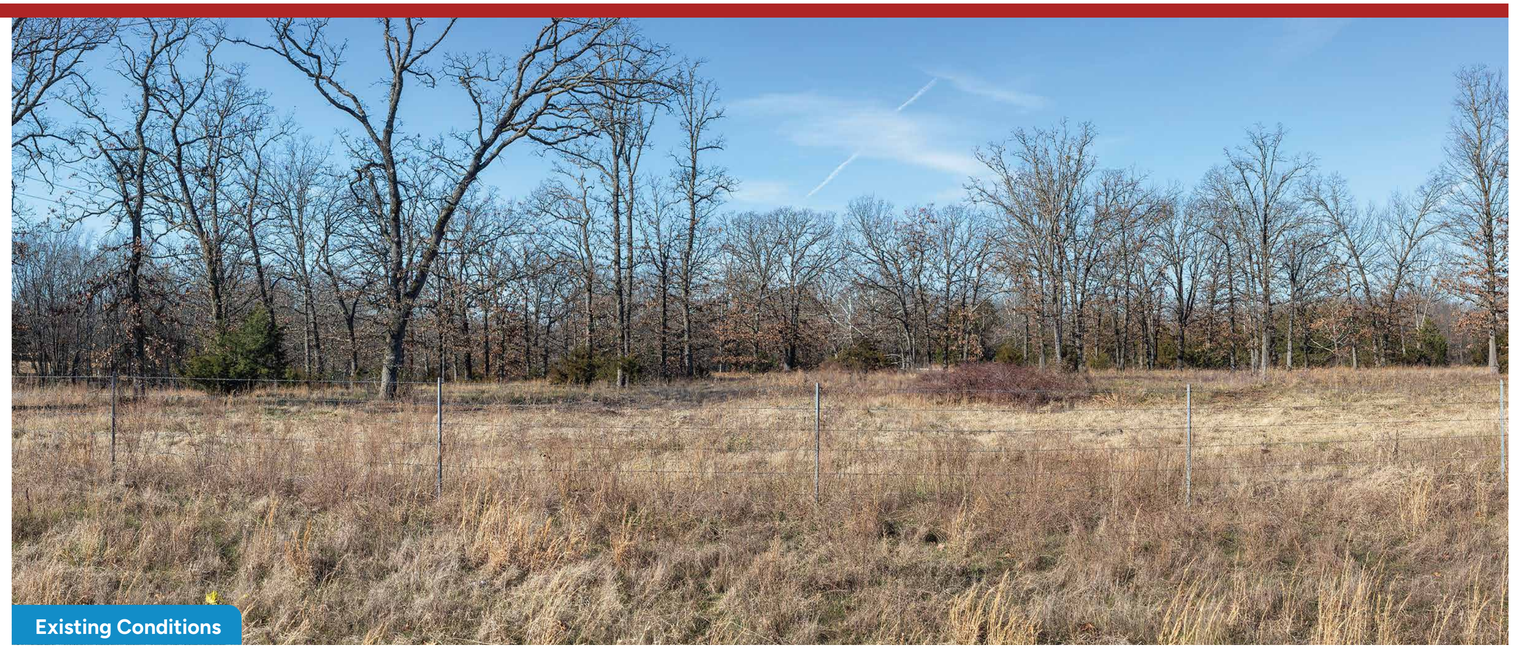


Existing Conditions

Proposed Conditions

# THANK YOU FOR ATTENDING OUR OPEN HOUSE

Thank you for sharing your valuable input! Your insights and ideas help our project team develop the best solutions for the necessary system improvements.

## Tell Us What You Know:

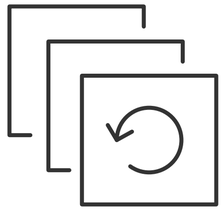
**Please return your comment forms before you leave.** Your insights and ideas help our project team develop the best solutions for the necessary system improvements.

**Want to send us comments after today?** Feel free to scan the QR code here or on your handout to send comments electronically.

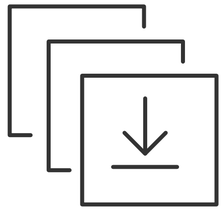
**If you have more questions,** please let a project team member know.

# THANK YOU!

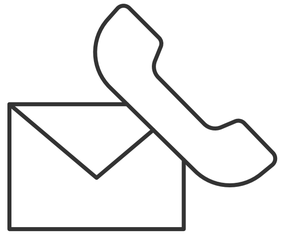
Thank you for visiting the project virtual open house. For more information and project updates please visit the project website, or contact us with any additional questions.



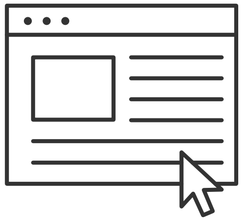
**Replay Open House**



**Download Slide Deck**



**Contact Us**



**Visit Project Website**