

PROJECT NEED & BENEFITS



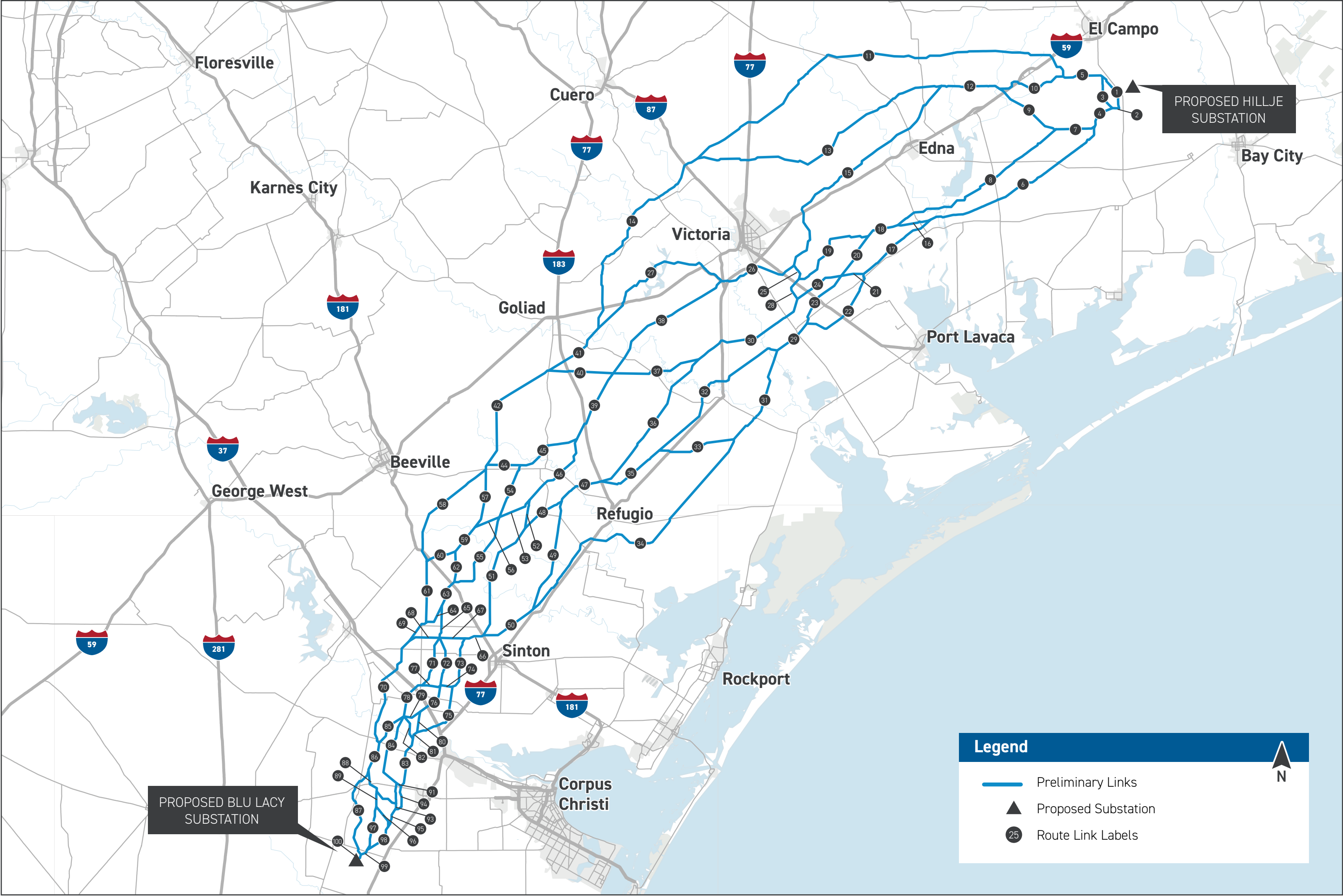
Why is the project important to our community?

After analyzing Texas' rapid growth in electricity demand, the Electric Reliability Council of Texas (ERCOT) identified projects through its Regional Transmission Plan process necessary to address reliability concerns today and in the future. These projects, including the Hillje-Blu Lacy Transmission Improvement Project, were identified to strengthen grid reliability and minimize congestion costs.

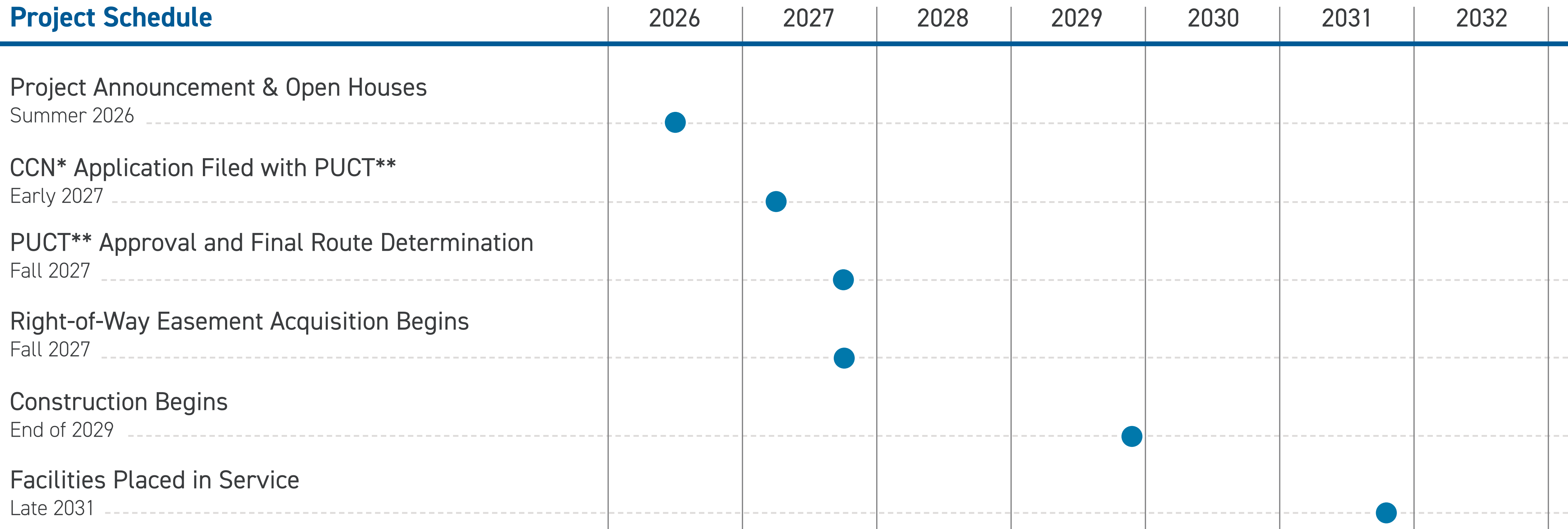
The Hillje-Blu Lacy Improvement Project:

- Introduces a more efficient and reliable energy delivery system.
- Provides additional capacity for growth and economic development.
- Improves storm resiliency by building stronger energy grid infrastructure capable of withstanding extreme weather events.

PROJECT MAP

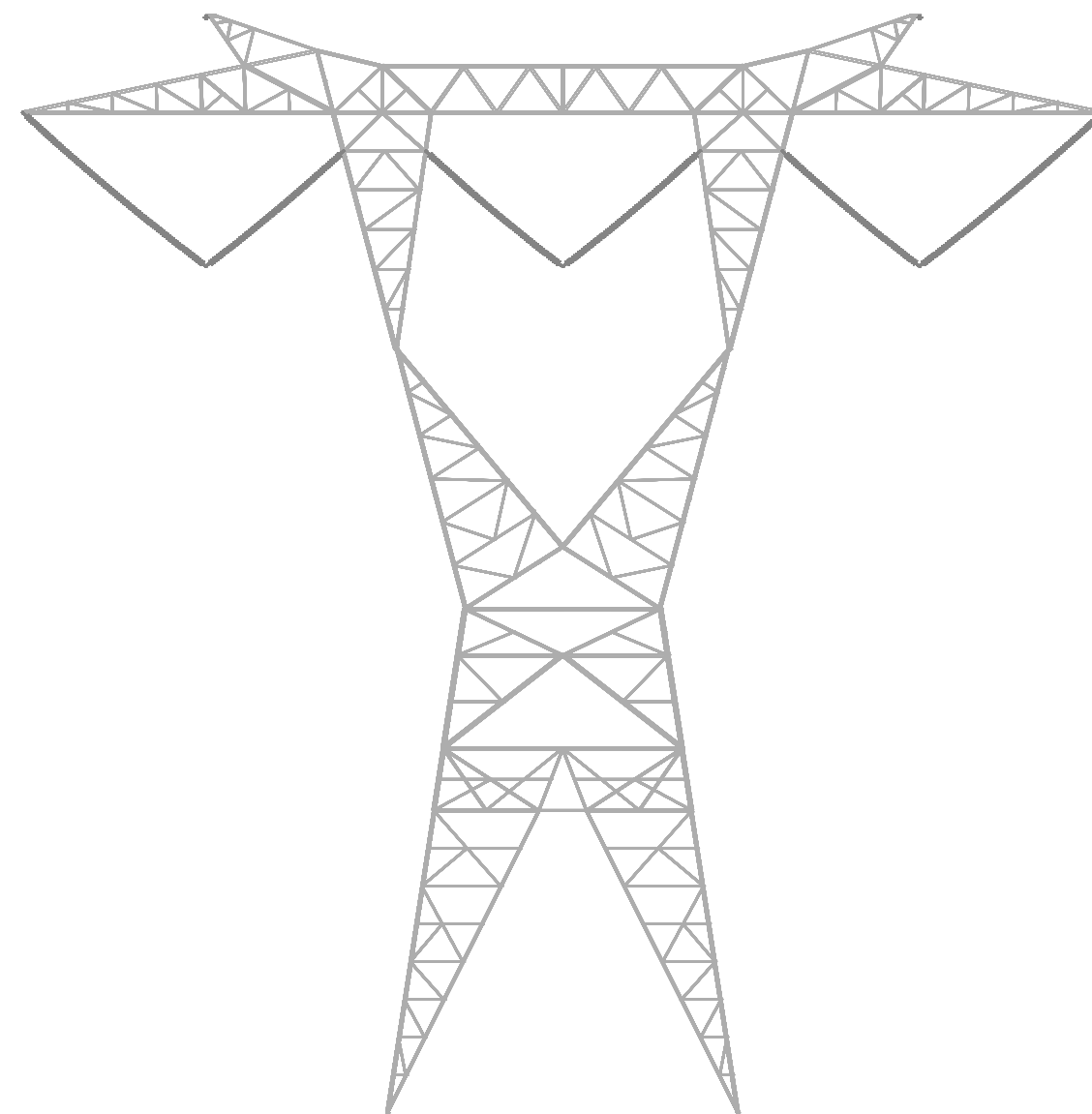


PROJECT TIMELINE

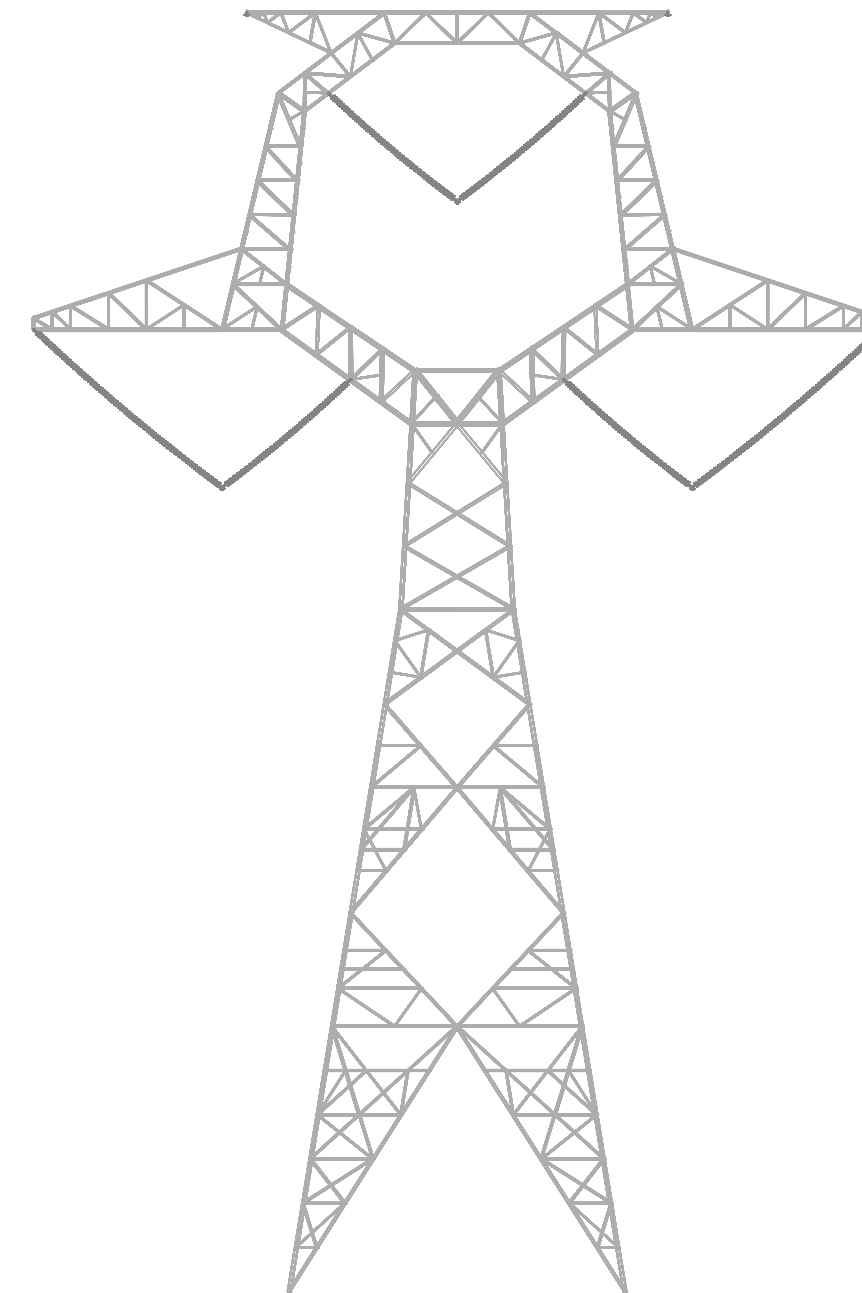


*Certificate of Convenience and Necessity **Public Utility Commission of Texas Timeline Subject to Change

TYPICAL STRUCTURE



Horizontal Lattice Towers



Delta Lattice Towers

AEP Texas plans to install self-supporting lattice structures on the western half of the power line.

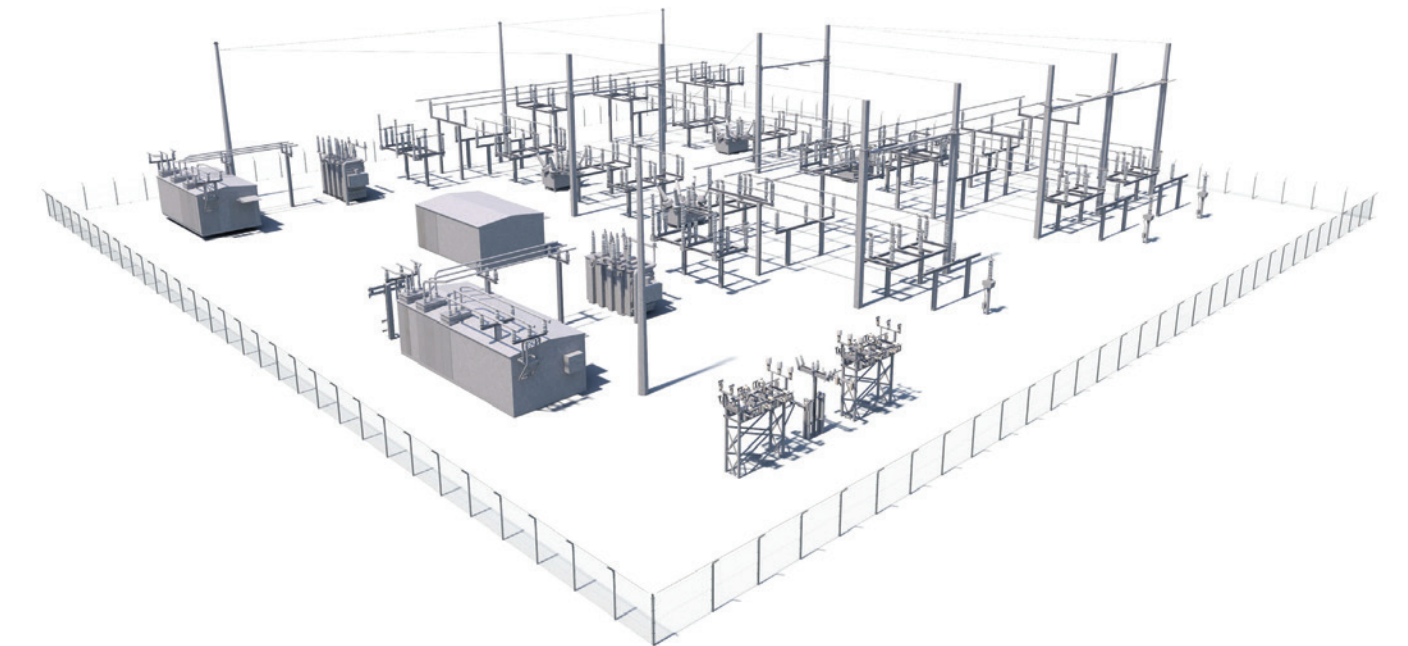
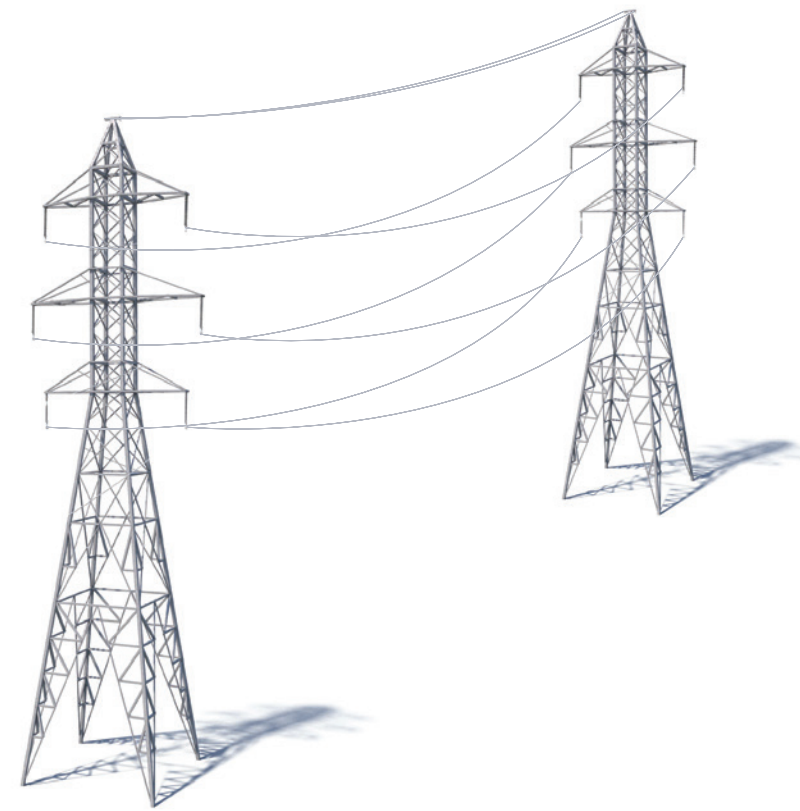
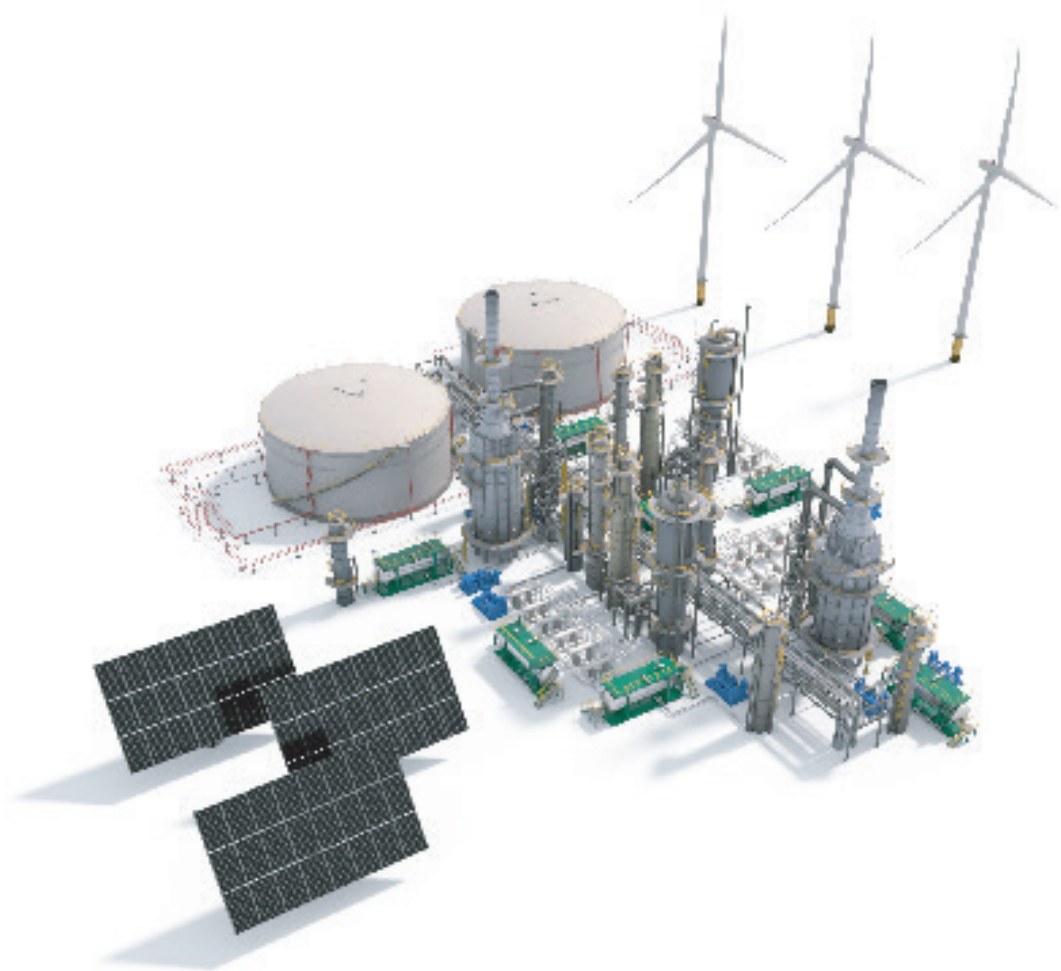
Typical Structure Height: **160-180 feet**

Typical Right-of-Way Width: **200 feet**

Typical Distance Between Structures: **1,200 feet**

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

HOW THE SYSTEM WORKS



1. Generation Stations:

A generation station produces power to be transported long distances through transmission lines.

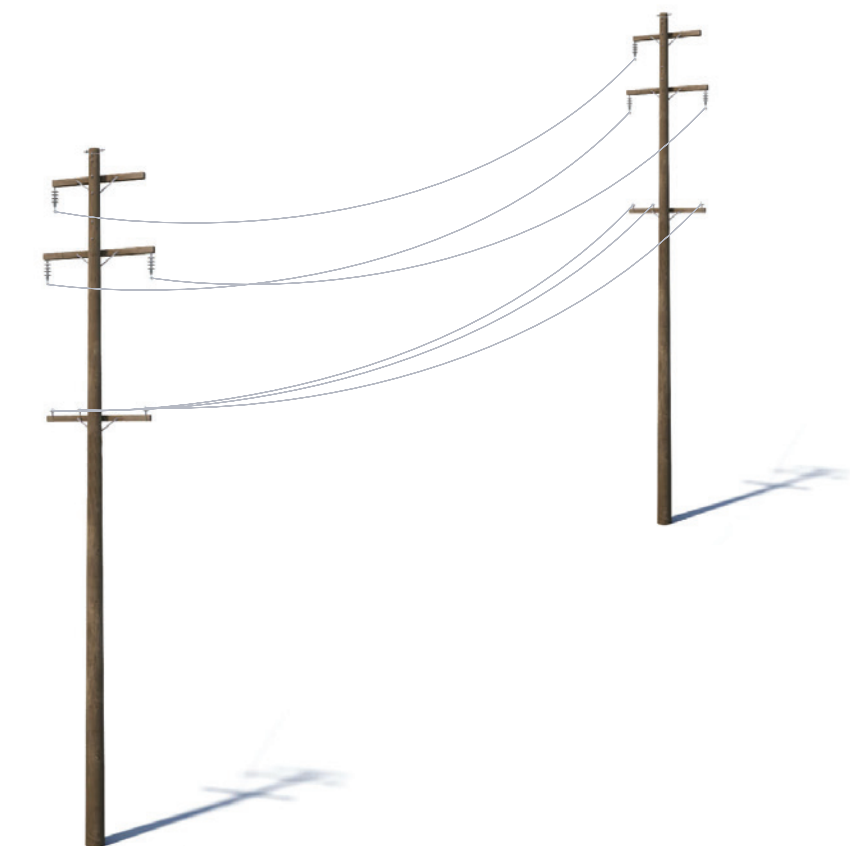
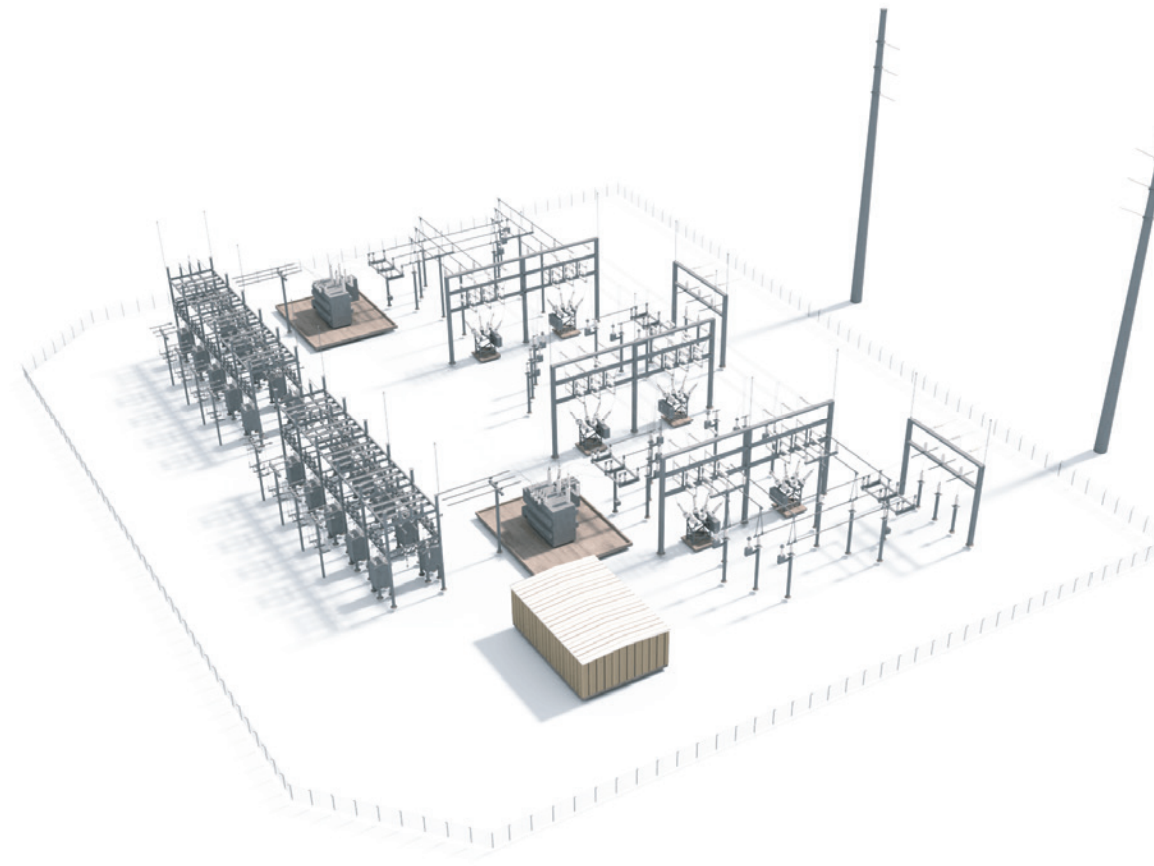
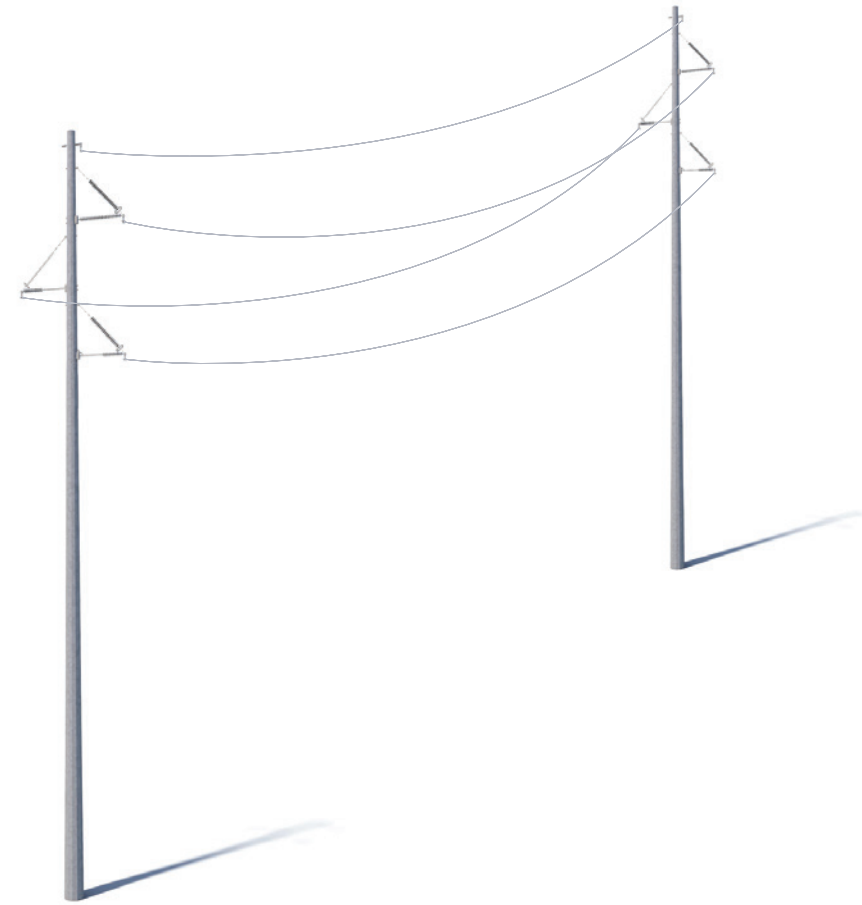
2. EHV Transmission:

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.

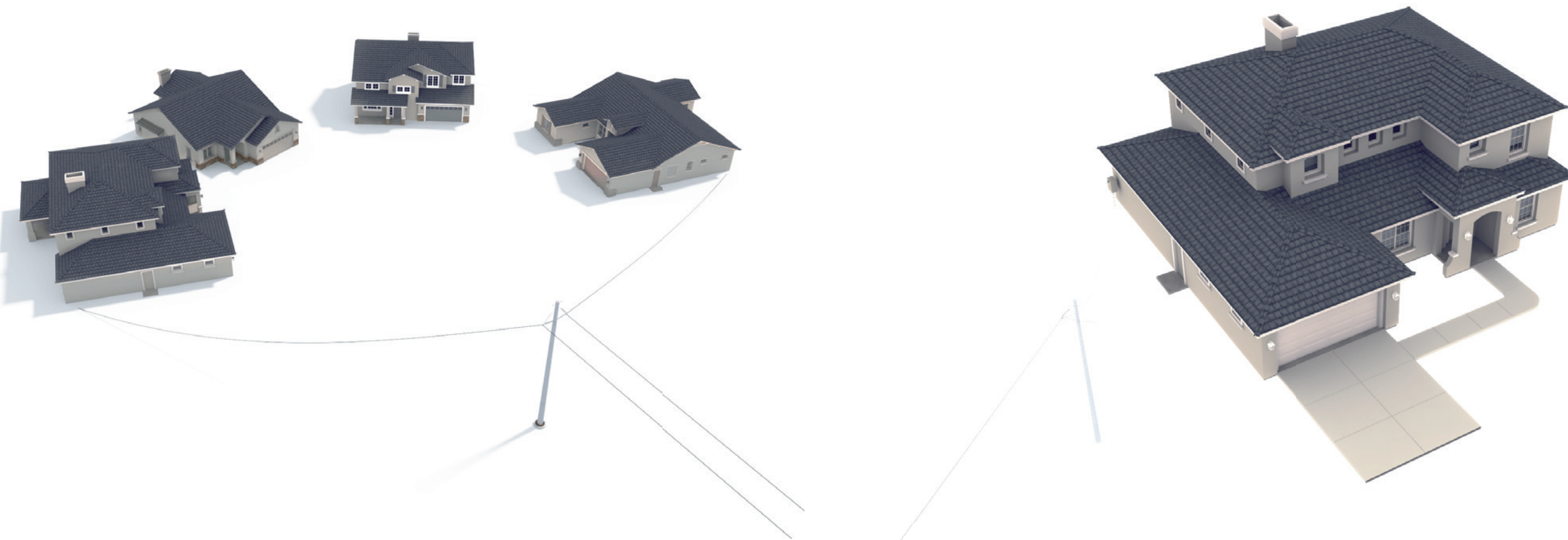
5. Distribution Substations:

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

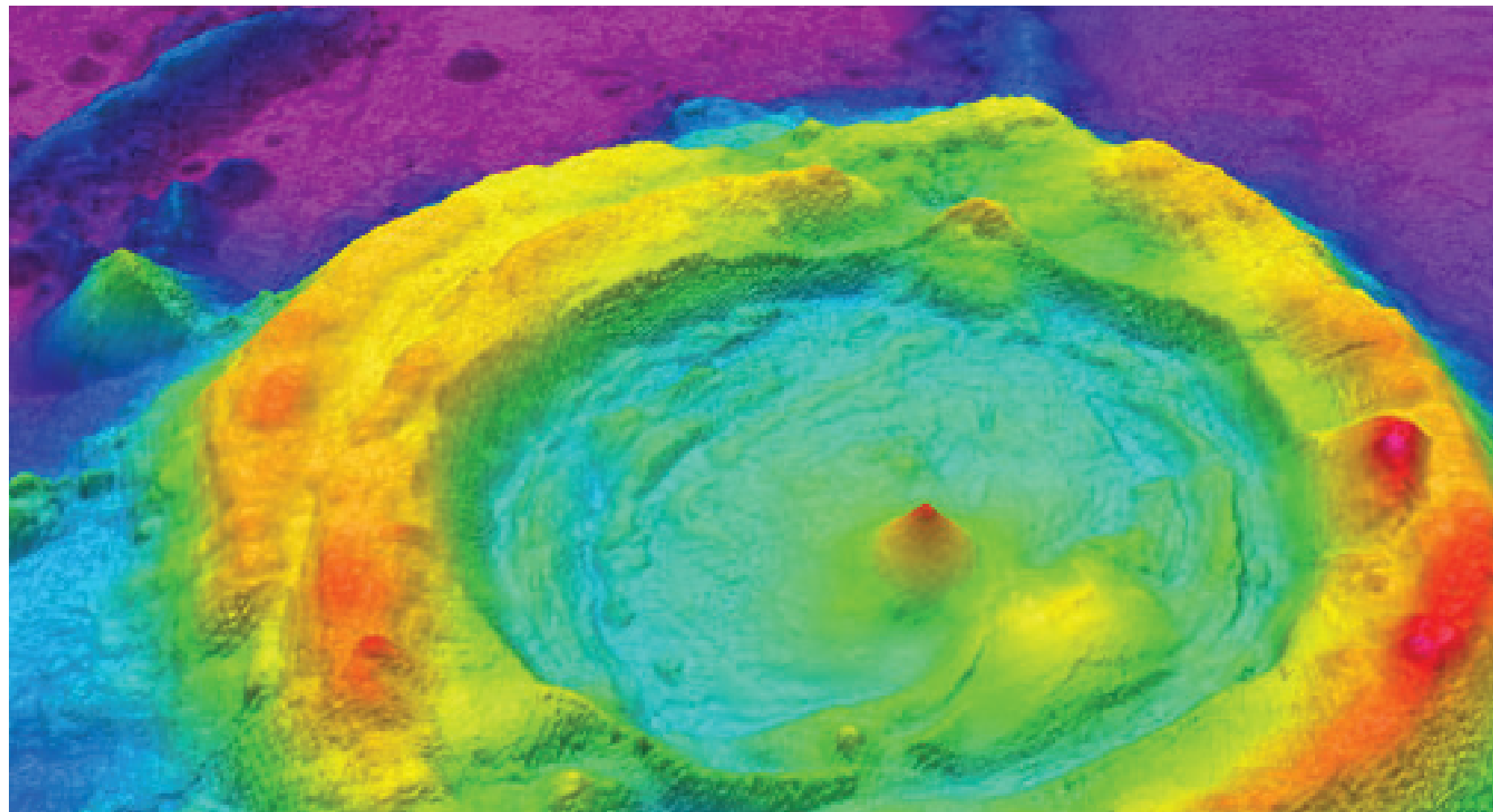
Challenging terrain or other restrictions/obstructions can make accessing certain parts of a project area difficult. In these locations, crews use helicopters to install structures, string conductors, perform line work and maintain electric facilities. Company representatives work with local media outlets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

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

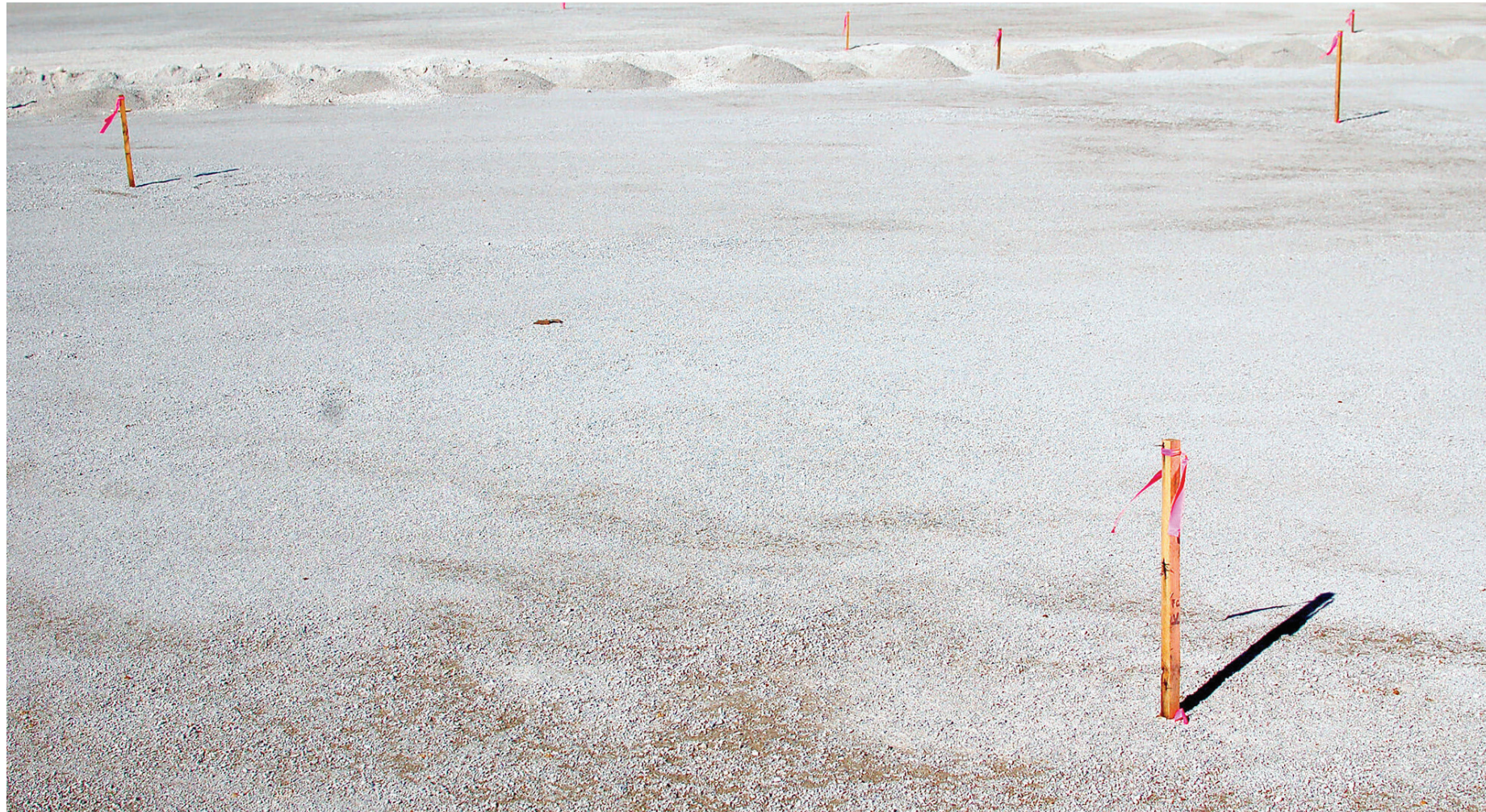
Surveyors collect information about the habitats and physical attributes of the project area. They also look for ecological concerns like wetlands, flood plains and forests. This process can help protect endangered species, such as the Indiana Bat and American Burying Beetle.



Unmanned Aerial Vehicles (Drones)

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.

WHAT TO EXPECT DURING CONSTRUCTION



Construction Corridor Development

Crews prepare for construction by:

- Building access roads.
- Marking utilities and pole locations along the power line route using stakes and flags.
- Removing obstructions from the right-of-way easement area.
- Installing safety and environmental controls such as fencing.

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

- 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 the 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.

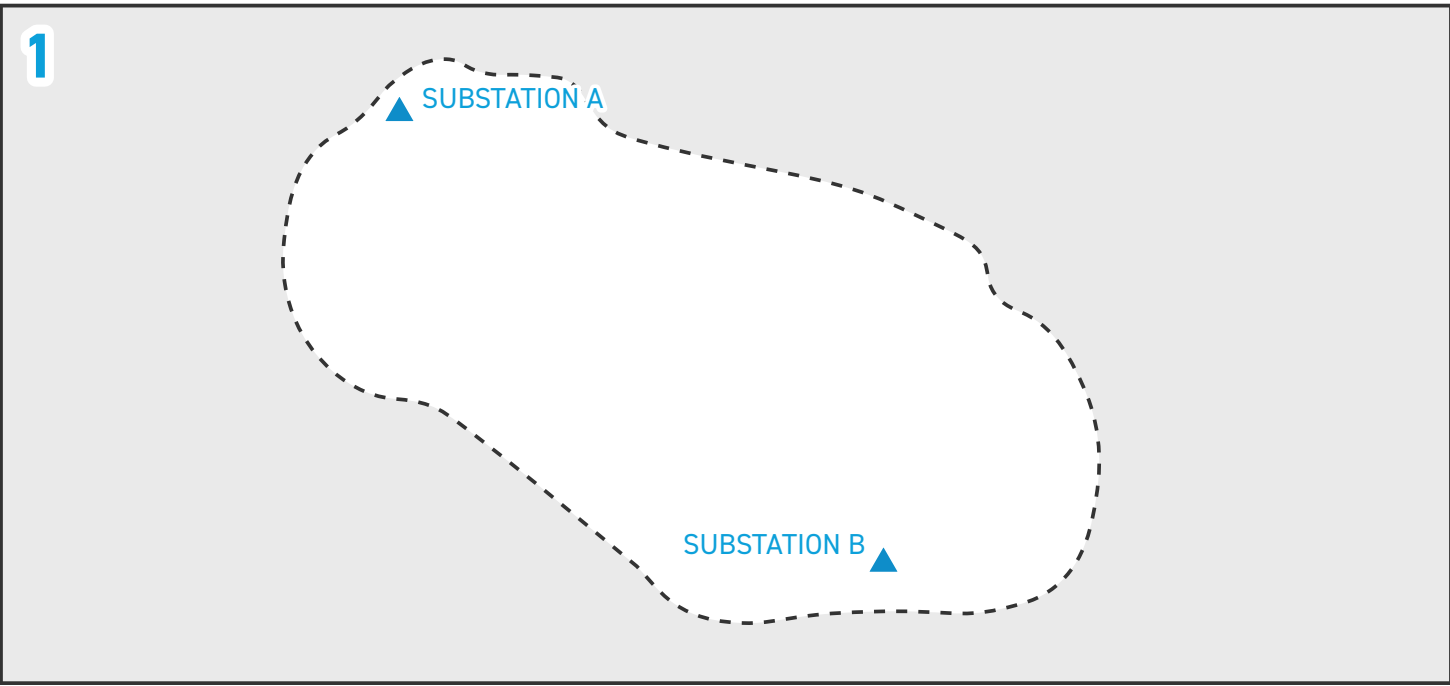
Post-Construction & Site Restoration

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

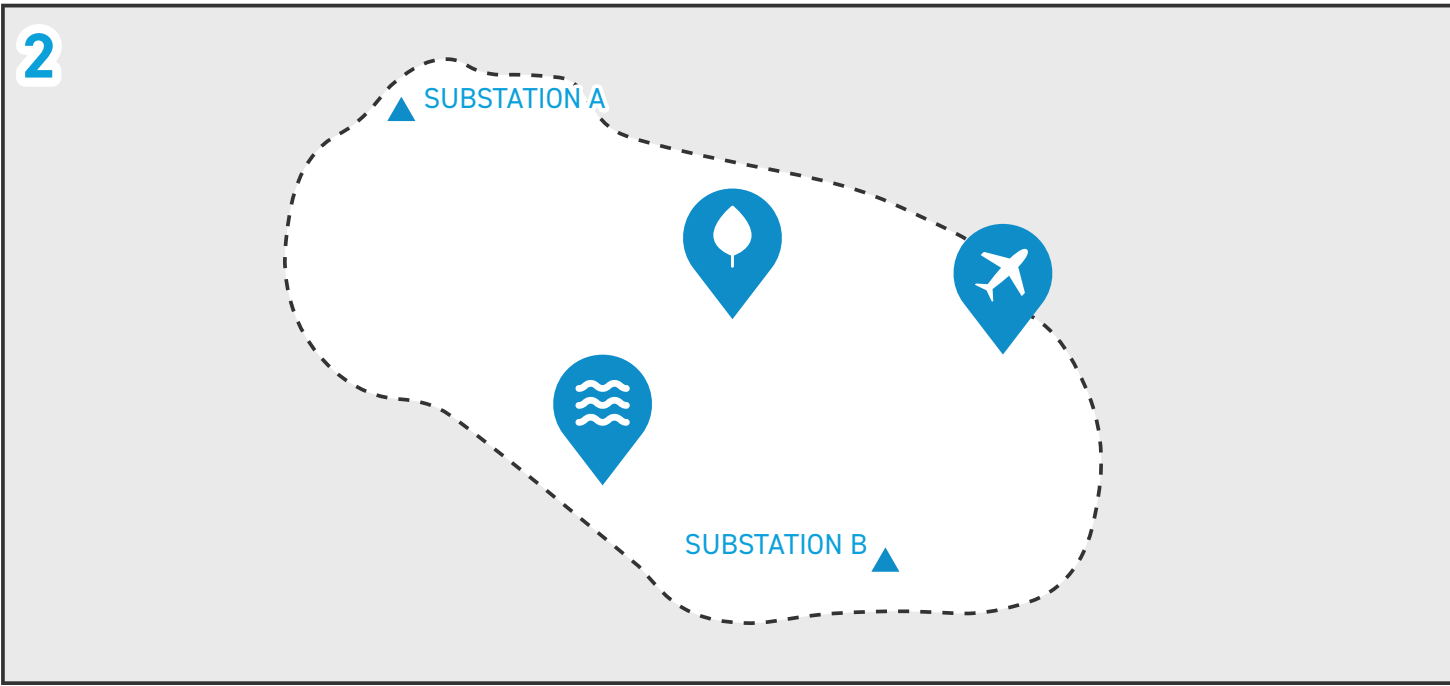
ROUTING PROCESS



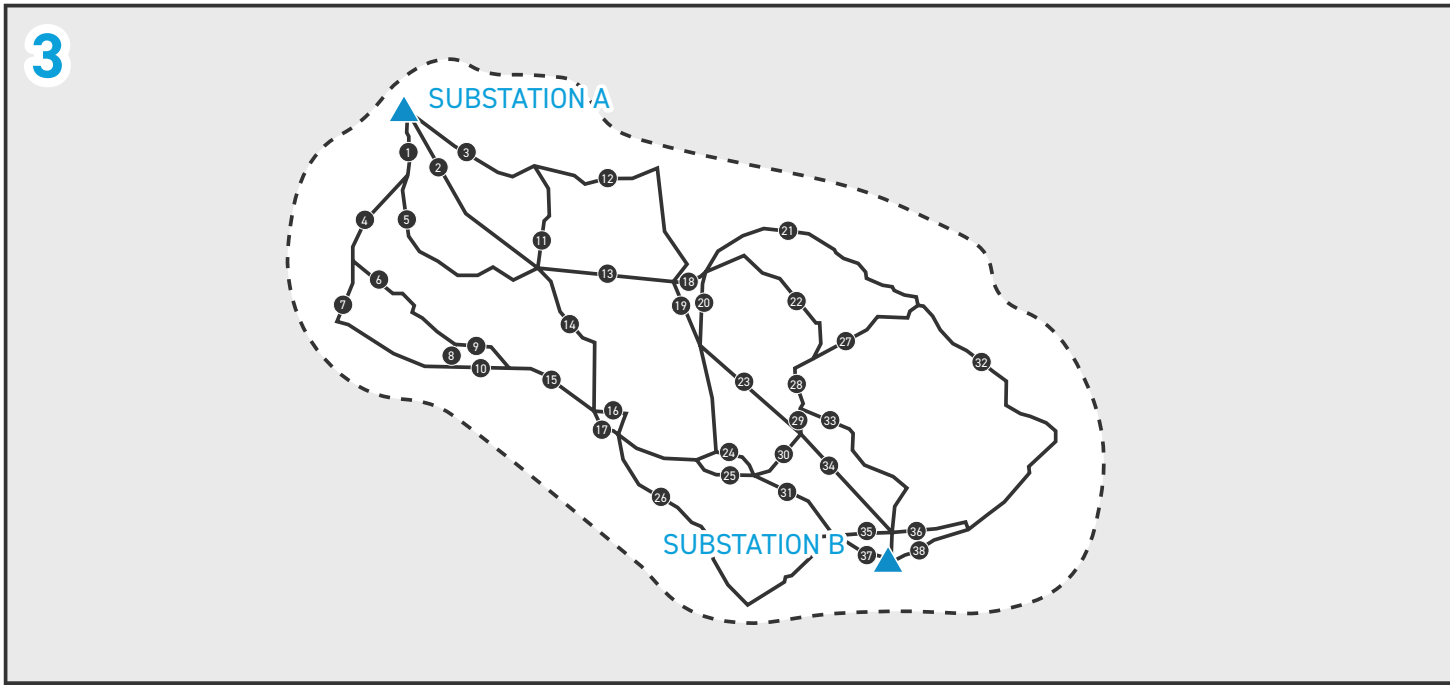
We implement a comprehensive routing process that takes land use, the environment, public input and engineering guidelines into account to develop a transmission line route. The information below illustrates each stage of the routing process.



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

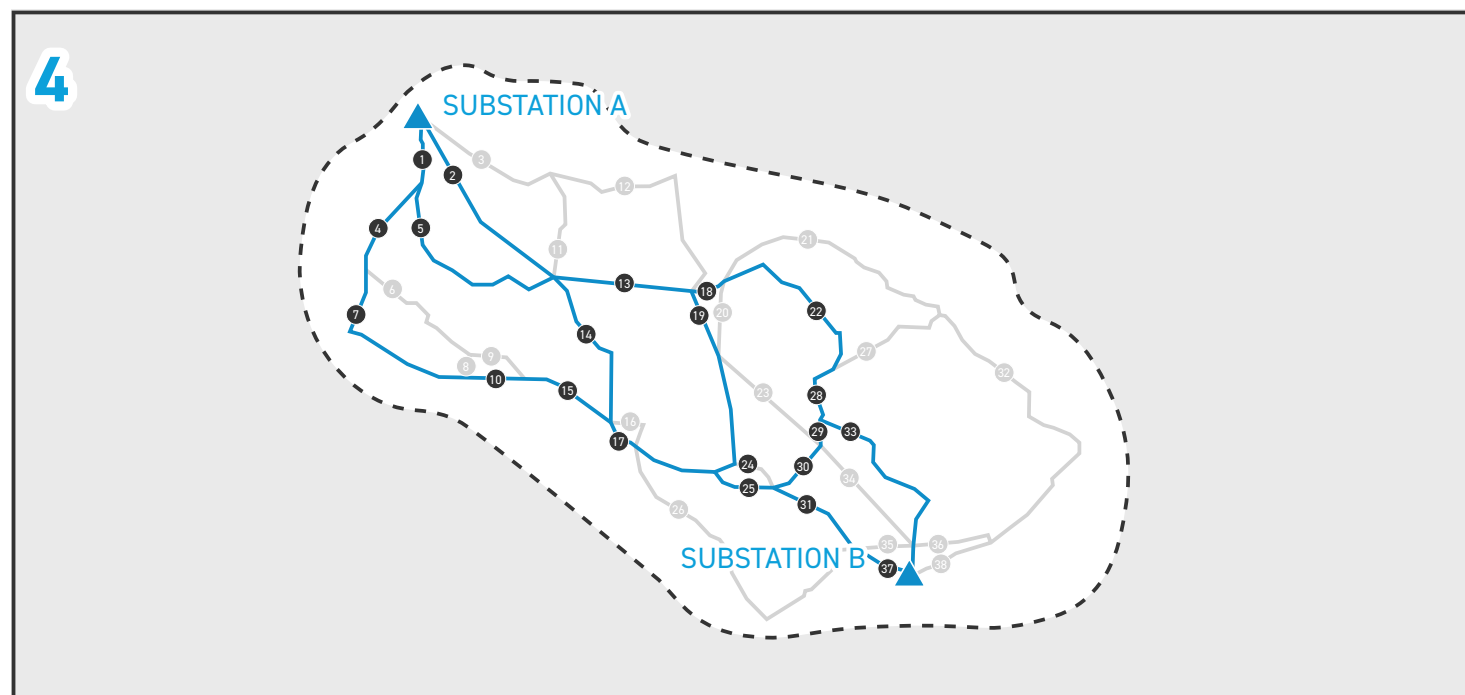


2. Information Gathering: Data is gathered for the defined study area including environmental, land use, historic and cultural resources, existing infrastructure and sensitive areas.

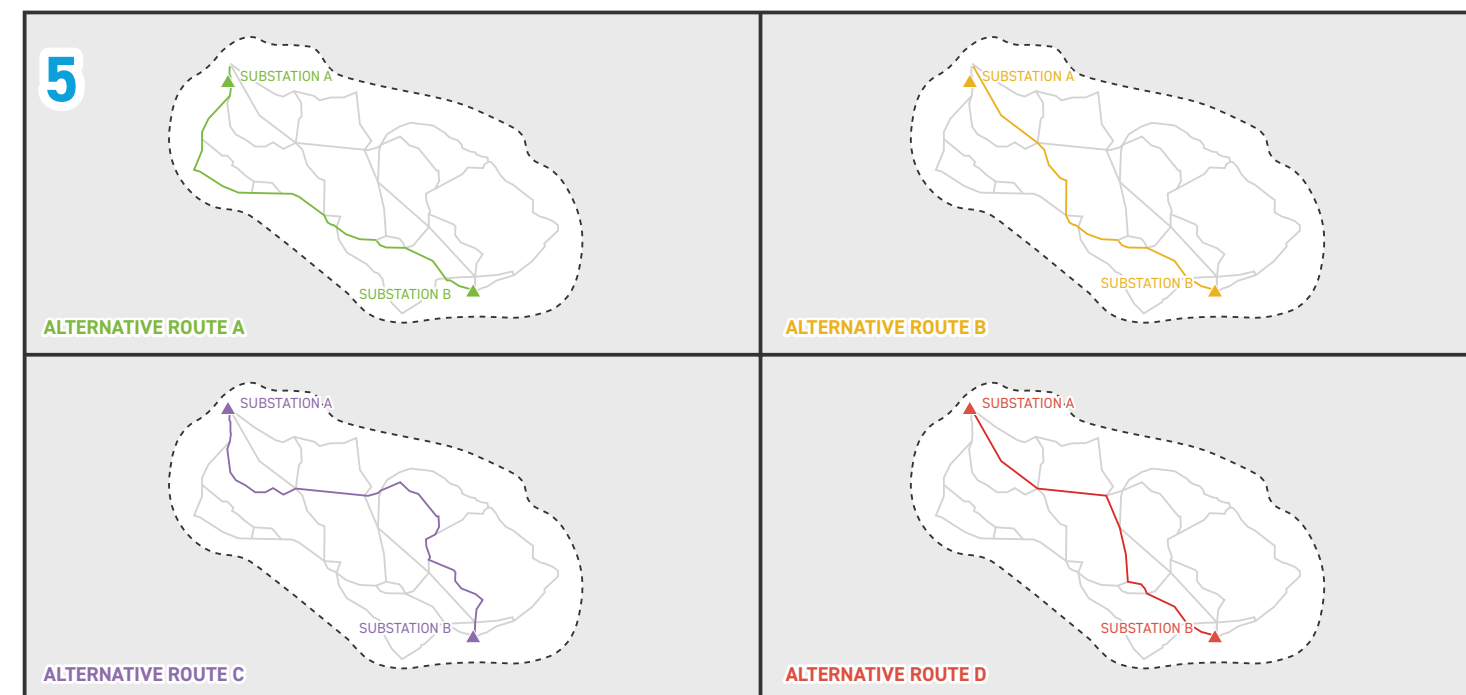


3. Preliminary Links: The routing team uses data gathered to develop Preliminary Links adhering to a series of general routing and technical guidelines. Preliminary Links are formed between two common points of intersection.

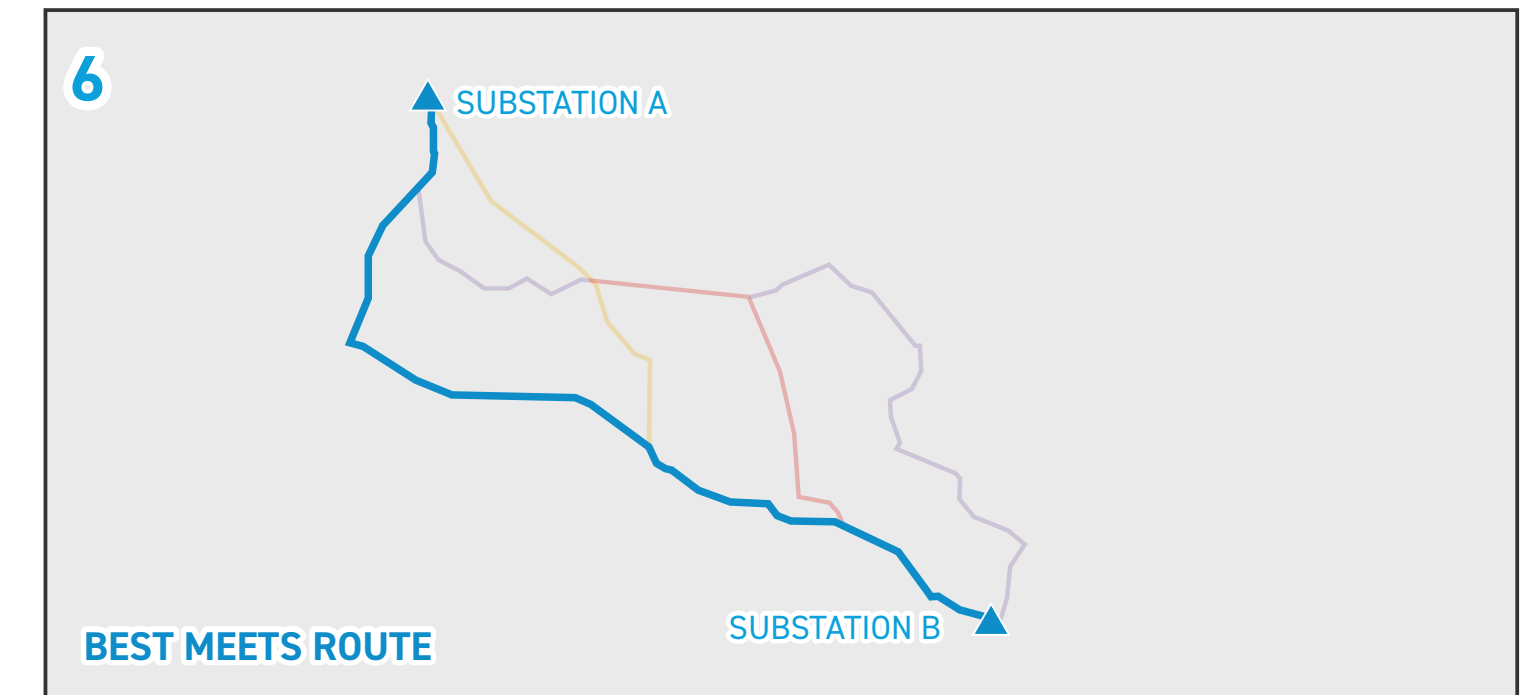
ROUTING PROCESS



4. Primary Alternative Links: As more information is gathered, including input from regulatory agencies, local officials and the public, the Preliminary Links are refined. Some Preliminary Links are eliminated or modified resulting in a set of Primary Alternative Links.



5. Alternative Routes: The Primary Alternative Links are used to create Alternative Routes that are feasible, geographically diverse and forward progressing. Alternative Routes are evaluated using criteria to determine potential impacts to existing land use and environmental resources.



6. Best Meets Route: Alternative Routes are assessed and a Best Meets route is chosen based on the requirements of Public Utility Regulatory Act (PURA) and PUCT Substantive Rules. The proposed route minimizes impact to the community and environment, while considering cost, line length, and design requirements. The Best Meets Route will be one of multiple alternative routes presented to the PUCT as part of the CCN application.

ROUTING CONSIDERATIONS



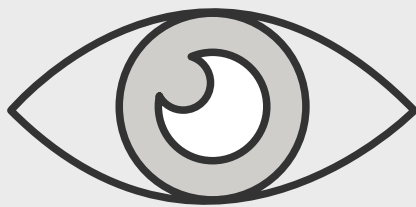
We aim to build transmission lines that power communities and the economy while minimizing community and environmental impacts.



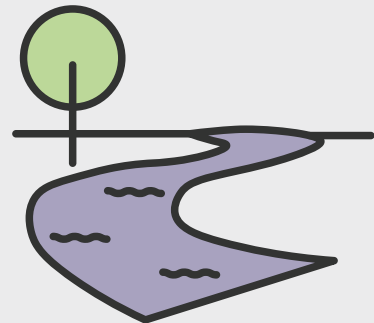
Our project teams review a variety of environmental factors, including:



Current and proposed public and private land uses



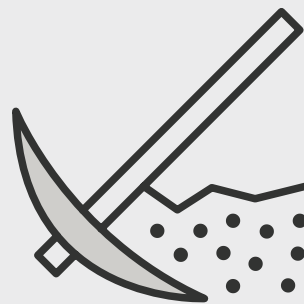
Aesthetics and visual impacts



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



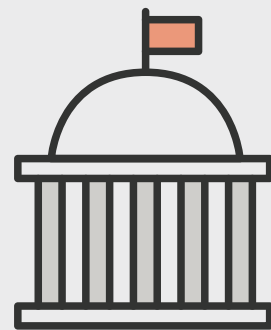
Wildlife, vegetation and fisheries, including threatened and endangered species



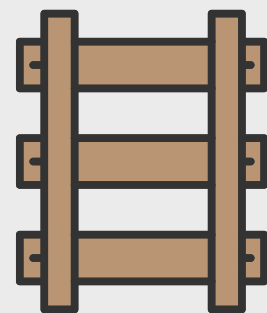
Soils and geology



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.

ENVIRONMENTAL & LAND USE CRITERIA FOR TRANSMISSION LINE EVALUATION



Land Use

1. Length of Alternative Route
2. Number of habitable structures^a within 500 feet^b of right-of-way (ROW) centerline
3. Length of ROW utilizing existing transmission line ROW
4. Length of ROW parallel to existing transmission line ROW
5. Length of ROW parallel to other existing compatible ROW (roads, highways, railways, etc. – excluding oil and gas pipelines)
6. Length of ROW parallel to apparent property lines (not following existing ROW)^c
7. Sum of evaluation criteria 4, 5, and 6
8. Percent of evaluation criteria 4, 5, and 6
9. Length of ROW across parks/recreational areas^d
10. Number of additional parks/recreational areas^d within 1,000 feet of ROW centerline
11. Length of ROW across cropland
12. Length of ROW across pastureland/rangeland
13. Length of ROW across land irrigated by mobile irrigation systems (rolling or pivot type)
14. Length of ROW across conservation easements and/or mitigation banks (Special Management Areas)
15. Length of ROW across gravel pits, mines, or quarries
16. Length of ROW parallel to existing pipeline^e ROW <500 feet from ROW centerline
17. Number of pipeline^e crossings
18. Number of transmission line crossings
19. Number of Interstate, United States, and State highway crossings
20. Number of Farm-to-Market (FM)/Ranch-to-Market (RM) road crossings
21. Number of Federal Aviation Administration (FAA)-registered public/military airfields^f within 20,000 feet of ROW centerline^c (with runway >3,200 feet)
22. Number of FAA-registered public/military airfields^f within 10,000 feet of ROW centerline (with runway <3,200 feet)
23. Number of private airstrips within 10,000 feet of ROW centerline
24. Number of heliports within 5,000 feet of ROW centerline
25. Number of commercial AM radio transmitters within 10,000 feet of ROW centerline
26. Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline
27. Number of recorded water wells within 200 feet of ROW centerline
28. Number of recorded oil and gas wells within 400 feet of ROW centerline

ENVIRONMENTAL & LAND USE CRITERIA FOR TRANSMISSION LINE EVALUATION



Aesthetics

- 29. Estimated length of ROW within foreground visual zone⁹ of Interstate, United States, and State highways
- 30. Estimated length of ROW within foreground visual zone⁹ of FM/RM roads
- 31. Estimated length of ROW within foreground visual zone⁹ of parks/recreational areas

Ecology

- 32. Length of ROW across upland woodland/shrubland
- 33. Length of ROW across bottomland/riparian woodland/shrubland
- 34. Length of ROW across National Wetland Inventory (NWI)-mapped emergent wetlands
- 35. Length of ROW across NWI-mapped forested/scrub-shrub wetlands
- 36. Length of ROW across NWI-mapped estuarine/marine wetlands
- 37. Length of ROW across designated critical habitat for federally listed endangered or threatened species
- 38. Number of stream and river crossings
- 39. Length of ROW parallel (within 100 feet) to streams and rivers
- 40. Length of ROW across open water (ponds, lakes, etc.)
- 41. Length of ROW across Federal Emergency Management Agency-mapped 100-year floodplains
- 42. Length of ROW within Coastal Management Zone boundary

Cultural Resources

- 43. Number of recorded cultural resource sites crossed by ROW
- 44. Number of recorded cultural resource sites within 1,000 feet of ROW centerline
- 45. Number of vicinity cemeteries crossed by ROW
- 46. Number of additional cemeteries within 1,000 feet of ROW centerline
- 47. Number of National Register of Historic Places (NRHP)-listed or determined-eligible sites crossed by ROW
- 48. Number of NRHP-listed or determined-eligible sites within 1,000 feet of ROW centerline
- 49. 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

Federal Aviation Administration
Federal Emergency Management Agency
National Parks Service
NRCS Texas State Office
U.S. Army Corps of Engineers
Military Aviation and Installation Assurance Siting Clearinghouse
U.S. Environmental Protection Agency
Ecological Field Office - Texas Coastal & Central Plains

STATE

Railroad Commission of Texas
Texas Commission on Environmental Quality
Texas Department of Transportation
Texas General Land Office
Texas Historical Commission
Texas Parks and Wildlife Department
Texas Water Development Board

ARANSAS COUNTY

Aransas County Judge
Aransas County Commissioners
Aransas County Historical Commission
Aransas County Partnership Economic

BEE COUNTY

Bee County Judge
Bee County Commissioners
Bee County Development Authority
Bee County Historical Commission
Bee City
City of Beeville
Skidmore-Tynan Independent School District
Pettus Independent School District
Beeville Independent School District
Bee Groundwater Conservation District

GOLIAD COUNTY

Goliad County Judge
Goliad County Commissioners Precinct 1
Goliad County Airpark
Goliad County Historical Commission
Goliad Independent School District
Goliad County Groundwater Conservation
City of Goliad

JACKSON COUNTY

Jackson County Judge
Jackson County Commissioners
City of Edna
City of Ganado
Lavaca-Navidad River Authority
Palacios Independent School District
Edna Independent School District
Ganado Independent School District
Industrial Independent School District
Jackson County Historical Commission

JIM WELLS COUNTY

Jim Wells County Judge
Jim Wells County Commissioners
Jim Wells County Historical Commission
Orange Grove Independent School District
Brush Country Groundwater Conservation

LAVACA COUNTY

Lavaca County Judge
Lavaca County Commissioners
Floodplain Administrator
Lavaca County Historical Commission
Guadalupe Valley Economic Development
Hallettsville Independent School District ISD
Ezzell Independent School District

LIVE OAK COUNTY

Live Oak County Judge
Live Oak County Commissioners
Live Oak County Historical Commission
Live Oak Underground Water
Conservation District

MATAGORDA COUNTY

Matagorda County Judge
Matagorda County Commissioners
Matagorda County Historical Commission
Matagorda Economic Development Corporation
Tidehaven Independent School District
Coastal Plains Groundwater
Conservation District

NUECES COUNTY

Nueces County Judge
Nueces County Commissioners
Nueces County Public Works
Nueces County Historical Commission
Nueces River Authority
Corpus Christi Regional Economic
City of Robstown
City of Corpus Christi
Banquete Independent School District
Calallen Independent School District
Robstown Independent School District
Tuloso-Midway Independent School District
Driscoll Independent School District
Bishop Consolidated Independent School District
West Oso Independent School District
Corpus Christi Independent School District
Corpus Christi Aquifer Storage and Recovery
Conservation District

REFUGIO COUNTY

Refugio County Judge
Refugio County Commissioners Precinct 1
Refugio County Historical Commission
Refugio County Community Development Foundation
Town of Bayside
Town of Woodsboro
Woodsboro Independent School District
Refugio Independent School District
Austwell-Tivoli Independent School District
Refugio Groundwater Conservation District

SAN PATRICIO COUNTY

San Patricio County Judge
San Patricio County Commissioners
San Patricio County Economic Development
San Patricio County Groundwater Conservation
San Patricio County Historical Commission
City of Sinton
City of Taft
City of Odem
City of Odem Economic Development
City of Mathis
Odem-Edroy Independent School District
Mathis Independent School District
Sinton Independent School District
Taft Independent School District
Gregory-Portland Independent School District

VICTORIA COUNTY

Victoria County Judge
Victoria County Commissioners
Victoria County Groundwater Conservation
Texana Groundwater Conservation District
Victoria County Historical Commission
Victoria Economic Development Corporation
City of Victoria
Guadalupe-Blanco River Authority
Victoria Independent School District
Nursery Independent School District
Bloomington Independent School District
Meyersville Independent School District

WHARTON COUNTY

Wharton County Judge
Wharton County Commissioners
Wharton County Historical Commission
Wharton Economic Development Corporation
City of El Campo
El Campo Independent School District ISD
Louise Independent School District

NON-GOVERNMENTAL ORGANIZATION

The Nature Conservancy
Texas Land Trust Council
Texas Land Conservancy
Texas Agricultural Land Trust
Texas Cave Management Association
Coastal Conservation Association
Coastal Prairie Conservancy

TRANSMISSION LINE PROJECT REVIEW PROCESS



Planning/Need for the Project

Environmental Assessment and Routing Study
Typically 9-12 Months

- Delineate Study Area
- Collect/Review Environmental/Historical/Archaeological Data
- Identify Constraints
- Public Information Meetings
- Prepare Environmental Assessment Report
- Evaluate Alternative Routes

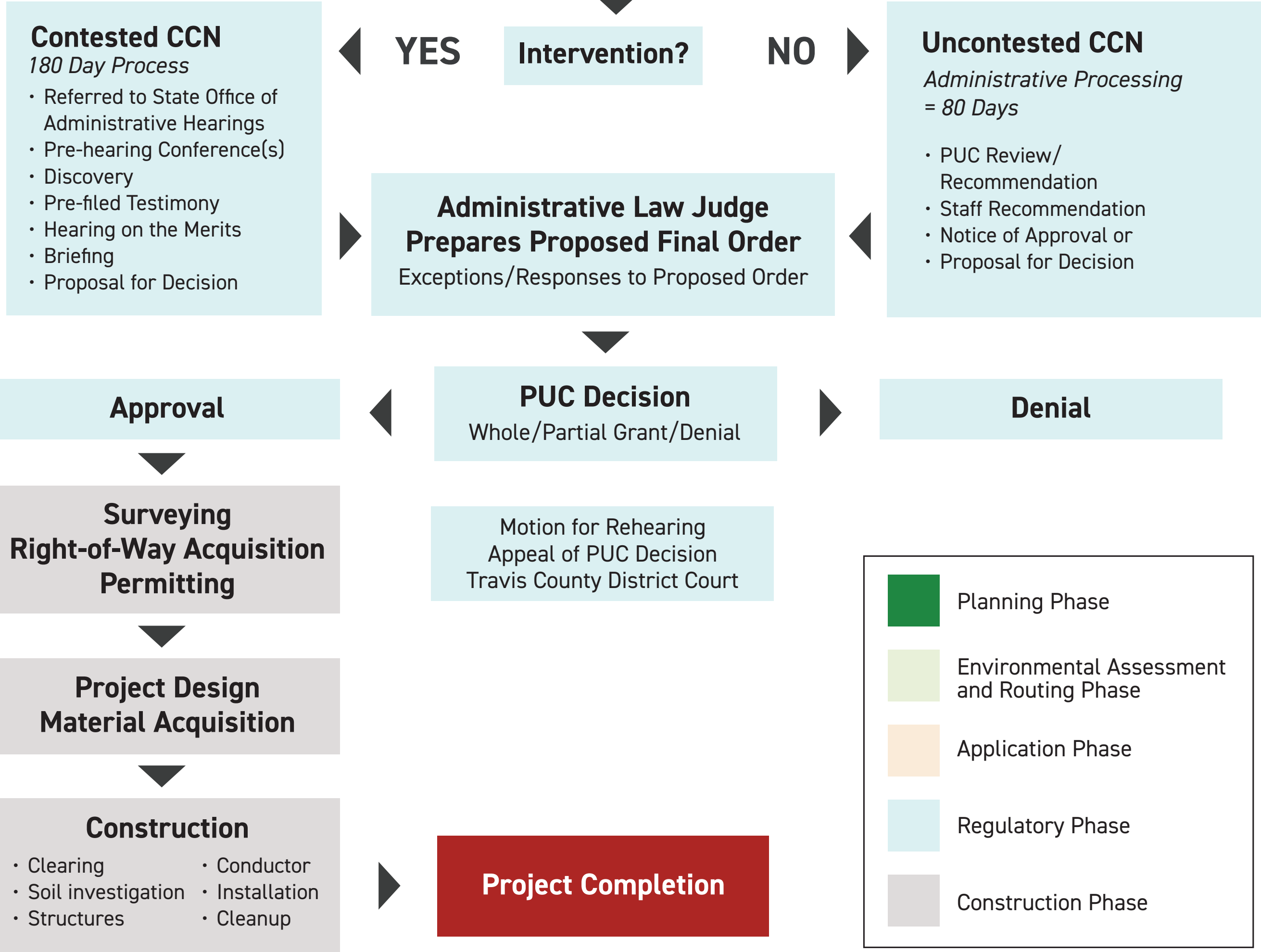
Submit Final Report

Certificate of Convenience and Necessity (CCN) Application
Typically 2 Months to Prepare

**Public Utility Commission (PUC) Processing
CCN Filing**

Provide Notice
Direct Mail/Public/City and County Government Agencies/Other Utilities

Intervention Period
30 Days



VEGETATION MANAGEMENT



What is vegetation management?

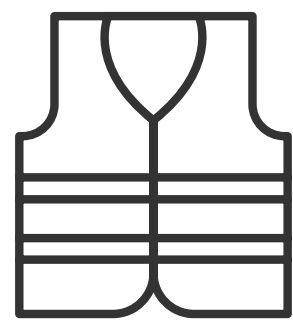
AEP’s vegetation management approach involves controlling the growth of trees and other vegetation in transmission rights-of-way, the sections of land where transmission power lines are located.

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.

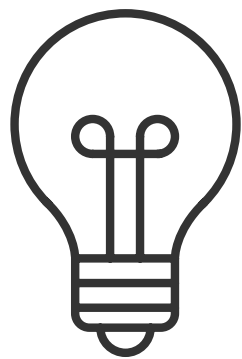
Why is it done?

To reduce power outages caused by trees and other plants contacting power lines.

Our vegetation management program aims to:



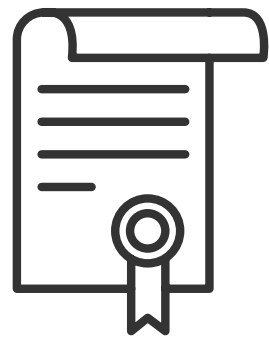
Work safely and efficiently



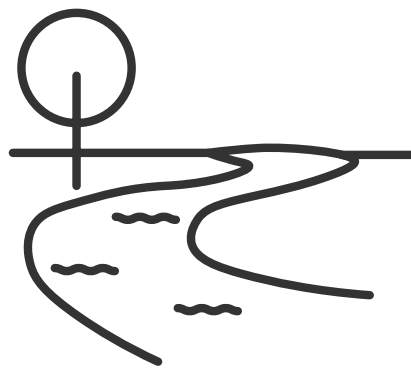
Protect the electric grid and reduce power outages



Foster positive relationships with customers and communities



Comply with federal, state and local regulations



Minimize negative impacts to the environment

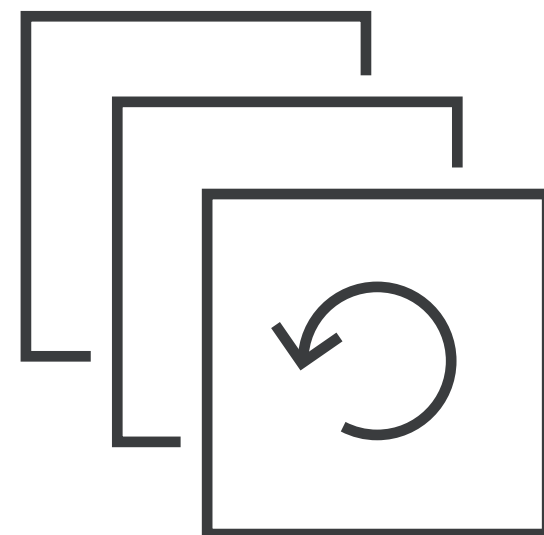
The North American Electric Reliability Corporation (NERC) sets standards that require utilities to establish minimum clearance distances between transmission lines and the nearest vegetation. Non-compliance can lead to significant community-wide power outages.

- 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.

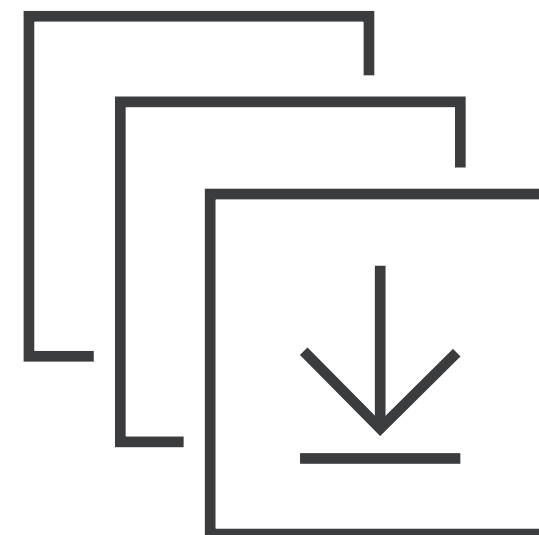
THANK YOU!



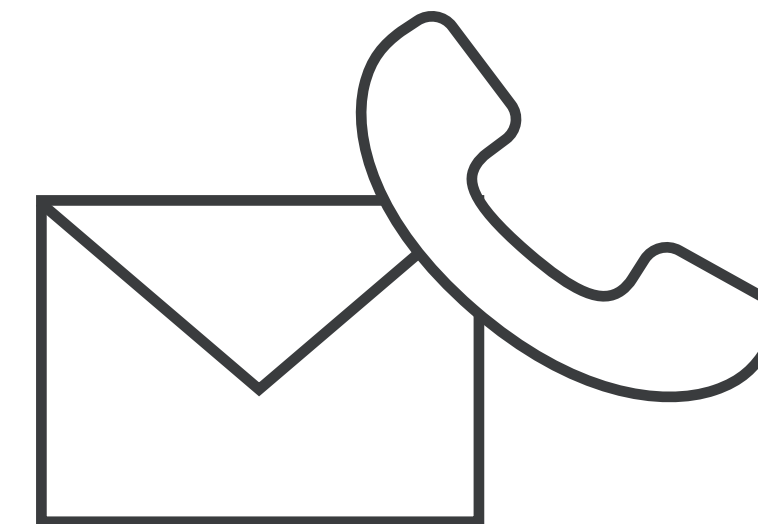
Thank you for visiting the project virtual open house. For more information and project updates, please visit the project website, or contact us with any additional questions.



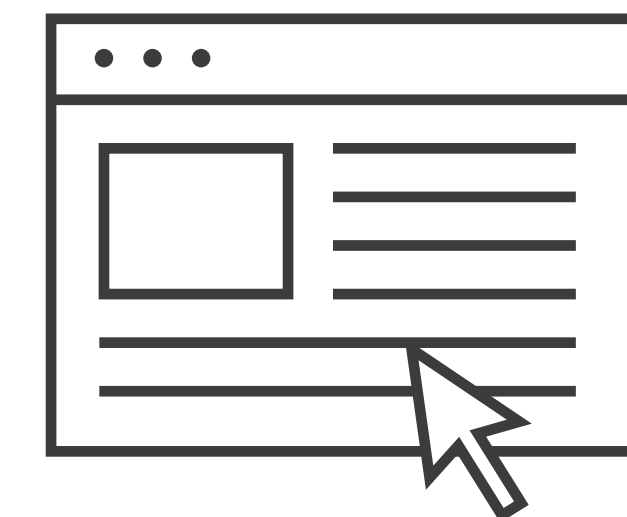
**Replay
Open House**



**Download
Slide Deck**



Contact Us



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Website**