

Natural gas in joint trench

- Be aware that when responding to gas involving a trench, electric cable may also be buried in same trench.
- Do not enter a trench until it is verified that no electricity is there, or if it is, it is de-energized first.

Hazard and risk assessment

- Wear positive pressure self-contained breathing apparatus (SCBA), as well as full structural firefighter protective clothing. Note that structural firefighters' protective clothing only provides limited thermal protection.
- Listen for roaring or hissing sound, but use **caution** as no noise is possible.
- Monitor the atmosphere, using multiple monitors where possible.
 - Action criteria: 0 to 10% of the LEL – use extreme caution.
 - Action criteria: 10% of the LEL or greater – **do not enter building.**
- Monitor for natural gas traveling away from source toward exposures.
- Control ignition sources: smoking, open flames, internal combustion engines and motors.
- Do not operate electrical devices such as switches, fans, etc. Sparks can cause ignition.
- Avoid contacting the pipeline system. A static spark may occur and result in ignition.



Important Emergency Response Information

Dedicated safety phone lines

Safety is our highest priority, and first responders receive top consideration at Xcel Energy's Dispatch Center. To ensure the safety of the community, we have provided unpublished, dedicated 800-numbers to emergency dispatch communications centers in communities we serve. Our 800-numbers enable communications center personnel to directly and quickly contact us when they receive information about an emergency that involves our facilities. From a natural gas leak to a downed power line, your communication dispatch center often is the first step in connecting us to an energy emergency.

Response time

While emergency responders are often the first on the scene, our prompt response to emergency calls helps ensure the safety of those nearby.

When the situation requires immediate action from our first responders, local emergency dispatch communications centers help us by providing accurate information when they initially contact us, such as:

- A complete or closest address or best directions possible to the emergency.
- An accurate description of the energy situation and specifics regarding what the responder anticipates Xcel Energy can do to make the situation safe, such as de-energizing a line, stopping blowing gas, etc.

During extreme conditions (most often storm-related) that cause extensive electrical outages, all available trained Xcel Energy employees perform some level of field inspections. Generally, our response time during such extreme conditions averages approximately four hours; however, it could be up to eight hours or more before an Xcel Energy inspector arrives on the scene.

Guidance for responding to electric and/or gas emergencies

Your safety is very important to us, and we encourage you to follow the guidance provided in this brochure. These guidelines, when followed, help keep you, your co-workers, the public and our employees safe. Just as you have been trained and know your jobs well, our employees go through several years of extensive training, making them qualified to respond safely to electrical or natural gas emergencies.

This information is intended to provide basic guidance for an emergency response. It does not provide detailed information about responding to electric or natural gas emergencies.

For more information, please visit our online training site at <https://Xcel-Energy.RTUEonline.com>. On your first visit, use the "Register" tab and create your login.

Electric emergencies

General safety precautions

Do

- Ensure your dispatch has communicated the electric emergency with Xcel Energy.
- Keep bystanders away.
- Position apparatus **a minimum of 10 feet** away from distribution wires, with greater distances required for higher voltage wires.
- Wait for Xcel Energy to arrive.
- Assume all lines are hot; consider them energized or live, as is anything they are touching. Always stay away!
- Anticipate that **anything** can conduct electricity, including people.
- Expect the electric system to try to re-energize. Our system is designed to keep electricity flowing. It locks out, or stops flow, after a few consecutive tries to rid the system of a problem such as tree limbs blowing into lines, etc. When a problem persists, the system locks out.
- Follow your department's Standard Operating Procedures (SOP) for pulling breakers/electric mains.

Do not:

- Become a victim yourself.
- Remove fallen wires from vehicles, etc.
- Disconnect electrical services.
- Remove electric meters.
- Open transformers or switch cabinet secondary pedestals (green metal boxes).
- Enter substations unescorted.



Downed wires and structure fires

- Always establish a safe clearance for downed lines—a minimum of one full span between two structurally sound poles.
- Position apparatus emergency trucks safely. Watch for downed lines and lines that could fail with potential to hit apparatus.
- Keep aerial equipment a minimum of 10 feet from distribution wires and more for high voltage wires.
- Only properly utility trained and qualified personnel should use rubber gloves, dielectric overshoes and special equipment for handling energized equipment. Pike poles are not the same as insulated and regularly tested utility fiberglass sticks.
- Never pull meters.
- Never cut wires.
- Never cut or remove padlocks from transformer or switch cabinets.

Substations and electric equipment fires

- Never enter into or fight substation, switchyard or generation plant fires. **Wait for utility personnel.**
- As necessary, provide fire suppression to prevent fire from spreading to adjacent areas and facilities. **Look up first for overhead lines before starting suppression.**
 - Transformers can explode.
 - Arcing can kill.
- Maintain clearances from damaged or burning underground utilities, pad-mounted transformers or switch-cabinets. Treat vehicle and pad-mount collisions the same as car-pole collisions. The vehicle's chassis may be energized.

Tactical use of hose streams

- Wait for trained electric utility personnel to de-energize any equipment before any operations begin.
- Avoid using water until you are advised to proceed by electric utility personnel.
- If water is used, however, you must use fog at 30 degrees or wider (100 psi at nozzle) applied from at least 33 to 35 feet or 10 meters.
- Protect exposures and let the fire burn. Monitor the runoff.
- Never use straight streams.
- Never spray energized equipment.

Rescue

- In **car/pole collisions**, if electrical hazards are present (lines down), have victims remain in the car if possible and wait for electric utility personnel.
- If it's possible for the driver to move the vehicle away from fallen lines, first consider if movement will increase risk to area by pulling more lines down.
- Keep others far away from the collision site.
- If victims are free from life-threatening injuries, have them stay in the vehicle and keep others back, including you. Reassure the victims they are safest to stay in the vehicle.
- If victims must exit the vehicle, follow step potential safety procedures. Instruct them to jump clear without touching the vehicle and ground at same time. They must shuffle or hop away to avoid step potential.
- Use protective shields, barriers or alerting techniques to protect firefighters and bystanders from electrical hazards and energized areas.
- Treat **vehicle/pad-mount** collisions the same as car/pole collisions. The vehicle's chassis and surrounding area may be energized. Wait for utility personnel to verify equipment is dead before rescue is attempted.
- Remove vehicle only after equipment is determined de-energized.

Natural gas emergencies

General safety precautions

Do

- Ensure your dispatch has communicated the gas emergency with Xcel Energy.
- Keep bystanders away.
- Position apparatus away from danger, and always upwind from blowing gas.
- Anticipate ignition sources can be everywhere.
- Extinguish open flames.
- Eliminate electrical ignition sources.

Do not:

- Become a victim yourself.
- Position apparatus in front of buildings or place over drains or manhole covers.
- Try to prevent flow of gas using squeeze off jacks or by bending natural gas lines.
- If there is a fire in a hole or trench, do not enter excavation.
- Turn off any valves (with the exception of gas meter valve).
- Assume that shutting off a gas meter negates the source of flowing gas.

Scene control

- Establish an effective and safe perimeter.
- Ensure your dispatch has contacted Xcel Energy.
- Position apparatus safely away from the emergency. Shut off diesel equipment.
- Determine the safest course of action: shelter-in-place or evacuate.
- Evacuate the public a safe distance away, and upwind of blowing gas.
- If a transmission pipeline is involved, or there is an extreme "roar," look for pipeline markers and evacuate larger areas as necessary.
- Coordinate large-scale evacuation with utility (gas distribution and/or transmission pipeline operator).

Natural gas escaping out-of-doors

- Notify utility immediately when gas is not ignited, but is escaping from ground (open pipe, excavation, etc.). This is typically noticeable by smell and/or sight (blowing debris) and sound (whistling to roaring).
- Secure the area by roping off or barricading.
- Extinguish all ignition sources.
- Check surrounding buildings – basements in particular – for gas odor presence.
- Restrict or reroute traffic until Xcel Energy (or local gas company) can bring flow under control.
- Do not attempt to cover the gas line with dirt.
- Do not fill the hole with water.
- Do not attempt to squeeze down the line.
- Do not attempt to shut off underground valves.
- Do not enter regulator stations.

Natural gas burning out-of-doors

- Ensure the gas company has been notified.
- Never attempt to put out fire while gas is escaping; let it burn.
- Clear area, then rope off or barricade danger area.
- Spray surrounding combustibles only if there is danger of ignition.
- Use a dry chemical at base of flame, and wet the surrounding area with fog to prevent re-ignition only if it is necessary to extinguish gas flame before the utility can stop the gas flow.

Natural gas escaping inside building

- Ensure notification to the gas company has been made.
- **Be extremely cautious.** Inside gas releases present one of the greatest risks to emergency responders.
- Approach buildings full of natural gas only if you must. Use extreme caution and a minimum number of personnel.
- If gas is detected throughout building, evacuate occupants.
- Secure surrounding areas.
- Use extreme caution if ventilating a building. With an ignition source, gas will ignite within a narrow range, approximately 4% to 15% gas-to-air mix. Above or below this range, combustion does not occur, but it can pass through this range at any time.
- Determine if gas flow can safely be shut off at the gas meter.
- Prevent re-entry to the affected building until the gas company has secured the leak and determined the building is free of gas.

Natural gas burning inside building

- Ensure the gas company has been notified.
- Incident commander should determine if gas can be shut off inside building or at meter.
- If meter is accessible, it may be shut off with a pipe or crescent wrench.
- Until the gas company can control the gas supply, keep surrounding combustibles wetted with spray stream.
- Rely upon the gas company to help evaluate proper action to avoid seriously interrupting costly commercial or industrial processes.
- Never turn a gas valve located inside a building; leave that for the gas company.

Natural gas in manholes, vaults, sewers

- Ensure the gas company has been notified.
- Seek assistance from the utility to identify the type of gas involved (sewer gas, etc.)
- Do not attempt to extinguish flames if gas ignites.
- Spray burning or combustible materials, if any, around surrounding vault.
- Rope off or barricade safe area around vault.
- Keep bystanders away.
- Extinguish ignition sources.
- If emergency responders **must** open manhole cover, wet manhole cover and rim before removing.
- Check basements of adjoining buildings for any evidence of gas seeping into buildings; monitor if needed.
- Evacuate tenants if needed.