



# **WORKER SAFETY: WORKING SAFELY AROUND UTILITY LINES**

**March 2021**

# Respect the power of electricity

- **Survey your job site every day to locate all electric utility equipment,** and point it out to your crew. Watch for overhead power lines.
- **Assume all overhead lines and downed power lines are energized and potentially dangerous,** including service drops running between poles and buildings.
- **Check the site daily,** because conditions may change.
- **Review your emergency plan** before work begins, so 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 up to 50 kV.
- **Higher-voltage lines require greater clearances.** Contact Xcel Energy or the local electric utility for clearance information.
- If your job requires you to work closer than 10 feet from power lines, **call Xcel Energy well in advance to make safety arrangements.**
- **Electric safety distances given here are minimums.**
- **Always use the maximum possible distance, and clearly mark boundaries** to keep workers and equipment the required distance away.

# Cranes & derricks in construction

- **Keep the crane boom and load at least 20 feet away from lines up to 350 kV, and 50 feet away from lines greater than 350 kV and up to 1,000 kV.** Always assume the line is energized, and allow nothing closer unless you have confirmed with the utility owner/operator that the line has been de-energized.
- **As voltage increases, clearance distances also increase.** Contact Xcel Energy or the local electric utility, and consult the OSHA regulations at [osha.gov](https://www.osha.gov) for specific clearance requirements and encroachment prevention 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 Xcel Energy or the local electric utility well in advance so any necessary facility protection arrangements can be made.



# Use a dedicated spotter



- **Always use a dedicated spotter on the ground** to safely judge distances between hoisting equipment, loads and overhead power lines.
- **Crane and derrick operators** must maintain continuous contact with a dedicated spotter to comply with electric 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.**
- **Move equipment away from the line ONLY** if you can do so safely.
- **Stay on the equipment** until utility workers tell you it is safe to leave.
- **Warn others to stay away** from the line and anything it is touching.
- **Immediately call 911 and Xcel Energy or the local electric utility.**
- **If fire or other danger forces you to leave your equipment:**
  - Jump clear, keeping both feet together, and without touching the equipment and the ground at the same time.
  - Land with your feet together and shuffle away with small steps, keeping your feet close together and on the ground at all times.



# Notify 811 before you dig

- **Call the underground utility locator service at 811 or place an online locate request.** Wait your state's required time before digging (CO, ND, MI and WI—3 business days; MN, NM, SD and TX—2 business days). Your call arranges for utilities to mark their underground lines, so you can dig safely.
- **Before you notify 811, pre-mark your dig area with white paint and/or flags,** so locators can easily identify and mark affected utilities.
- For more information visit [xcelenergy.com/811](https://www.xcelenergy.com/811).
- **If you don't notify 811, you risk hitting an underground natural gas and/or electric line.** This could lead to gas leaks, explosions, loss of service or injury to customers and possible fines. You or your coworkers could be hurt or killed, and you may be held liable for damages and repair costs.
- **Ask the property owner about any privately owned underground lines,** as the 811 locate request does not address any customer-owned service lines.











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

# Dig safely

- **Talk to the property owner.** Ask about any private underground lines that may not belong to a utility and so would not be marked by the locator. **Customers must arrange for a third-party** locating service to locate and mark these lines.
- **Respect the locator marks.** Maintain utility locator marks and follow them when digging.
- **Dig with care.** Adhere to state laws for digging within the "tolerance zone" or "caution zone."
- **Use hand tools ONLY** within this safety zone.
- **Be prepared.** Develop a written damage prevention plan and provide annual training.
- **Know the underground utility color code:**

## AMERICAN PUBLIC WORKS ASSOCIATION COLOR CODE FOR LOCATOR MARKS



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



# Watch out around pipeline markers

Brought to you by:



- **Pipeline 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.**
- **Pipeline markers indicate the need for extra care** around Xcel Energy's natural gas transmission pipelines and some distribution lines.
- **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 gas leak may have a sulfur or rotten egg-like odor (but not always). Other signs may include:
  - **A hissing, whistling or roaring sound**
  - **Dirt blowing into the air from a hole in the ground**
  - **Continuous bubbling in water**
  - **Unexplained dead or dying vegetation over or near a pipeline**
  - **An exposed pipeline after an earthquake, fire, flood or other disaster**
  - **A damaged connection to a gas appliance**



# Responding to a natural gas pipeline leak

- **If you damage a gas pipeline that results in a release or you suspect a gas leak:**
  - **Warn others and leave the area quickly.**
  - **Do not use matches, cell phones, radios or lighters**, as even a tiny spark could ignite the leaking gas.
  - **Do NOT attempt to stop the flow of gas or fix the pipeline.**
  - **Leave the excavation open. Do not bury the line.**
  - **When you have reached a safe distance, call 911** and Xcel Energy (or the local gas utility), or the emergency number posted on pipeline markers. Always call, even if damage is a minor nick or scrape. Excavators are required by law to call 911 in the event of escaping gas.
  - **Stay away from the area** until safety officials say it is safe to return.
  - **Report the incident to your supervisor.**
- **Review your emergency plan** before work begins, so everyone knows what to do in case of natural gas pipeline contact.



# Utility safety review

- **Identify all power lines and electrical equipment upon arrival at a job site.**  
Recheck the site daily, communicate with your team, and review your emergency plan.
- **Keep yourself and all tools and equipment** (other than cranes or derricks used in construction) **AT LEAST 10 feet away** from all overhead power lines carrying up to 50 kV.
- **Cranes and derricks used in construction may require clearances greater than 10 feet**, and should adhere to encroachment prevention precautions.
- **Always use a dedicated spotter.**
- If a power line contact occurs, **follow proper safety procedures and immediately call 911 and Xcel Energy (or the local electric utility).**
- **Notify the underground utility locator service by dialing 811** or placing an online locate request before you dig. For more information visit [xcelenergy.com/811](https://www.xcelenergy.com/811).
- **Know the warning signs of a natural gas leak**, and review your emergency plan.
- If you contact a natural gas pipeline, **leave the area, avoid spark hazards, and immediately call 911 and Xcel Energy (or the local natural gas utility).**



# Underground utility locator contact information

- To reach your state's underground utility locator service/one-call center, call **811**.
- The required “business day” (excludes weekends and legal holidays) wait time for each state is as follows:
  - Colorado: 3 days
  - Michigan: 3 days
  - Minnesota: 2 days
  - New Mexico: 2 days
  - North Dakota: 3 days
  - South Dakota: 2 days
  - Texas: 2 days
  - Wisconsin: 3 days
- For more information visit [xcelenergy.com/811](https://www.xcelenergy.com/811).



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# Contact information

- In case of emergency, call Xcel Energy:
  - Electrical emergencies: **800.895.1999**
  - Natural gas emergencies: **800.895.2999**
  - **Colorado and Texas only:**
    - Gas Transmission Pipeline Emergencies: **800.698.7811**
- For additional information:
  - Visit Xcel Energy's website: **[xcelenergy.e-smartworkers.com](http://xcelenergy.e-smartworkers.com)**
  - Call Xcel Energy: **800.895.4999**



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