



Construction Equipment Guide



Dominion Energy's Strategic Underground Program is a system-wide initiative to **shorten restoration times** following major storms by placing certain outage-prone overhead electric distribution lines and equipment **underground**.

This document provides examples of the most common types of equipment used as part of the Strategic Underground Program. A Dominion Energy representative will be able to show or describe any other specific equipment needs.

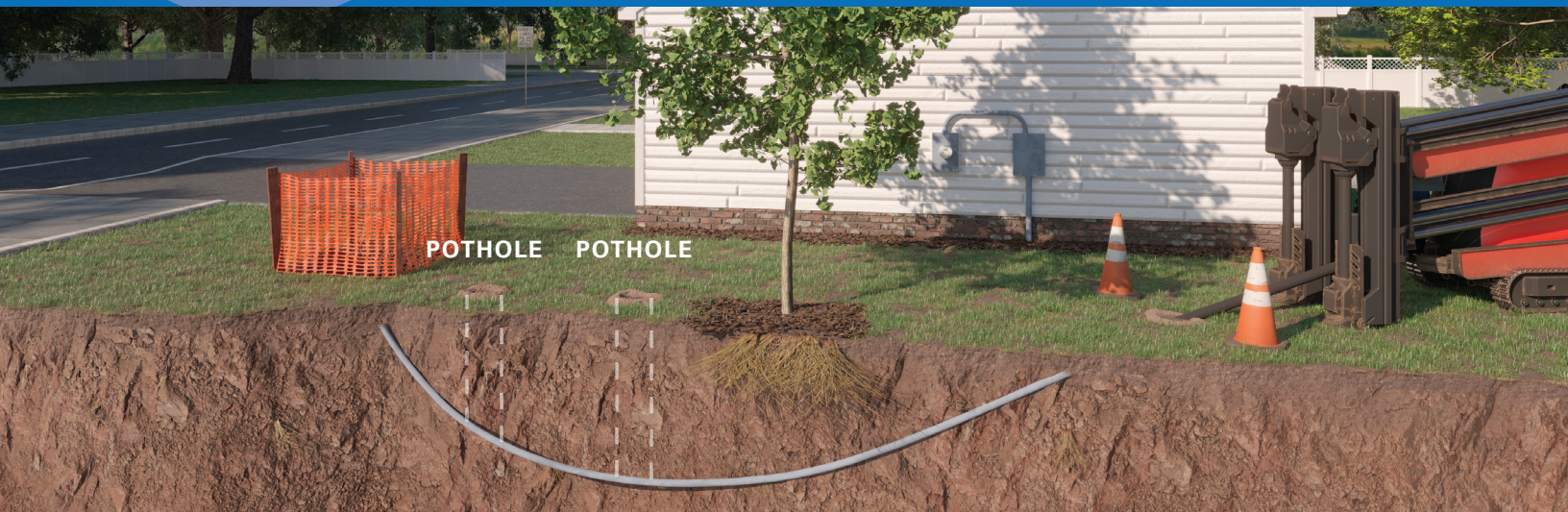


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Understanding Directional Boring



In most cases, Dominion Energy will use low-impact drilling equipment, rather than open trenching, to minimize disruption to property. Underground cables will be placed in protective conduit.



A Dominion Energy authorized contractor operates the underground directional boring equipment.



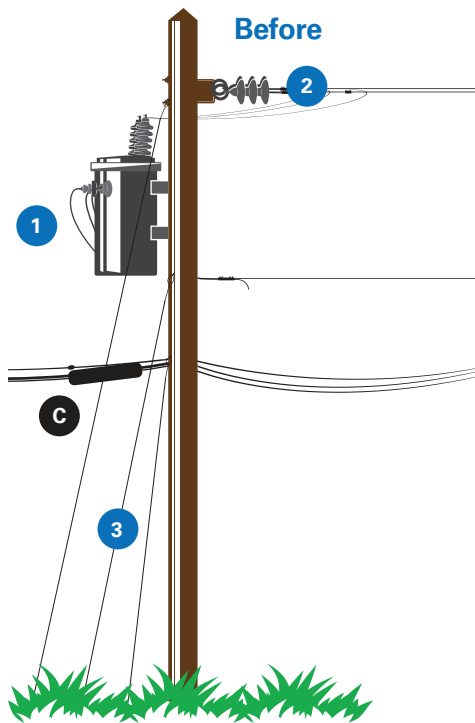
Another contractor tracks the path of the underground drill. The black conduit will be routed underground.



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Understanding What Happens to the Poles?

Dominion Energy and our telecommunication partners will often locate their facilities on the same poles. When the overhead electric lines are converted to underground but telecommunications facilities remain, the poles remain in place. Dominion Energy will remove electric wires and equipment from the poles while the remaining service providers will maintain their lines.



- 1 Transformer removed
- 2 Electric lines and components removed
- 3 Neutral lines removed
- 4 Pole shortened and capped
- C Communications services could remain

Dominion Energy is unable to coordinate the removal of Joint Use providers' facilities. We recommend calling the customer service telephone number found on the specific utility's monthly bill or statement to understand what removal options it offers.



Will it stay or will it go?

The pole will stay if our telecom partners choose to keep their equipment on the pole. If the pole only has electric equipment, it will be removed.

If it stays what will it look like?

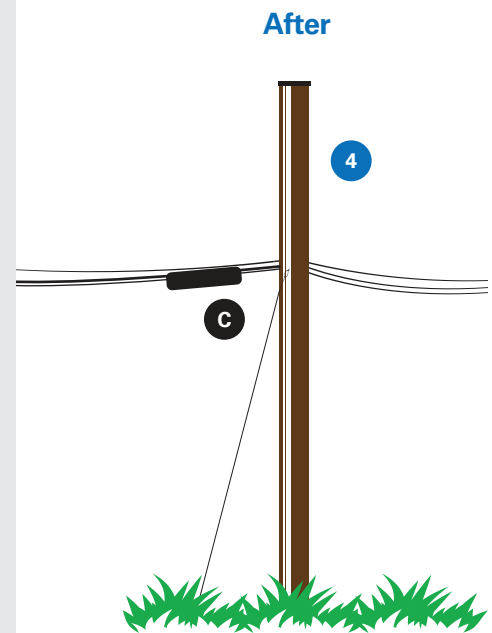
Electric lines and components, such as transformers, insulators, and fuses, will be removed from the pole. The pole will be shortened 3-4 feet above the remaining telecom facilities and a cap will be installed on top of the pole.

Who will own the pole?

It depends. Dominion Energy may retain ownership if we still have equipment on the pole, such as a streetlight, or if the only remaining equipment is for cable TV service. Otherwise, pole ownership may transfer to the remaining service providers.

If I have concerns who should I contact?

For questions about electric lines, reach out to the dedicated contact person for your project. For questions about telecommunications facilities, please reach out to your service provider using the information provided on your bill or their website. Please note, Dominion Energy is unable to contact partner utilities on behalf of customers.



A stronger distribution system and faster restoration following major storms

Improved Reliability

- ✓ Reduces exposure to weather and trees
- ✓ Fewer power outages



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Examples of Meter Base Adapters

The meter remains in place and an entrance cable and meter base adapter are added to the left of the meter.



Before



After

The meter remains in place and an entrance cable and meter base adapter are added to the right of the meter.



Before



After

Examples of Equipment in Operation



A tank of water is sometimes used to aid the drilling.



The contractor tracks the path of the drill under a fence.

Understanding Transformer Installations

Transformer location is determined by the electric load calculations and the route of the underground lines.



Single-phase transformers supply power for residential lighting, receptacles, air-conditioning and heating. Average transformer size: 40" wide x 36" deep x 34" high. A transformer pad will be placed underneath the transformer. Average pad size: 44" wide x 57" deep.



Underground lines come up from underground to meet the ground-level pad mounted transformer.



Connections are kept safely inside and out of view.

Examples of Meter Base Adapters

The meter remains in place and an adapter box is added next to the meter.



A vertical box adapter to the right of the meter.

If space does not allow, a longer entrance cable can be used to connect to a meter base adapter.



A meter base adapter around the corner from the meter.

Understanding Meter Base Adapter Equipment



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Dominion Energy Virginia will convert overhead electric services to underground. In some cases, a meter base adapter will need to be installed so that the meter base can accept the new underground cable.

What is a meter base?

A meter base is the customer-owned box attached to your home that holds your electric meter. It safely provides the separation between Dominion Energy's wiring and the customer's wiring that runs into the interior panel box. For safety reasons, a meter base should only be opened by a Dominion Energy representative, authorized contractor, or certified professional electrician using proper personal protective equipment.

Why is a meter base adapter needed?

In some cases, the meter base for existing overhead services cannot accommodate a different underground cable due to size limitations. Adding an adapter allows

the existing overhead service to be converted to underground.

When is the meter base adapter installed?

Dominion Energy will install the adapter during construction. The timing for this work and associated power outage will be communicated closer to the installation date.

Important Facts

- Customers may be asked to provide access to the meter base.
- When the electric service line is removed from the side of the home, any repainting or surface restoration is the property owner's responsibility. Our contractors will only caulk nail holes.

A Dominion Energy representative will discuss the available options and work with each customer to determine the best possible solution.



Actual meter base size and property characteristics will vary; available options are dependent upon the existing configuration.

Option 1a:

Obstructions are beneath the meter base (i.e. patio, deck)



A "vertical box" adapter can be installed utilizing entrance cable to connect the meter base to the adapter.

Option 1b:

Salt Contaminated Areas Only. Obstructions are beneath the meter base (i.e. patio, deck)



A stainless steel "horizontal box" adapter is used in areas susceptible to sea salt. It can be installed utilizing entrance cable to connect the meter base to the adapter.

Option 2:

Replace the existing meter base with one that will accept the new underground cable



Situations will vary. In most cases this option will require work at the customer's expense prior to conversion.

Option 3:

Leave the existing electric service line overhead



The electric line that serves the neighborhood would be placed underground, but the service line providing power to the house would remain overhead.

Ask our authorized representative about our Augmented Reality App for a 3D view of the meter base adapter options.



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Examples of Completed Installations



Understanding Pedestal Installations

Pedestals allow a single transformer to provide service to several customers. When a pedestal is used, a cable runs from the transformer to the pedestal and acts as a splitting device, converting the single incoming line into multiple outgoing service lines.



The location of each pedestal is ultimately determined by the electric load calculations and the route of the underground lines.



Average size: 23" wide x 15" deep x 18" high.



Another example of a typical pedestal installation.

Understanding The Service Connection to Your Home



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A Dominion Energy representative will meet with each customer to determine a solution and discuss the options when converting services with pipe masts.

What is a pipe mast?

A pipe mast is used to provide enough height to ensure standard electric clearance requirements.

Conceptual examples only—actual meter base size and property characteristics will vary.

Should the homeowner decide to have their overhead service connected to a pipe mast relocated to underground, the removal of the pipe mast may require additional work that is the responsibility of the customer.



Option 1:

The pipe mast goes through the roof and is connected to the meter



Dominion Energy will seal the top of the meter base and install underground cable to either an adapter or the meter base once all customer responsibilities have been completed.

Customer responsibilities:

Performed when the overhead service is being converted to underground service.

- Cut the pipe mast (or have it cut)
- Secure the pipe mast to prevent the pipe from moving
- Seal around the pipe mast to prevent water damage to the roof
- Install a cap on the top of the pipe mast

Option 2:

The pipe mast goes through the roof but is not attached to the meter base



Dominion Energy will install underground cable to an adapter or the meter base.

Customer responsibilities:

- Secure the pipe mast to prevent the pipe from moving
- Seal around the pipe mast to prevent water damage to the roof
- Install a cap on the top of the pipe mast

Option 3:

The pipe mast is not going through the roof or eave



Dominion Energy will (in most cases) remove the pipe mast in its entirety and will install an adapter or use the existing meter base to convert the service to underground.

Option 4:

Leave the existing electric service line overhead



The electric line that serves the neighborhood would be placed underground, but the service line providing power to the house would remain overhead.

IMPORTANT NOTE:

- Dominion Energy crews and authorized contractors will caulk any visible holes.
- Any repainting or surface restoration will be the customer's responsibility.

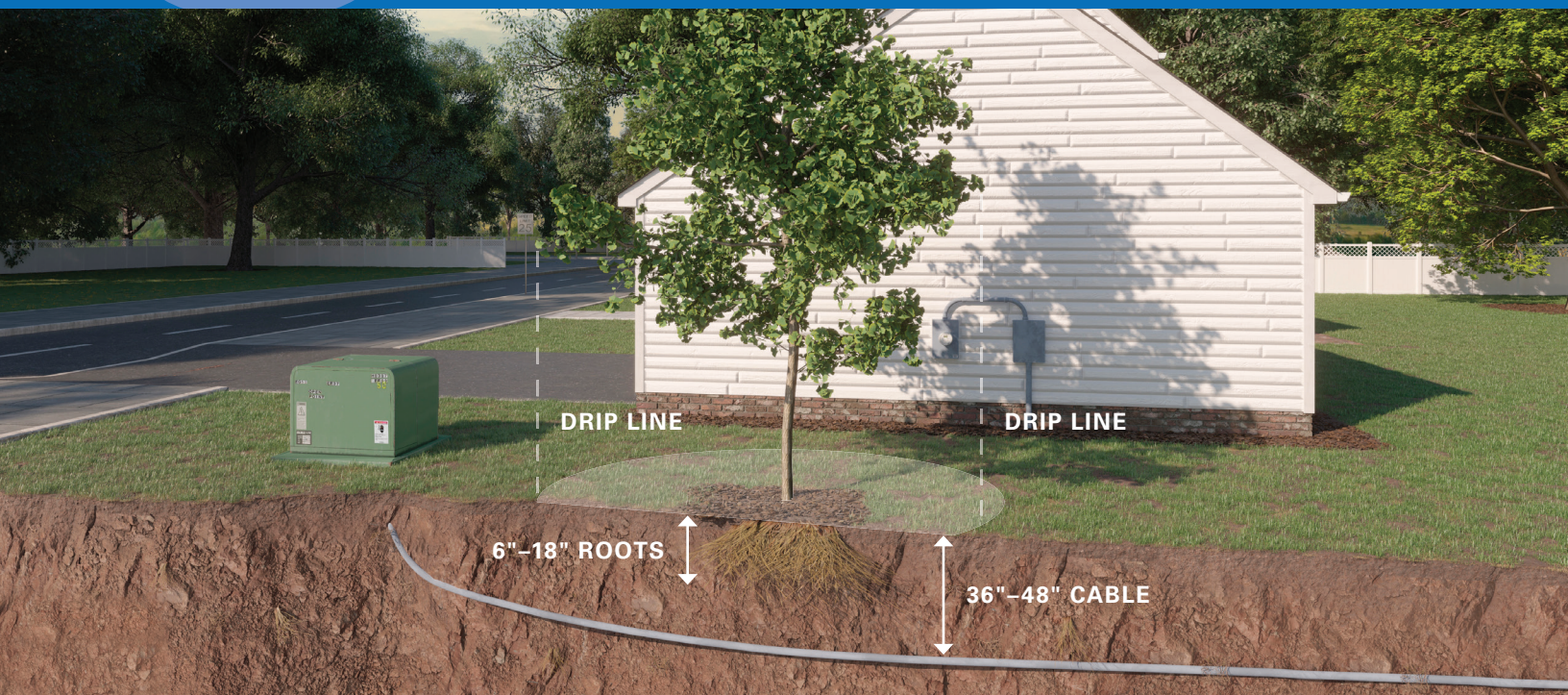


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Understanding Trees and Underground Lines



The Strategic Underground Program is committed to ensuring the health and beauty of natural landscapes. As part of this commitment, we normally use low-impact drilling technology to install new underground cable which helps minimize disruption to property.

Construction Considerations

It's rare for trees to show symptoms of damage as a result of construction using directional drilling.

- Primary underground cable is installed in conduit 36–48 inches below the current grade.
- Construction holes (pits) are dug for the entrance and exit points for the drill, installing equipment, and making underground connections.

A Dominion Energy representative will partner with each customer to explore all placement options and determine a solution for the proposed new underground equipment.



Drip Lines

Underground equipment can be installed within a tree's drip line. However, homeowners should consider the possible impact on the tree during installation and over the long-term.

- The drip line of a tree is determined by the outer circumference of the branches, where water drips to the ground.
- While some roots extend beyond the drip line, most roots are within it.

Tree Roots

Tree roots lie within the top 6–18 inches of the soil. A tree's vitality largely depends on the health of its root structure and other variables, such as the following:

- soil condition
- weather (drought or frost)
- age
- insects
- nutrient deficiencies.



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Safe Installation of New Underground Lines

When Dominion Energy's underground cable crosses other existing underground utilities, we utilize a practice called "potholing." Under the *Code of Virginia's Underground Utility Damage Prevention Act* and *North Carolina's Underground Utility Safety and Damage Prevention Act*, potholing is used to expose other underground utilities and ensure there is enough clearance to safely install the new underground cable.



After the underground facilities have been installed, the pothole location will be restored to a condition similar to that before construction.



In this photo, potholing was used when crossing a water line, which is identified by the blue paint. (Photo taken before property restoration.)



Roadway with potholes patched with asphalt.



This driveway was patched and sealed.



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Understanding Underground Easements



Conceptual example only—actual details of installation will be customized to your property and vary depending on terrain, the possible presence of phone or cable service lines, and other factors.

An easement is a signed document that provides legal permission to an entity to perform specific work on another person's public or private land. The property owner still owns the land subject to the rights granted to the utility company. These rights include constructing, maintaining, repairing, and/or replacing lines and equipment.

If we request an easement from you, then you are granting us the ability to install, maintain, and operate our equipment on your property. We ask you to ensure that the easement area is accessible to our equipment if repairs need to be performed.

Will I be compensated for an easement?

We do not offer financial compensation for easements.

Why am I being asked to sign an easement form?

As part of Dominion Energy's Strategic Underground Program, we relocate existing overhead lines underground. Dominion Energy must obtain authorization from property owners before any work is performed on their property. The Underground Distribution Easement Agreement, that Dominion Energy asks property owner(s) to sign, grants permission to do this work.

Will I have to sign more than one easement?

In situations where Dominion Energy partners with telephone and cable companies to place lines

underground, property owners may need to sign more than one easement. When possible, we will incorporate a joint electric and telecommunications underground easement into a single document.

How much easement area is required?

The standard underground easement area is fifteen (15) feet wide. This width provides adequate space for the installation and maintenance of underground electric equipment.

What does it mean if my property has an underground easement?

An underground easement simply gives the utility permission to perform work on your property and maintain its equipment. The property owner still retains ownership of the land. We ask you to ensure that the easement area is accessible to our equipment if repairs need to be performed.

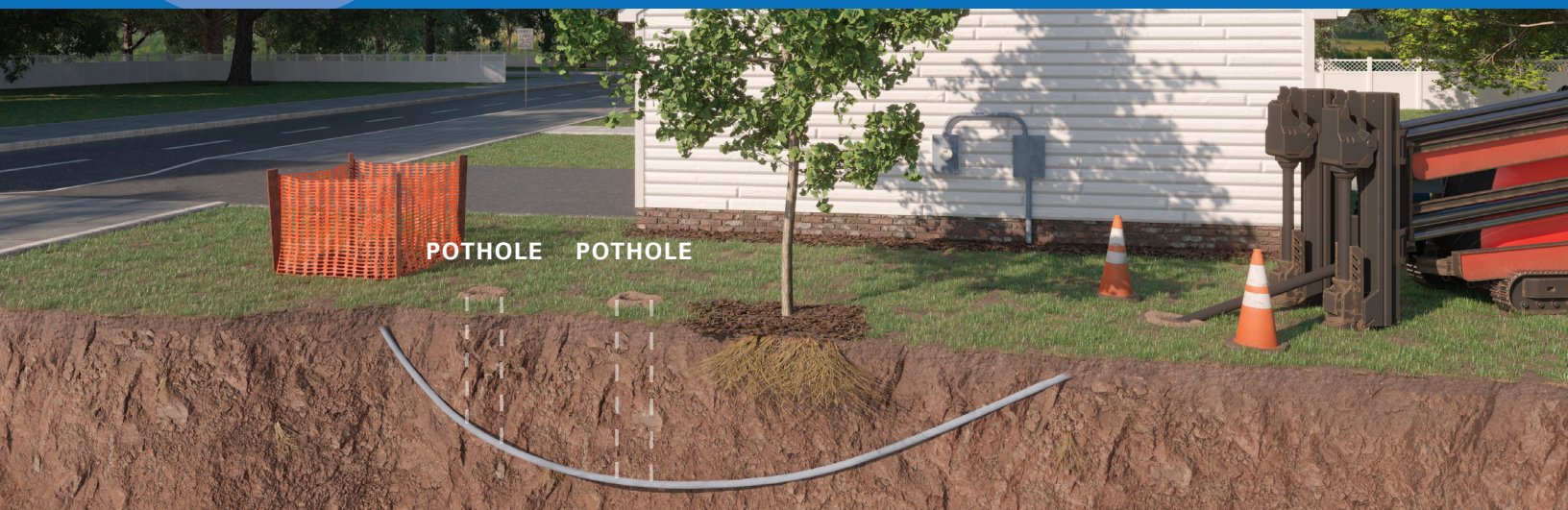
Landscaping around our equipment is permissible, within guidelines. Plantings must be at least 3 feet from the back and sides of the equipment and 10 feet from the front.

If there are underground lines on the property, remember to call 811 before you dig.



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Understanding the Safe Installation of the New Underground System



Daily work practices and methods ensure that the underground lines are safely and professionally installed during construction. Dominion Energy is committed to restoring each customer's property following construction.

Project Site Preparation

To ensure safe installation:

- The project team will contact VA811 for Virginia projects or NC811 for North Carolina projects to identify existing underground public utilities with colored markings and flags. *Examples: water, sewer, and gas.*
- The project team will work with property owners to identify any private underground facilities. *Examples: irrigation, invisible fences, and septic or oil tanks.*

Color Codes for Underground Utility Marking

Red	ELECTRIC
Yellow	GAS, OIL, STEAM
Orange	COMMUNICATIONS, TV, ALARM
Blue	WATER
Purple	RECLAIMED WATER, IRRIGATION, SLURRY
Green	SEWERS, DRAINS
Pink	TEMPORARY, SURVEY MARKINGS
White	PROPOSED CABLE ROUTE

Construction and Safety Inspection Holes

A safety inspection hole (or pothole) is used to visually locate existing underground facilities to ensure clearance of the new underground cable.

- Potholing is a mandatory practice under the Code of Virginia's *Underground Utility Damage Prevention Act* for Virginia projects and under North Carolina's *Underground Utility Safety and Damage Prevention Act* for North Carolina projects.

Pits are strategically dug to install equipment and make connections.

- Pits are barricaded with orange fencing for safety.

A construction hole is used as an entrance and exit point for the drill.

Upon completion of construction, all holes will be filled. At the end of each project, properties will be restored to a similar condition as prior to construction.



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Stages of the Program

There are six stages to the Strategic Underground Program:



1. Evaluation

We use a data-driven process to identify overhead electric lines most susceptible to outages.



2. Design

A Dominion Energy representative will do the following:

- Propose a route for the new underground facilities
- Assess your meter base to determine if a meter base adapter is needed

You may see flags during this stage which helps develop the proposed underground route.



3. Obtaining Easements

We partner with property owners to secure necessary easements along the newly proposed underground route. This process is very important as it provides Dominion Energy permission to install and maintain equipment on the underground route. Without necessary easements, the project may be canceled.



4. Scheduling and Site Preparation

Before construction, we will do the following:

- Send an update informing you of the construction process
- Work with VA811 (formerly known as Miss Utility) or NC811 and property owners to identify public and private pre-existing facilities (water, septic, oil tanks, irrigation, etc.) to ensure safe installation. Colored markings and flags will be placed on the property at this time.



5. Construction & Conversion

In most cases, we will use a drilling technology rather than open trenching to reduce impact to your property. Underground cables will be placed in protective conduit.

There will be a planned outage to convert electric service from overhead to underground. The outage date and time will be communicated in advance.



6. Property Restoration

Respecting your property is a priority. Our crews will return to remove any remaining overhead lines and restore your property back to a similar condition.

Contact Us

1-877-306-8292

[DominionEnergy.com/SUP](https://www.dominionenergy.com/SUP)