

Morton Substation Project

Frequently Asked Questions

The Morton Substation Project is part of PECO's Reliability & Resiliency Plan to invest \$1.36 billion through 2025 on targeted reliability-focused infrastructure investments.

General Project and Timeline

What is the earliest start time of the project?

Vegetation work is planned to start by the end of the first quarter and construction will follow.

How long will construction take overall (tree and line work)?

The project is projected to last 12 to 18 months, depending upon material availability, weather, and other unforeseen circumstances.

When did PECO first notify the Swarthmore community of the project?

PECO began communicating with the Swarthmore community in the Fall of 2021, when notifications for this project were delivered.

Why is this project being pursued?

- Many substations contain obsolete equipment and these units are experiencing an increased rate of failure with high customer impact. This is the case with Morton Substation, which feeds the Swarthmore community.
- Since substations transform power from a higher to a lower voltage, they cannot be retired unless the distribution system downstream from the substation is upgraded to operate at a higher voltage.
- These upgrades will improve the ability to respond to outages, particularly those caused by major storms, by providing alternate paths to reroute power to customers who were interrupted or to perform routine maintenance.
- Additionally, the higher voltage increases the ability of PECO's equipment to handle the addition of customer-owned solar facilities to the system.

- It will also prepare the system to handle the expected increase in electric vehicle charging.
- The specific substations selected for retirement will be prioritized based on their susceptibility to storm damage, the need to obtain spare equipment that is not readily available, the number of customers served, and equipment obsolescence, or upon other considerations that may be location- or unit-specific.

What are the specific benefits to PECO customers impacted by this plan?

The project will strengthen the electric infrastructure used to serve PECO's customers to better withstand more frequent and damaging storms in our region, deliver enhanced reliability for our customers by reducing the frequency of outages and the duration of those that cannot be prevented, and support the adoption of clean energy resources, like solar power and electric vehicles.

What is the overall cost of the project?

The estimated cost of this project is \$12 million.

Poles and Lines

Are the existing poles being replaced, or are there going to be new poles in addition to the existing poles?

Existing poles are being replaced with taller poles. For a limited time, there will be an old pole and a new pole located next to each other. Once all communications lines (which are not owned by PECO and over which PECO does not control the timing of their transfer) have transferred onto the new poles, the old poles will be removed. We currently forecast that one additional new pole will be added in Swarthmore as a result of this project.

How tall and of what diameter poles are you proposing to install?

- The pole heights range from 40-55 feet.
- The average pole width will be approximately 13" to 15" in diameter.
- The poles will be made of wood.

Will the new, taller poles use spreaders?

Spreaders are only used if the field conditions require it. Spreaders are required if multiple 13kV wires are present. The Spreaders are needed to effectively maintain spacing. If there are multiple primary wires present now, spreaders would be used in the new construction.

I currently have a large transformer on my current pole. Will this large transformer be on my new pole and will it stay the same size, larger or smaller?

If there is a transformer on a pole on or near your property, it is likely that a new one will also be installed at that location. The new transformers are nominally bigger than the existing ones and are generally not noticeably larger from the ground level.

Did you consider increasing the size of existing conductors or adding additional conductors to the existing poles?

Adding additional conductors or increasing the size of the conductors is not feasible from a construction standpoint. Most of the existing poles are approaching their expected life. If the existing poles remain, we risk interruptions upon failure.

Since poles on other streets have 13kV placed on the current 35-foot poles, why can that not be done here?

PECO is following current National Electrical Safety Code (NESC) standards for the Swarthmore project, which were different for prior projects.

How is PECO coordinating with other utilities (e.g. AT&T, Comcast, Verizon) for relocating their lines to the new poles and removal of the old to prevent interruptions?

PECO and communications companies track all attachments on their poles. When a new pole is installed, all attachers are notified to remove their facilities from the old pole. PECO also participates in regular review meetings with communications companies and maintains a dedicated team to track these transfers and remove old poles. PECO does not, however, control the timing of communications companies' pole transfers.

You stated a number of poles that will be to be replaced. Is this number PECO-owned poles or both PECO and Verizon/Comcast-owned poles?

There are both PECO-owned poles and poles owned by communications companies (such as Verizon and Comcast) along the project path. The number of poles being replaced includes all of these.

Who actually owns the utility poles? Verizon or PECO? Many of the poles have old Bell Atlantic badges on them.

There are both PECO and communications company-owned poles along the project path. PECO does not own the Bell Atlantic poles.

How will you ensure that the Comcast cables don't pull the PECO poles out of alignment as they do now?

PECO has a pole inspection program that schedules replacements for poles that are out of specification.

What is the impact on EMF exposure when upgrading from 4Kv to 13Kv?

Operating the lines to supply the same load at 13 kV versus 4 kV is expected to reduce the EMF. EMF decreases with increased voltage.

Will cell tower nodes be added on top of new poles? What additional height?

At this time, PECO is not aware of plans to add cell tower nodes to the poles, which are generally owned by communications companies.

What quality control methods do you have in place?

PECO performs quality inspections in the field on construction work being performed by contractors. Contractors are also obligated to perform self-inspections for quality.

Since power outages are cited as a reason for this project, is there a guarantee with the higher power lines that the power won't go out from now on?

PECO cannot guarantee power will not be impacted as a result of weather and other incidents. However, the project will strengthen electric infrastructure and if the vegetation removals are not completed in combination with the new construction, there is a high likelihood that these trees will cause future outages.

Will you replace a shed or other structure that is located where the new pole will go?

The poles are generally not placed where infrastructure is located; the poles will be offset as needed. PECO will contact customers on an as-needed basis if this field condition is discovered.

Will customers experience an outage when cutting over from the lower voltage line to the higher one?

It is our expectation that customers will experience an outage during the conversion process. Although we cannot guarantee the exact length of the outage, in the past, similar conversions typically result in a 4 to 8-hour outage. PECO will work to minimize the length of outages. Some customers may experience more than one outage over the duration of the project. Customers will be notified in advance of a planned outage and should take the necessary steps to be prepared during this timeframe.

Design and Construction

Can PECO put the lines underground?

There are advantages and disadvantages to both aerial and underground service. While underground lines are not impacted by trees and other vegetation or wind, they are impacted by heavy rain and flooding. In addition, problems on underground lines are more difficult to locate and take longer, and are more expensive, to repair. There would be substantial impact to the trees since buried lines require concrete duct banks which greatly impact the root systems of the trees which can have a greater detriment long term.

How much does it cost to put the lines underground?

Burying the lines is cost prohibitive from a project planning and overall lifetime maintenance point of view. Underground construction typically costs upwards of 7x-10x the cost of overhead upgrades. In addition, undergrounding requires all customers in the project zone to hire

electricians to reroute their service lines underground. With regard to vegetation, undergrounding could also damage the root systems of trees within a project path and it presents the risk of damage to the underground infrastructure of other utilities in the project area.

- Underground infrastructure has a useful life of 40 years whereas overhead facilities constructed to today's standards have a useful life of 60 years. Given the shorter lifespan of the underground conductor, future maintenance costs become higher and more costly.
- Undergrounding power lines would not mean that the poles are getting removed given that many communication companies rely on the overhead infrastructure to provide communication services to the township and neighboring areas.

How much does it cost individual homeowners to relocate their lines at the service entrance?

- Customers can pay to have service lines (pole to home) buried at their expense, as this project is not designed to perform service line changes or upgrades. Requests can be submitted through PECO's New Business process to bury service lines only. Customers would be responsible for trenching, conductor, and other associated restoration costs on their property, as well as any fees associated with performing this work.

We have heard that some communities in the county have worked with PECO to convert from aerial to subterranean service. Why can some do and some not?

Generally, these communities have worked with PECO to move their service lines underground. Service lines are the secondary voltage lines that go from the transformer to the house. This is separate from their primary distribution lines, which are the higher voltage lines between transformers.

What other alternatives were considered?

PECO performed multiple evaluations and studies to mitigate the project impact, and none provided a viable alternative to the project that has been selected.

Why do we need to move to a higher voltage and retire Morton?

13kV facilities are now the industry standard service voltage.

Why are you installing taller poles?

Taller poles are needed for two primary reasons. First, taller poles are needed to construct the new facilities over the old facilities safely and with minimal power interruptions. Most poles are only expected to be approximately 5 feet higher than the existing height. Some locations may have poles 10 feet taller if there is congestion at the top of the pole.

Second, PECO's service territory, and Pennsylvania broadly, fall under the "Heavy Loading Zone" as that is defined by the National Electrical Safety Code (NESC). The NESC recommends standards for those in the "Heavy Loading Zone" to meet expected weather conditions for this area, including hurricane-force winds and ice buildup during snowstorms. The taller poles are part of the NESC recommended standards.

Why are you not performing work in South Swarthmore?

South Swarthmore already has 13kV facilities and does not require upgrades.

There are already underground lines on Riverview Road. Why can't that be used?

The existing underground lines near Riverview Road are a different type of line that cannot be used to feed homes.

Were any engineers specializing in underground lines consulted on this project?

Yes. PECO utilizes an extensive process that includes design and review by qualified engineers.

Why were you willing to work with Swarthmore College to bury their lines but not our lines?

Swarthmore College's facilities are privately owned and installed. PECO does not oversee private facilities and how they are constructed.

Why can underground lines be installed for new construction?

PECO installs underground lines within new residential developments where various criteria must be met including: the development of 5 or more lots including street and sidewalk improvements, performing the necessary work to make those lots utility-ready, developing 5 or more adjoining lots that are to be used for single family residences. These requirements can be found in detail in PECO's tariff and applicable State legal requirements.

Vegetation

What is the process of customer notification and permission for tree removals?

PECO Vegetation Management representatives make multiple attempts to contact customers to review required tree trimming and removals in person at the customer's property. In cases where tree removal is required, we request signatures from customers acknowledging that they have been notified. In cases where a tree must be removed or trimmed and a customer does not sign off on the vegetation work, the customer is sent a certified letter stating the approximate date that the work will occur. The work is then performed by a PECO-approved contractor.

What happens if owners don't sign the tree removal form? Are they deemed to have approved it, after a certain length of time?

If property owners do not sign PECO's tree removal form, they will receive a certified letter stating the approximate date that the work will be performed.

Will you be grinding stumps following the tree removals?

PECO will assess each tree removal associated with this project to determine if it meets the criteria for stump grinding.

Can residents use their own arborists to trim their trees?

PECO strongly recommends that our contractor Asplundh perform the necessary clearance work. However, customers have the option to hire a qualified private contractor to complete all of the necessary work at their own expense. If a customer decides on this option, it is important that they consider several items. The contractor that a customer hires must certify to the customer that they are qualified to perform tree trimming activities as outlined in Section 4 of the American National Standard Institute (ANSI) publication Z133.1 pertaining to voltages of 4kv, 13.2kv, and 34kv, and that they will comply with the rules and regulations of the Occupational Safety and Health Administration (OSHA) relating to worker health and safety, including, but not limited to 29 CFR 1910.269.

As a landowner, the customer may be assuming all liability and responsibility for bodily injury and property damage resulting from the performance of work by their private contractor. If the customer chooses this option, PECO requires that the work is completed within the project timeframe, and that the customer notifies PECO of its completion. All tree clearance work must meet PECO's clearance distances for the facilities located at the customer's property. If the clearance distances are not met, PECO's contractor will trim the trees to establish the required clearance distances.

Will trimming destroy my trees?

PECO performs tree trimming according to applicable standards and aligns with industry best practices to balance the health of the tree with safe clearance from the facilities.

In addition to the 124 trees proposed for removal, how many trees are scheduled to be pruned or trimmed?

PECO does not count trees to be trimmed.

Why and how did the number of trees being removed go from 60 or so in early 2021 to 95 in December 2021 to 124 in October 2022?

The number of trees set for removal changed as the result of additional project planning and refinement.

What is PECO doing to minimize the number of trees being cut down?

In addition to designing the route with consideration for the number of trees being removed, PECO has selected the use of a spacer cable system on a majority of the areas. This system requires less space and has reduced the impact to the trees, requiring fewer removals and reduced trimming as compared to common cross arm configurations.

Has PECO applied for and obtained permits for removal of any trees? If not, why not?

PECO is not required to obtain permits from municipalities for tree trimming or removal because the PUC is the sole regulating body over PECO's vegetation management work.

Has PECO provided the Borough with a storm water management plan regarding the impact on storm water resulting from the removal of so many old growth trees? If not, why not?

A storm water management plan is not required for this project. In addition, PECO is working with working with PHS to offer a new tree for each tree removed.

How are you justifying full tree removal instead of mere limb removal when the trunk and base of the tree are outside the easement limits proscribed in people's deeds.

Easement limits do not dictate the scope of work for vegetation management necessary to correct or prevent situations that may pose a threat to public safety or to system reliability.

Why are you taking down so many trees if the new poles are only 5-10 feet taller than the old ones?

Some trees require the removal of significant limbs or portions of the canopy due to the positioning of the new facilities. In some cases, removal of significant portions of a tree's crown could result in a tree's decline or create a hazardous condition. In these cases, PECO is completely removing the tree. Other trees are required to be removed due to the replacement of older style, lower voltage wires with higher voltage wires which require greater clearances. If trees can be pruned without compromising the health and safety of the tree, PECO chose that option.

For each tree, is it absolutely necessary for it to be removed? Or is this about removing the risk of future outages?

Each potential tree removal is reviewed to evaluate if the tree needs to be trimmed or removed in order to provide adequate space to construct the new facilities, or if the tree needs to be trimmed or removed to mitigate the risk of future outages within the timeframe of PECO's maintenance cycle.

Is PECO willing to explore ideas to route lines around to bypass and save our oldest, most significant trees?

PECO evaluates impacts of rerouting facilities. In this case, we have already evaluated other routes and this would involve removing trees and installing poles on other properties that don't currently have existing pole lines.

Is PECO taking into consideration the endangered species and species at risk that rely on the trees in our community? What will be done for those species?

PECO complies with all applicable legal and regulatory requirements, including those that impact endangered species.

Will all trees along the affected routes be cut to 10' below the height of the poles?

Current standards do not dictate that trees must be a certain height. Trees will be trimmed or removed according to species, habit of growth, and location relative to facilities. Each tree is assessed by our team of professional arborists, and work is performed in alignment with industry best practices.

Is there an arbitration process for tree removals and trimming?

There is not an arbitration process for tree removals and trimming.

How will the wood from the trimmed or removed trees be salvaged? If it is sold does the homeowner get the proceeds?

PECO does not sell wood that is removed from these projects. It is removed by our contractor of choice and disposed of in accordance with environmental regulations. If the customer is interested in keeping the wood from a tree on their property, that can be arranged with the project team.

What is being done to protect trees identified as historical trees?

Historical and specimen trees are being preserved where it is feasible to construct the lines without removing the trees, and when those trees do not pose a level of risk to the facilities which would warrant removal.

How will backyard work, particularly in narrow areas with shrubbery, be performed?

PECO's contract tree crews utilize a range of tools and techniques to minimize impact to landscapes. This includes utilizing tree climbers instead of lift trucks to avoid bringing equipment into the rear of properties. When equipment is required for worker safety or other considerations, tree crews may be able to use small, tracked lift equipment with a reduced impact. When large equipment is needed, protective matting is used to minimize landscape damage. Every effort is made to work around and protect existing landscapes. In the event that no alternatives are available for access, our team will work with property owners to develop an access plan and any needed restoration work.

Would you reclassify an ash tree if you learned that the homeowner has been paying to have preventive treatment against emerald ash borer for years, and plans to continue to?

If the tree must be removed to provide enough space to construct the new facilities, the tree would need to be removed even if it is being treated for emerald ash borer.

Morton Substation

What are PECO's plans for the Morton substation property?

The substation property located off of Westdale Place in Springfield will remain an active Substation. The Substation property located off of Wildwood Ave in Springfield will remain PECO property, as there will still be active equipment on the property. In addition, much of this property had previously been converted to wetland as part of another project. Wetlands are a key aspect of stormwater management and so maintaining and improving this wetland provides ecological benefit in the area.

Why isn't PECO fixing the substation?

- The substation is currently operational, however the equipment is at least 60 years old. The upgrade allows implement industry standard equipment at the higher voltage.
- In addition, increasing the voltage of the distribution lines in the area will prepare for future load increases, such as those expected from solar installations and electric vehicles.

Where will our power come from after the Morton substation is closed?

Once the conversion is complete the Morton 4kV substation on Wildwood Ave would be retired. The main power feed will primarily come from other nearby substations.

Permitting and Studies

Does PECO have an impact assessment of the effect of tree loss on our property values?

No.

Has PECO performed an environmental study of the impact on the borough?

PECO conducts environmental reviews for projects as required by law, and none were required for this project.

Has an Environmental Impact Assessment been completed?

PECO conducts environmental reviews for projects as required by law, and none were required for this project.

Was NEPA conducted for this project? If yes, where is the report?

This project does not require a NEPA review.

Is new distribution design compliant with EEI avian protection guidelines?

Yes. PECO takes measures system-wide to place avian protection devices on the system. We also have an avian protection plan that mandates we undertake corrective actions on our system if certain federally protected species of birds are involved in a collision or electrocution. We have not determined that any areas require additional protection beyond our standard avian protection practices in Swarthmore.

Volunteer Tree Plantings/Tree Giveaways

Why are you only replanting the street trees and not all of the trees removed?

- PECO will be providing one tree for every tree removed during this project, and the Pennsylvania Horticultural Society (PHS) will partner to offer tree replacements for the Swarthmore Community.
- Street Trees will be replaced with bare root trees for the Swarthmore Tree Tenders and Swarthmore Tree Committee to replant. PHS will work with the Swarthmore Tree Committee to choose the species for the street trees.
 - a. A yard tree giveaway in partnership with PHS will be held in the Spring of 2023 for residents who had trees removed from their property.

How big/mature are the replacement trees?

The average bareroot tree is about 30 pounds and five feet tall. The yard tree giveaway will offer containerized trees approximately 3 feet tall to residents.

What is a bare root tree?

A bare root tree is a nursery grown tree that has had all soil removed from its root system after being dug from the nursery. There are many advantages to transplanting trees bare root including reduced transport weight, reduced need for heavy equipment, and increased rates of survival if planting is performed properly.

Why aren't more mature trees to replace removed trees not being offered?

There are more risks involved planting larger mature trees. Damage can be incurred while unloading and transporting a tree to its final location. Another risk has to do with ensuring the tree becomes established with proper care.

How will replacement trees be planted?

Trees will need to be planted by the owner of the property. The street trees will be given to the Swarthmore Tree Committee to be planted.

If PECO isn't paying for the replacement trees to be planted, then who pays for it?

PECO is utilizing its partnership with PHS to provide the trees to the Swarthmore community at no cost. It is up to the borough and residents to determine a location for the trees and to plant them.

Customer Communication

How do I find out if my property is affected?

Any resident who will be affected by tree removal or tree trimming received a letter inviting them to the in-person Open House that PECO held on December 5, 2022. If residents wish to verify whether their property is affected, they may reach out to Michael Herman at michael.herman@exeloncorp.com.

When can we expect to get a list of the trees being removed and their locations?

PECO is working with each individual property owner who will be affected by tree removal or tree trimming. Given those ongoing discussions, we cannot provide a detailed list of tree removal locations. An area map showing where tree work is occurring has been developed and will be/was presented at the in-person open house on January 26, 2023. The area map will also be posted on PECO's project website.

When will a property owner be told if a new pole is being added to their property?

If a new pole is being installed, the property owner will be notified by the contractor at least one month prior to the pole being installed .

Other

What is the Swarthmore Tree Committee?

PECO has been working with the Swarthmore Tree Committee to provide awareness around the project's impact to trees that fall within the borough's street tree ordinances.

On tenant occupied properties, will the account holder be notified or the deed holder.

We have been mailing information to the account holder and are also attempting to notify property owners if there is tree work occurring on their property.

Can we also use this project as an opportunity to improve the lighting in the borough?

Swarthmore Borough owns their streetlights. It would be up to the Borough to upgrade or add additional fixtures.