

worker beware®

Working safely around utility lines

Respect the power of electricity

- When you arrive at a job site, always identify power lines and highvoltage equipment, and point them out to coworkers.
- Assume all overhead power lines are energized, including service drops running between poles and buildings.
- Check the site daily because conditions change.
- **Review your emergency plan** before work begins so that everyone knows what to do in case of power line contact.



For tools & equipment other than cranes & derricks used in construction: Always observe the 10-foot rule

- OSHA requires that you keep yourself and your equipment (other than cranes or derricks used in construction) at least 10 feet away from overhead power lines carrying 50 kV or less.
- Higher-voltage lines require greater clearances. Contact OSHA for clearance information.
- If your job requires you to work closer than 10 feet from power lines, call PECO at 800.454.4100 well in advance to make safety arrangements.
- Electric safety distances given here are minimums.
- Always use the maximum possible clearance, and clearly mark boundaries to keep workers and equipment the required distance away.

Cranes & derricks in construction

- Cranes and derricks used in construction must remain 20 feet away from lines up to 350 kV and 50 feet away from lines greater than 350 kV but at or less than 1,000 kV until the operator has taken specific safety measures.
- As voltage increases, clearance distances also increase. Consult the OSHA regulations at osha.gov for specific clearance requirements and encroachment precautions.
 - Once you have established the required clearance, clearly mark a boundary with tape, signs or barricades.
- Whenever cranes or derricks are used in construction on your job site, contact PECO well in advance at 800.454.4100 so that any necessary facility protection arrangements can be made.

Use a dedicated spotter

- Always use a dedicated, qualified spotter on the ground to safely judge distances between hoisting equipment and power lines.
- Crane and derrick operators: You must maintain continuous contact with a dedicated spotter to comply with line clearance requirements.
- The spotter's only responsibility should be power line safety. Don't divide the spotter's attention with other tasks.



If heavy equipment contacts a power line

- Both the equipment and the line should be considered energized.
- If you can do so safely, move the equipment away from the line.
- It may be safer to stay on the equipment unless there is imminent danger, such as the equipment is on fire.
- Warn others to stay away.
- Call 911 and PECO at 800.841.4141.
- If fire or other danger forces you off:
 - Jump clear, keeping both feet together, without touching the equipment and the ground at the same time.
 - Then shuffle away with small steps, keeping both feet close together and on the ground at all times.



Notify 811 before you dig

- Dial 811 or place an online locate request at www.pa1call.org at least three business days (excluding weekends and state holidays) before you dig or move earth in any way. They will arrange to have the underground utility lines marked so that you can dig safely.
- Before you call, pre-mark your proposed dig area with white paint so that locators can easily identify and mark affected utilities.
- If you don't notify 811, you risk hitting a natural gas or an electric line, which has serious consequences, including severe personal injury or death.

Always contact your state 811 center before digging and for the most current requirements.



Know what's **below. Call before you dig.**

Wait the required time

- In Pennsylvania, wait at least three business days, excluding weekends and state holidays.
- Before you dig, wait the required time, and confirm with the 811 automated response system that all utility operators have responded.

Always contact your state 811 center before digging and for the most current requirements.



Conduct a visual site survey

- **Do not rely exclusively on the locate marks.** Look for visual indicators of underground facilities that have not been marked, such as meters, valves and pad-mounted transformers.
- Check with property owners about any private underground lines that would not have been marked by the locator.
- Also check for signs of something buried after the locate was completed, such as a fresh trench.
 - If you find a newly installed or unmarked facility, call 811.





- **Respect the locator marks.** Maintain utility indicator marks and follow them when digging.
- Dig with care. Have a spotter present to observe the excavation whenever heavy equipment is used.
- Know the underground utility color code:

AMERICAN PUBLIC WORKS ASSOCIATION COLOR CODE FOR LOCATOR MARKS





Electric power lines Gas, oil or steam Communications lines, cables or conduit Potable water Reclaimed water, irrigation and slurry lines Sewers and drain lines Temporary survey markings Your proposed excavation

Respect the tolerance zone

- Adhere to state laws for digging within the "tolerance zone." This safety area spans the width of a marked utility line plus a state-mandated distance from each indicated outside edge of the line: 18 inches in Pennsylvania.
- Hand dig or use other non-intrusive methods prudently in this zone.
- Once visual identification has been achieved, do not use mechanized digging equipment within 18 inches of the outermost surface of buried utility lines. Use a spotter to observe the excavation and help prevent damage when heavy equipment is used near utility lines.
- The tolerance zone is a *minimum* safety clearance. Protect yourself by using the maximum possible distance.

Always contact your state 811 center before digging and for the most current requirements.



Know when to stop digging

- If you do not understand the locate marks, do NOT dig.
- If you cannot visually verify the location of marked utility lines, STOP digging.
- If you find unmarked, mismarked or seemingly abandoned facilities, STOP digging.
- If you see signs of something buried after the locate was complete, such as a fresh trench, STOP digging.
- If the marks fade or are destroyed, STOP digging and contact 811 to request a new ticket.



Natural gas basics

- Natural gas travels through pressurized underground pipelines of varying diameters. The size of a gas line is NOT a reliable indicator of the internal pressure.
- PECO adds a distinctive, sulfur-like odor to natural gas to assist in the detection of leaks. However, in certain conditions, you may not be able to smell this odorant.
- Leaking natural gas can be ignited by a tiny flame or spark even from a lit cigarette or a phone.



Watch out around pipeline markers

- High-visibility pipeline markers indicate the need for extra care around natural gas transmission pipelines.
- These markers are general indicators only. For security purposes, they do not show the exact location, path or depth of gas pipelines.
- The markers should never be used as a substitute for calling 811.
- Call the number on the marker if you notice any type of suspicious activity or construction occurring nearby without gas utility personnel present.



Recognizing a natural gas pipeline leak

- If digging, grading or excavation of any kind is happening on your job site, **be alert for the signs of a gas pipeline leak:**
 - A distinctive, sulfur-like odor
 - A hissing or roaring sound
 - Dead or dying vegetation (in an otherwise moist area) over or near a pipeline
 - Dirt spraying or blowing into the air
 - Exposed pipelines after fire, flood or other disaster
 - Continuous bubbling in water
 - A damaged connection to a gas appliance



Responding to a natural gas pipeline leak

- If you suspect a gas leak or if you contact a gas pipeline:
 - Leave your equipment behind. Warn others and leave the area immediately.
 - Do NOT use matches or lighters, start an engine, or operate a radio, phone or any electrical device. Even a tiny spark could ignite leaking gas.
 - Do NOT attempt to stop the flow of natural gas or fix the pipeline. Leave the excavation open.
 - From a safe location, immediately report the incident to 911 and PECO at 800.841.4141. The law requires you to call 911 if natural gas is escaping.
 - Stay far away from the area until utility workers say it is safe to return.
 - Report the incident to your supervisor.



Utility safety review

- Identify all power lines and electrical equipment upon arrival at a job site. Recheck the site daily.
- Keep yourself and all tools and equipment (other than cranes and derricks used in construction) at least 10 feet away from all overhead power lines carrying 50 kV or less.
- Cranes and derricks used in construction may require clearances at or *greater than* **20 feet** and encroachment precautions.
- Always use a dedicated spotter.
- If a power line contact occurs, follow proper safety procedures, and immediately call **911** and PECO at 800.841.4141.
- Notify the underground utility locator service by calling 811 or placing an online request before you dig.
- Know the warning signs of a natural gas leak.
- If you contact a natural gas pipeline, leave the area, avoid spark hazards, and call **911** and PECO at 800.841.4141.

Underground utility locator contact information

• To reach the underground utility locator service, call **811** or visit **www.pa1call.org**



Contact information

- In case of emergency, call PECO at 800.841.4141.
- To schedule work, call PECO at 800.454.4100.
- For additional information, visit our website at **peco.e-smartworkers.com**.



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Thank you