Dominion Energy® Electric Transmission

Meeting Virginia's Energy Needs

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Dominion Energy – A Focus on Core Values

Safety	Ethics	Excellence	Embrace Change	One Dominion Energy (Teamwork)
Our highest priority is keeping our employees and communities safe	*Doing right and doing well are inseparable*	*Striving for excellence in everything we do*	*Changing the way we think about the today and tomorrow of our business*	*Innovative culture drives approach to clean energy and workforce opportunities*

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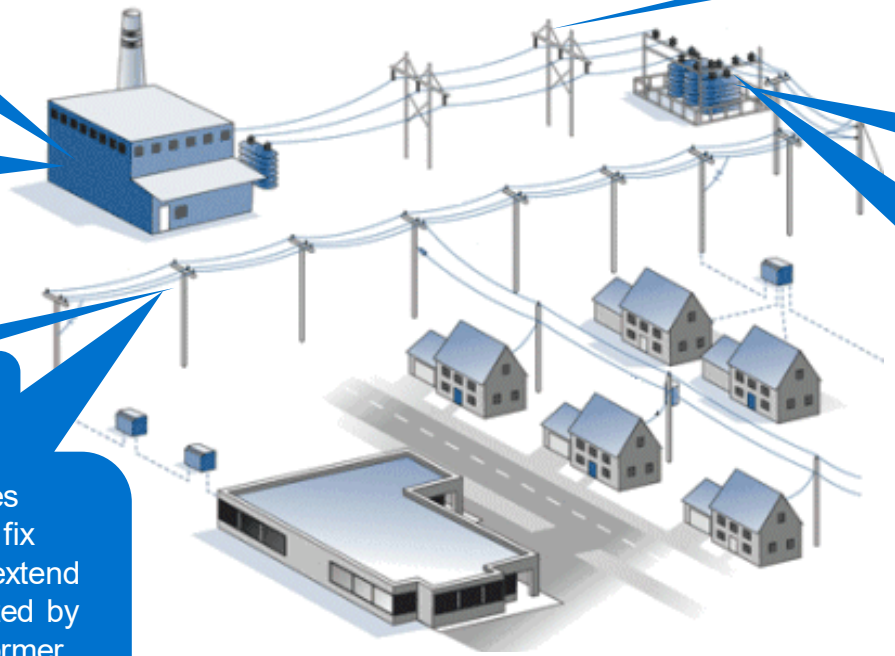
The Grid and Obligation to Serve

Transmission Lines
- Line “capacity” accounts for network flows
- Limited by 300 MW Line Loss Rules

Power Generation

1MW = ~200 homes



Transmission to Distribution Substation

Substations
- Ideally located near load centers
- ~3-5 transformers
- On ~5-10 acres
- Limited by 300 MW Rule

Distribution Lines (Low Voltages)

Distribution Lines
- Switch before fix
- First option is to extend distribution – limited by available transformer capacity
- Typical loads <30 MW

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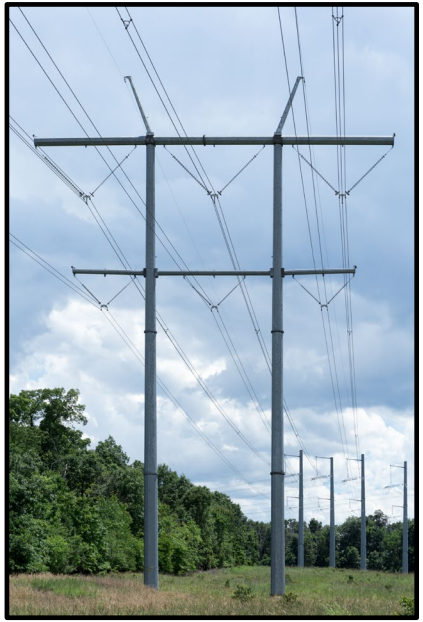
Electric Transmission vs. Electric Distribution

Transmission Lines:
Lattice, H-frame and Monopole Structures



Distribution Line:
Overhead Structures

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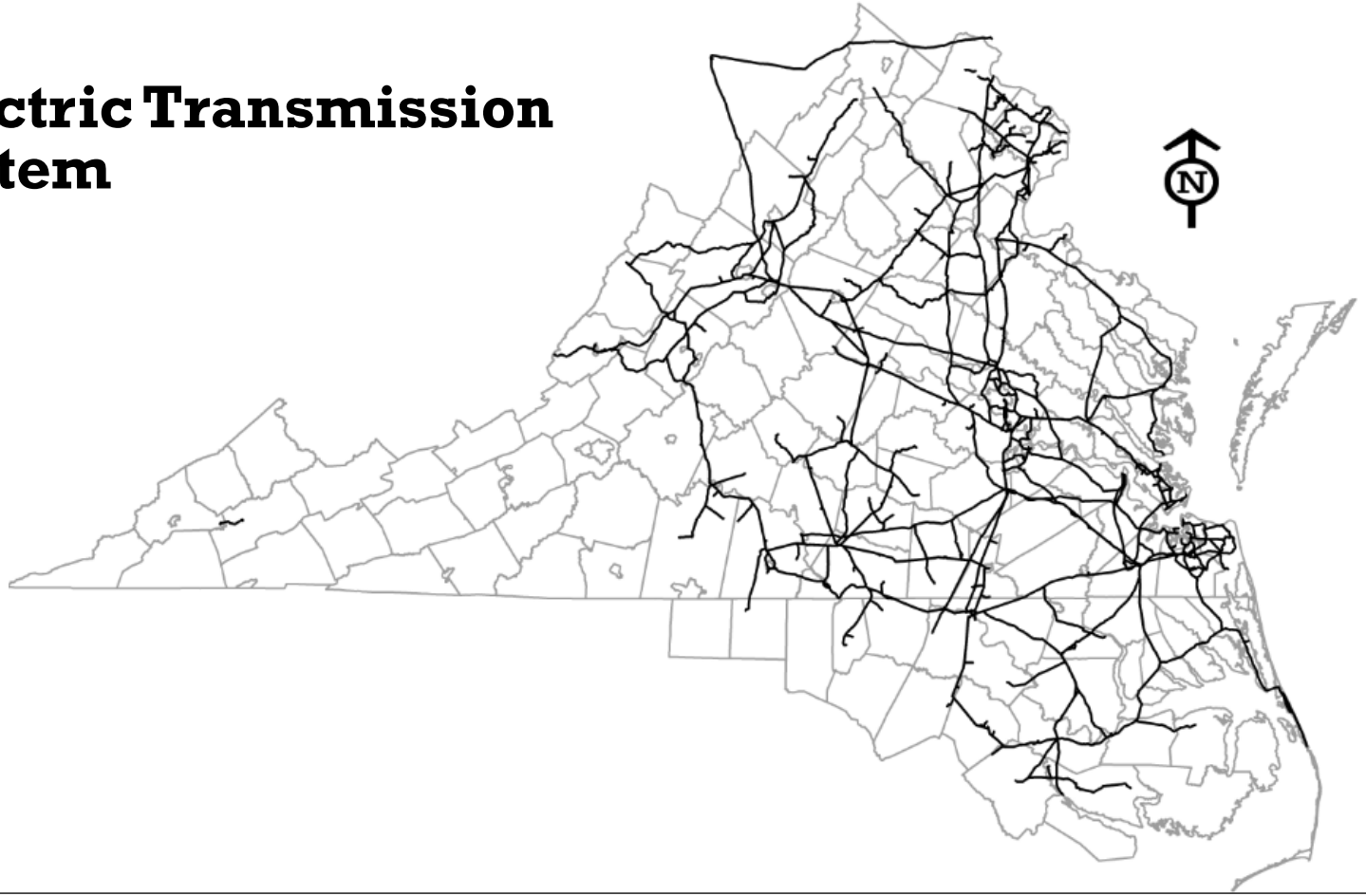
Electric Transmission System



Visit dominionenergy.com/powerline to learn more about Dominion Energy's electric transmission projects.

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Strength of Our Electric Grid

6,600
miles of electric transmission lines

Moving Energy

Transmission lines carry electricity over long distances from our diverse-fuel fleet of power stations to our customers.

57,900
miles of distribution lines

2.6 million
homes and businesses in VA and NC directly served

Since 2013…

2,400 megawatts
of generation have been added to our system

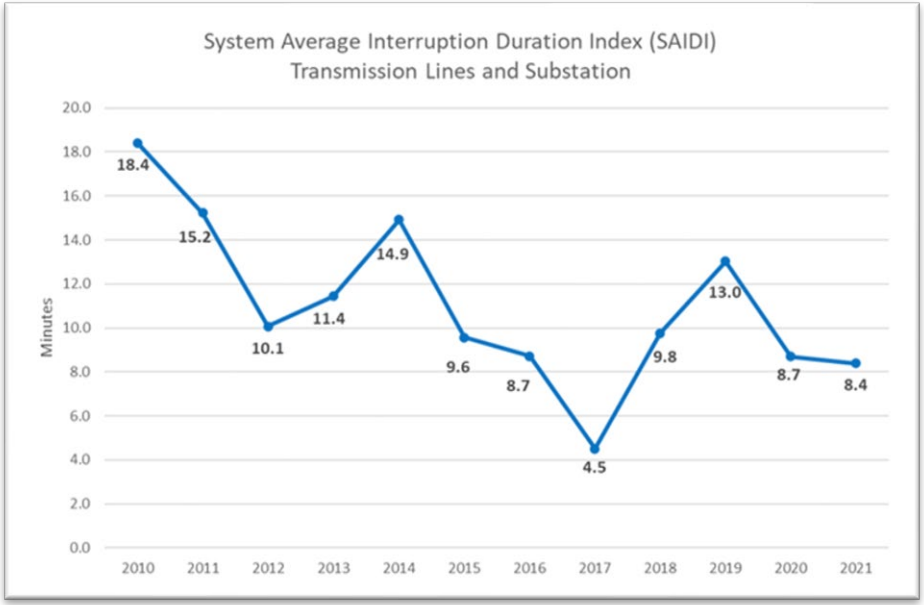
200 miles
of new transmission lines have been added to our system

Over 1,000 miles
of transmission lines have been rebuilt/ upgraded on our system

Our electric grid continues to be strong thanks to a commitment to long-term planning, as well as investments in reliability and capital growth projects.

Strength of Our Electric Grid

Investing in Continuous Improvements in Reliability



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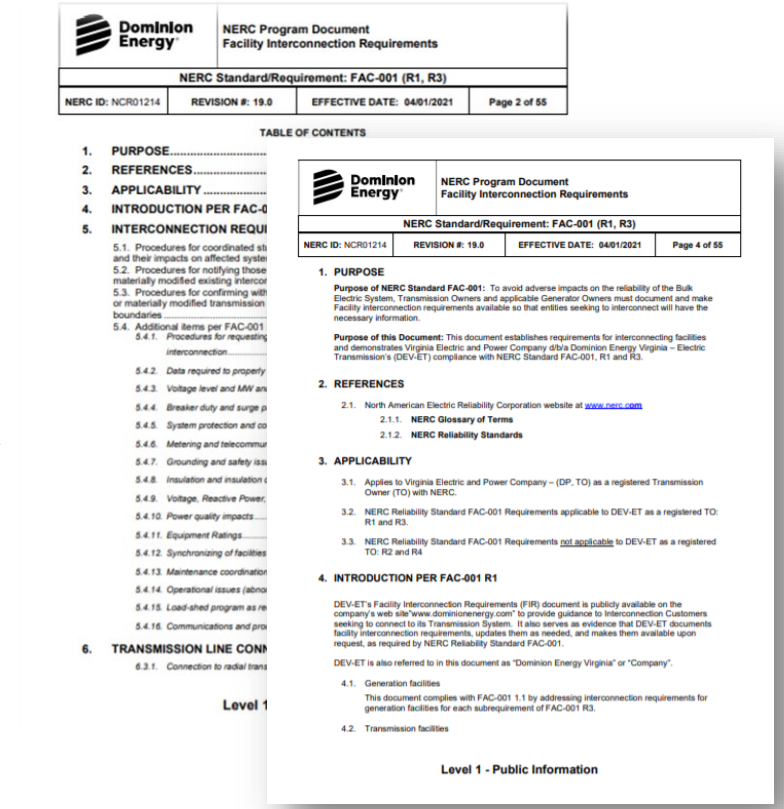
Forces Driving Infrastructure Need

Economic Growth

Aging Power Grid Assets

Addressing Mandatory NERC Criteria Standards



Dominion Energy | NERC Program Document
Facility Interconnection Requirements

NERC Standard/Requirement: FAC-001 (R1, R3)

NERC ID: NCR01214	REVISION #: 19.0	EFFECTIVE DATE: 04/01/2021	Page 2 of 55

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Level 1

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Facility Interconnection Requirements

NERC Standard/Requirement: FAC-001 (R1, R3)

NERC ID: NCR01214	REVISION #: 19.0	EFFECTIVE DATE: 04/01/2021	Page 4 of 55

1. PURPOSE

Purpose of NERC Standard FAC-001: To avoid adverse impacts on the reliability of the Bulk Electric System, Transmission Owners and applicable Generator Owners must document and make Facility interconnection requirements available so that entities seeking to interconnect will have the necessary information.

Purpose of this Document: This document establishes requirements for interconnecting facilities and demonstrates Virginia Electric and Power Company d/b/a Dominion Energy Virginia – Electric Transmission's (DEV-ET) compliance with NERC Standard FAC-001, R1 and R3.

2. REFERENCES

2.1. North American Electric Reliability Corporation website at www.nerc.com

2.1.1. **NERC Glossary of Terms**

2.1.2. **NERC Reliability Standards**

3. APPLICABILITY

3.1. Applies to Virginia Electric and Power Company – (DP, TO) as a registered Transmission Owner (TO) with NERC.

3.2. NERC Reliability Standard FAC-001 Requirements applicable to DEV-ET as a registered TO: R1 and R3.

3.3. NERC Reliability Standard FAC-001 Requirements not applicable to DEV-ET as a registered TO: R2 and R4

4. INTRODUCTION PER FAC-001 R1

DEV-ET's Facility Interconnection Requirements (FIR) document is publicly available on the company's web site"www.dominionenergy.com" to provide guidance to Interconnection Customers seeking to connect to its Transmission System. It also serves as evidence that DEV-ET documents facility interconnection requirements, updates them as needed, and makes them available upon request, as required by NERC Reliability Standard FAC-001.

DEV-ET is also referred to in this document as "Dominion Energy Virginia" or "Company".

4.1. Generation facilities

This document complies with FAC-001 1.1 by addressing interconnection requirements for generation facilities for each subrequirement of FAC-001 R3.

4.2. Transmission facilities

Level 1 - Public Information

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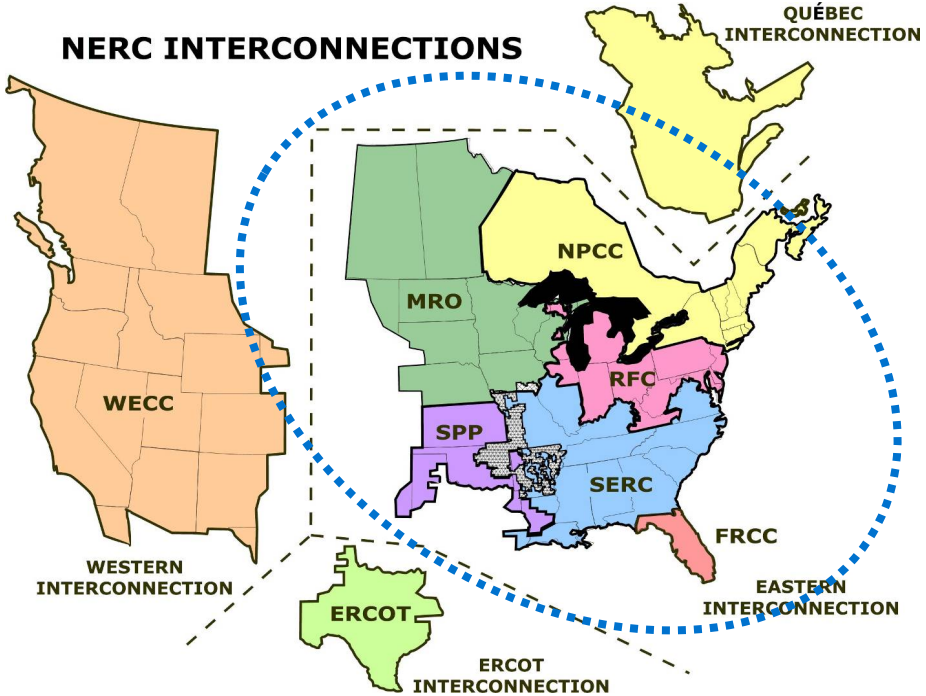
The Interconnected Grids

Dominion Energy is in the Eastern Interconnection



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Note: This is a depiction not an actual satellite image of the 2003 Blackout.

A Defining Moment for the Industry

2003 Blackout resulted in:

- Heightened regulations
- Mandatory fines
- Renewed focus on our nation's energy infrastructure

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Key Regulatory Bodies

FERC – Exclusive jurisdiction to determine and regulate the reliability of the electric transmission grid

NERC – Regulatory authority to develop and enforce the mandatory reliability standards – criteria, data and methodology to evaluate and ensure the reliability of the bulk power system in North America

PJM – Regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all or parts of 13 states and the District of Columbia; Virginia law mandates Dominion Energy's membership

SCC – Regulates Virginia public utility facilities, retail rates and service including transmission line need and routing; issues certificates of public convenience and necessity (typically electric transmission lines equal to or greater than 138 kV)

Cities and Counties

Local Governments – Regulate local land use (substations); typically electric transmission lines equal to or less than 138 kV

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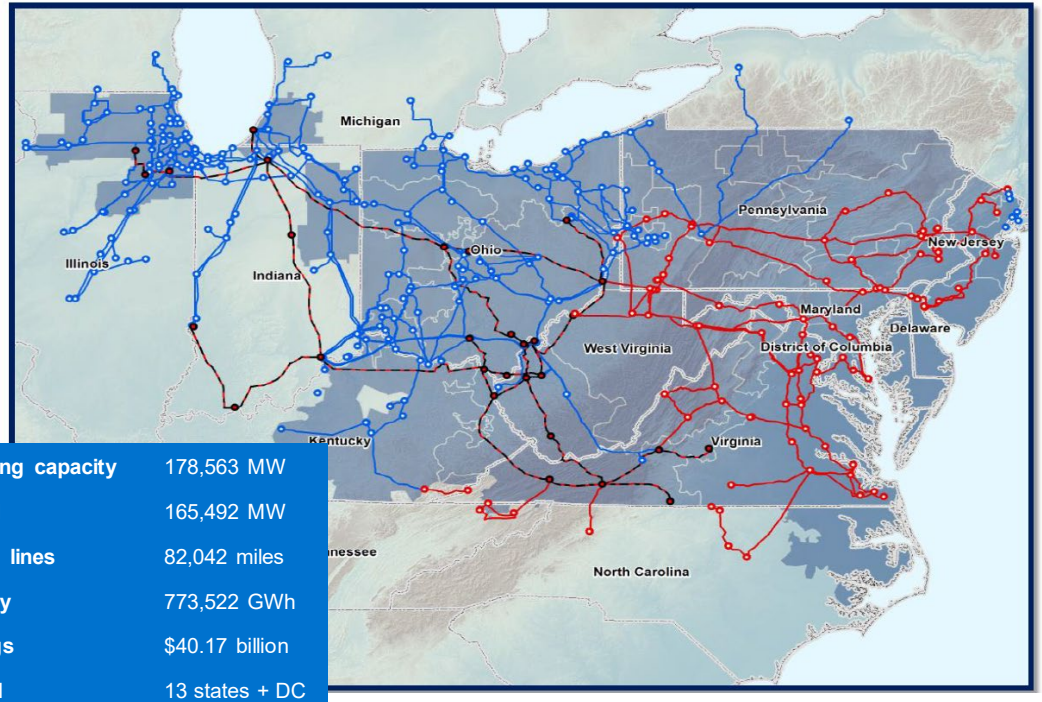
PJM Interconnection

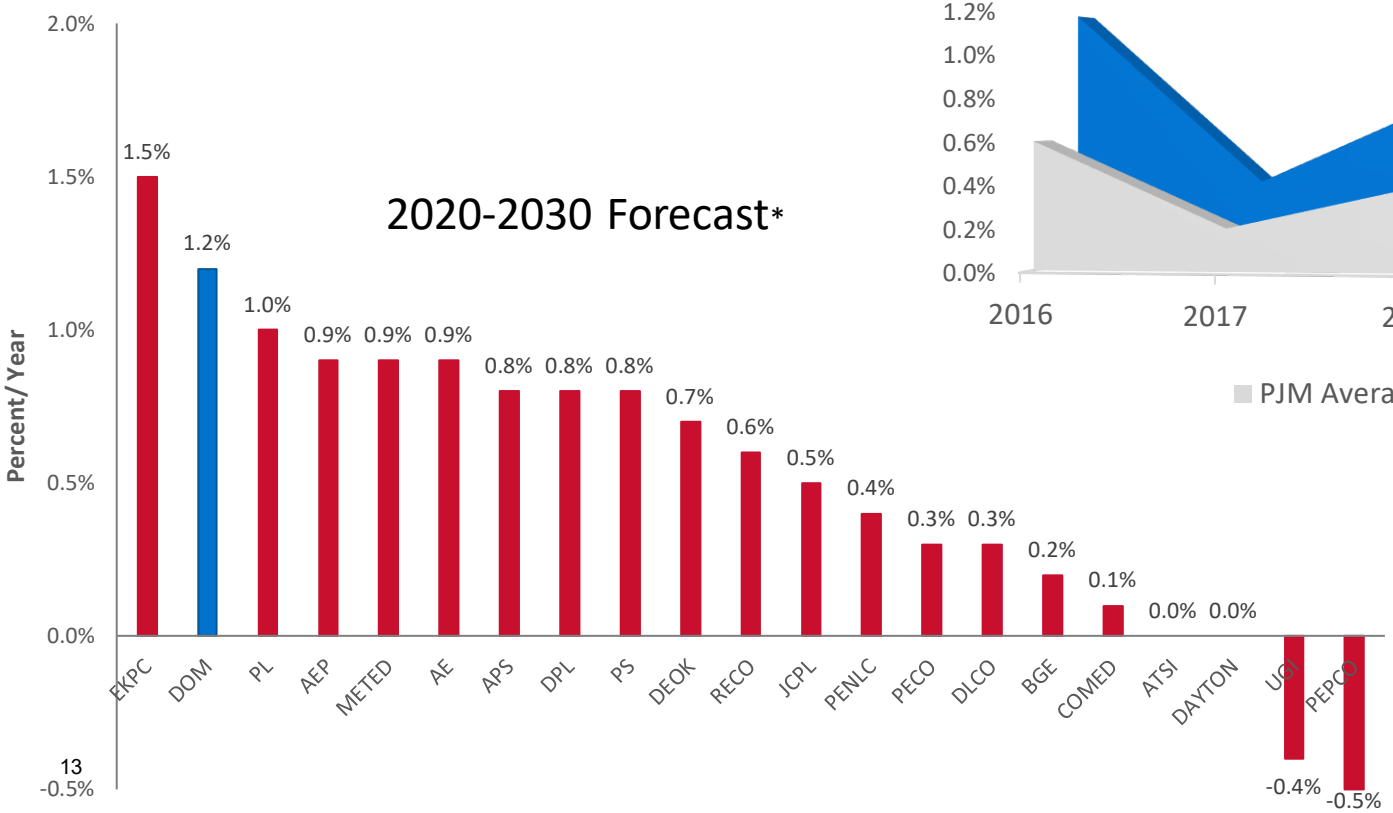
One of the largest centrally dispatched control areas in North America

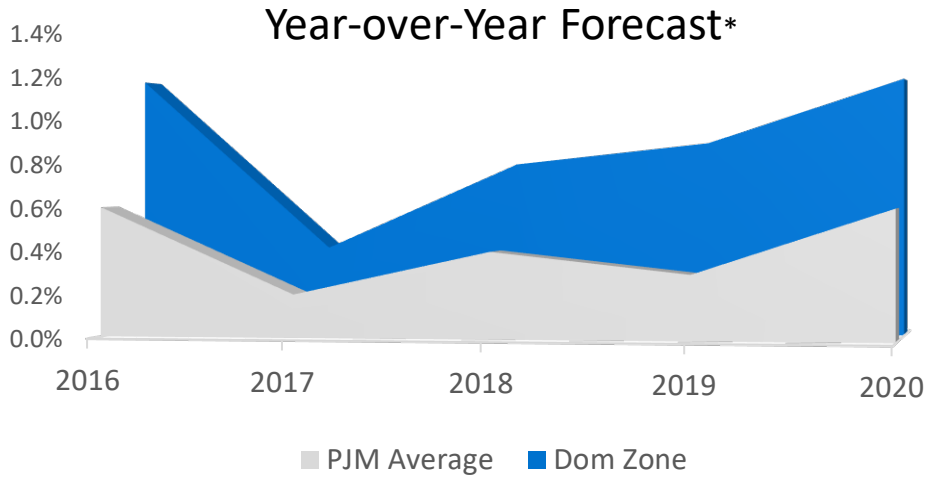


2017 generating capacity	178,563 MW
Peak demand	165,492 MW
Transmission lines	82,042 miles
Annual energy	773,522 GWh
Annual billings	$40.17 billion
States served	13 states + DC
Territory	243,417 miles
Population	65 million

- PJM Interconnection is a regional transmission organization (RTO) that coordinates the movement of wholesale electricity
- Neutral, independent party – operates a competitive wholesale electric market and manages the high-voltage electric grid
- PJM's long-term regional planning process provides a broad, interstate perspective that identifies the most effective and cost-efficient improvements to the grid
- Ensures reliability and economic benefits on a system-wide basis

PJM Load Forecast





*Summer Peak

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Data Centers

- In 2019, Dominion Energy connected a data center facility every two weeks
- Old standard 20-30 MW per building, seeing requests for 60+ MW

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Transmission System Projects

Maintaining reliability is becoming more complex

- Economic growth – regional and statewide
- Aging power grid assets
- Addressing mandatory NERC criteria standards
- PJM Load Forecast
- Large load additions – such as data centers
- Generation retirements and additions
- Growth of intermittent renewables

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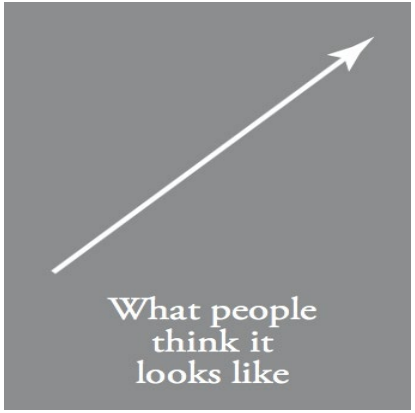
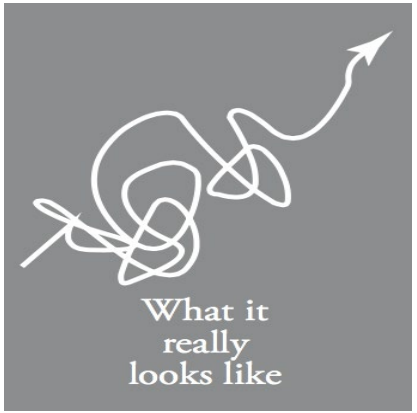
Project Development and Approval

High-level Steps

- **Step 1:** Determine need
- **Step 2:** Review existing conditions – routing and siting
- **Step 3:** Develop conceptual project scope and engineering
- **Step 4:** Public engagement process (pre-SCC)
- **Step 5:** SCC review process
- **Step 6:** SCC approved configuration





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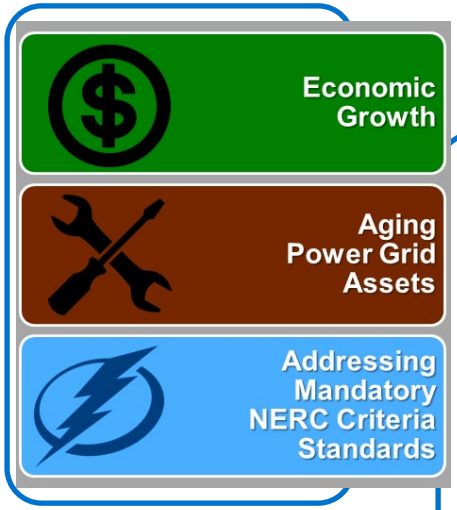
Modeling Required for System Reliability



Identify

Solve

- **Variety of ways to develop solutions:**
  - Uprates*
  - Rebuilds
  - New Lines
  - New Equipment

*Modifications made to existing structures and hardware which increase the current capability of the line. No change in appearance occurs.

Propose

- **Does this solution….**
  - Meet the need requirement?
  - Resolve all NERC Criteria violations?
  - Provide long-term reliability?
  - Use existing, proven technology?

Seek Approval

- State
- Local
- Other

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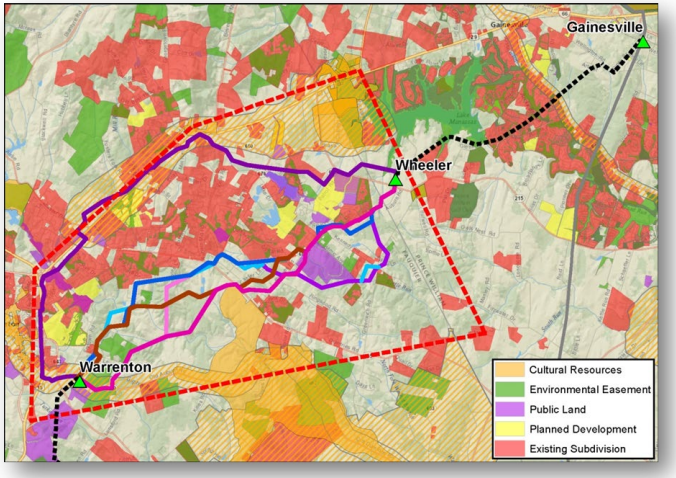
Routing Considerations

Foundational Principles

- Process always begins with review of existing rights of way and facilities
- Respect the land use of the property owners
- Colocate with other infrastructure, where appropriate
- Adhere to parcel boundaries if possible
- Minimize impacts to agricultural, human, environmental, cultural and historical concerns

Routing Considerations

- Wetlands and watercourse crossings
- Conservation lands such as those owned by the Virginia Outdoor Foundation, National Park Service, Department of Conservation and Recreation, and counties
- Environmental Justice and Tribal Communities
- Threatened and endangered species
- Cultural and historical resources
- Neighborhoods
- Public gathering spaces such as schools, churches and parks



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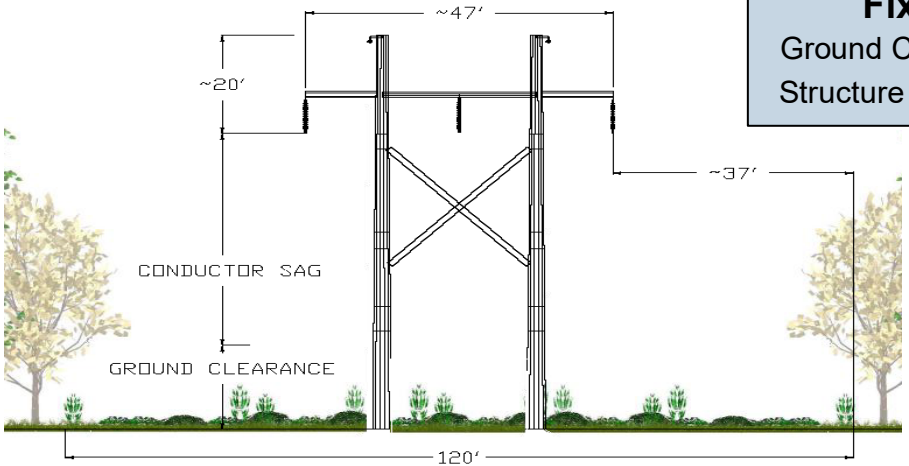
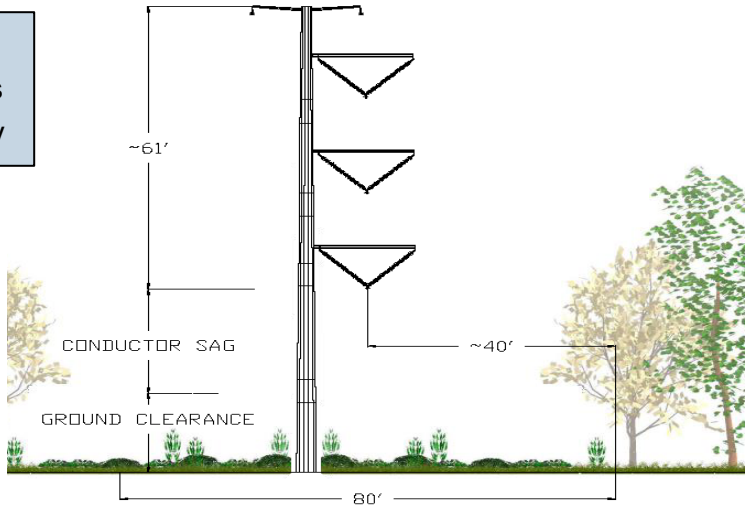
Structure Selection: Horizontal vs. Vertical

Structure selection has a direct correlation to:

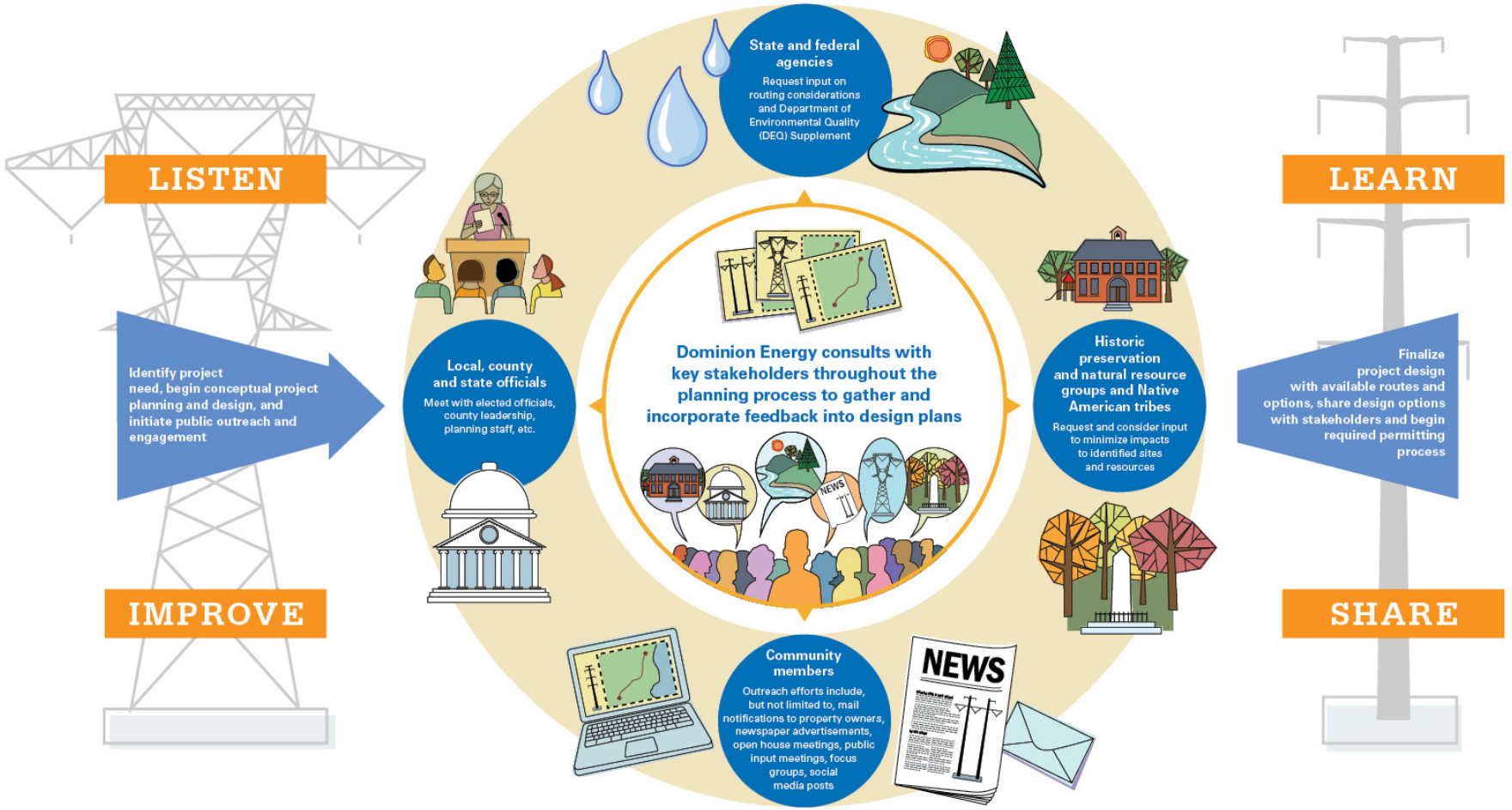
- Structure height
- Width of the right of way
- Existing and future development
- Terrain, geology and environmental impacts

Fixed
Ground Clearances
Structure Geometry



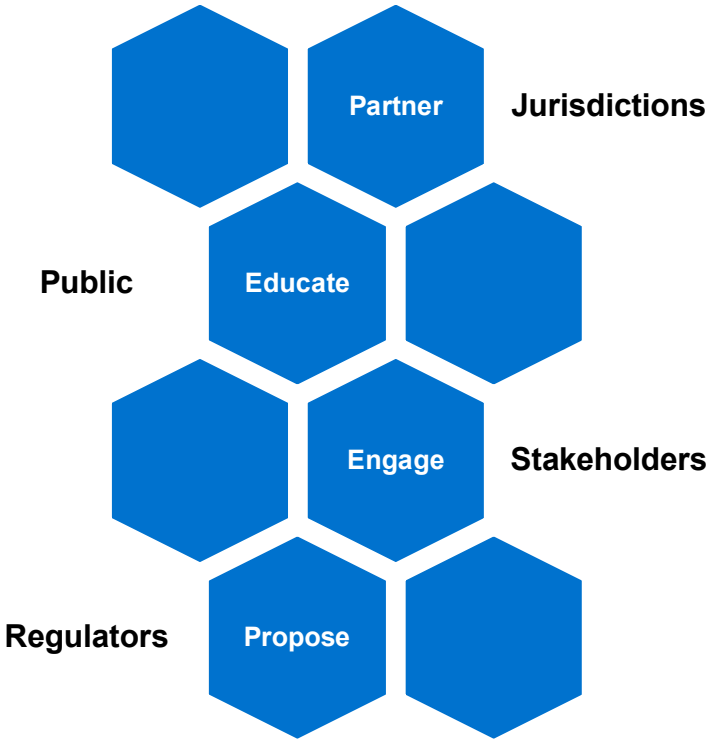


Electric Transmission Line Planning and Public Engagement Process



Partnerships to Meet Future Demand

Modern Grid Infrastructure Improvements = Win-Win



Local Economy

- Creates jobs during construction
- Provides long-term tax revenues

Economic Development

- Supports local businesses with more reliable energy
- Provides flexibility for future economic growth

Reliable, Diverse Energy

- Improves service for customers by preventing or speeding response to power outages
- Diversifies load by bringing renewables like solar and wind to the electric grid

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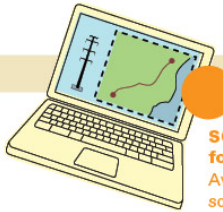
Electric Transmission Line SCC Application Review Process

The Virginia State Corporation Commission (SCC) has regulatory authority over all energy providers in Virginia and requires certification for all transmission lines out of the ordinary course of doing business or are at or above 138 kilovolts (kV). Among other responsibilities, the SCC validates the need for a proposed line and approves the route and structures. In reviewing a proposed project, the SCC must consider whether potential impacts on scenic assets, historic districts and the environment have been reasonably minimized.

Dominion Energy notifies county and city officials of intent to file
Required pursuant Code of Virginia § 15.2-2202

Dominion Energy submits application to SCC
Includes full project details, including need, cost, routing options, potential impacts, etc.

Dominion Energy notifies electric cooperatives



SCC posts application for public review
Available at scc.virginia.gov

SCC issues procedural order
Case schedule is set; SCC invites public comments and formal participation in the case as a respondent

Department of Environmental Quality (DEQ) issues first report
Due within 60 days of application filing

SCC conducts public hearings
Held in selected areas near the project

DEQ issues coordinated comments
Summary of recommendations from multiple state resource agencies to minimize impacts and for compliance with legal requirements

Public comment period opens
Submitted online or via mail

Discovery begins
SCC Staff starts its review; SCC Staff, Dominion Energy and respondents may serve discovery

Interested parties can join case as respondents
Formal mechanism to join proceedings

Dominion Energy issues public notice
Notifies local officials, impacted landowners and the public

Respondents submit testimony

SCC Staff submits its report about the project

Dominion Energy submits rebuttal testimony
In response to DEQ summary, staff report and respondent testimony

Public comment period closes

SCC conducts formal evidentiary hearing
Testimony submitted and subject to cross examination by SCC Staff, Dominion Energy and respondents

SCC hearing examiner issues report of recommendation

Participants issue response
SCC Staff, Dominion Energy and respondents comment to hearing examiner's report

Dominion Energy begins construction of facilities

Dominion Energy pursues additional permits as needed
Local permits, U.S. Army Corps of Engineers, Federal Aviation Administration (FAA), etc.

SCC issues final order
If approved, SCC issues a Certificate of Public Convenience and Necessity (CPCN) authorizing Dominion Energy to construct and operate the facilities

Process could take as little as eight months to complete if uncontested, with more complex proceedings ranging from 12–24 months from start to finish

- Dominion Energy's Responsibility
- Public Involvement Touchpoints
- Procedural Steps
- Optional Step Determined by SCC

Key Takeaways

Substantial new load associated with development will require new or modified electric transmission infrastructure.

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Key Takeaways

Generally speaking, proposed large loads at a site located near existing electric transmission lines can make the routing and siting process easier.

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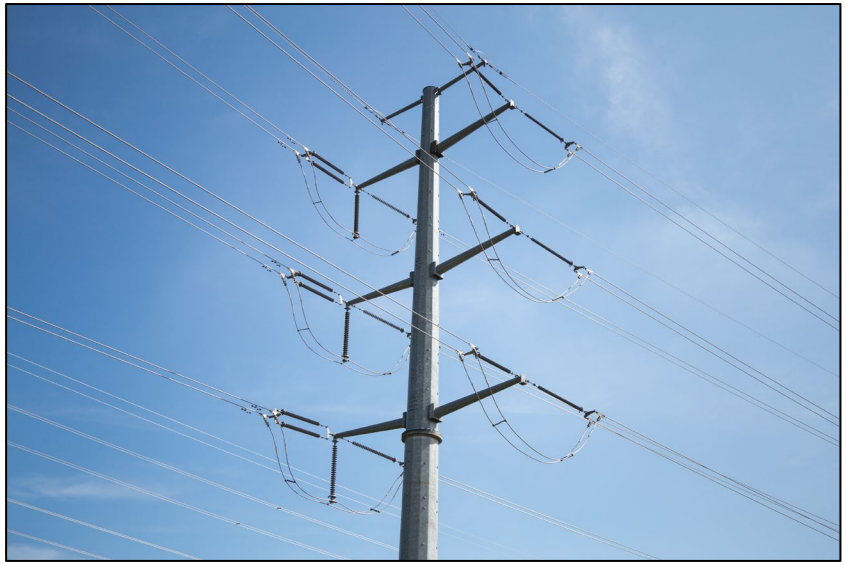
Key Takeaways

Colocating electric transmission facilities with other utilities (highways, railroads, etc.) can help mitigate impact on private property, and environmental, historic and scenic resources.



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Key Takeaways

The approval and permitting process is lengthy for new electric transmission infrastructure; communicate early and often with appropriate energy providers to ensure timely completion.

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Our company is built on a proud legacy of public service, innovation and community involvement.

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