

Excavator safety near underground natural gas pipelines

Use this poster for employee training



Smell Gas. Act Fast.

In a gas emergency, call **911** and **National Grid 24 hours a day, 7 days a week**

Massachusetts: **911** and **1-800-233-5325**
Rhode Island: **911** and **1-800-640-1595**

Help protect natural gas pipelines

- National Grid pipelines deliver natural gas safely and reliably to homes and businesses across New York, Massachusetts and Rhode Island. We regularly inspect these pipelines for corrosion and defects, monitor for leaks and conduct routine maintenance.
- Hitting a natural gas pipeline has serious consequences. Even a tiny gouge, scrape, dent or crease to a gas pipe or its coating may cause a leak that could lead to a catastrophic fire or explosion.
- The greatest risk to gas pipelines is accidental damage during excavation. We need your help to prevent pipeline damage and reduce the risk of dangerous natural gas leaks.

Notify 811, and dig with care

- State law requires you to call 811 or make an online request at least 72 hours before any excavation starts, excluding weekends and legal holidays.
 - This free service will arrange for marking of buried natural gas lines and other utilities so you can work a safe distance away from them.
 - Call **811** or **1-888-DIG-SAFE (344-7233)** | digsafe.com.
- Before you call, pre-mark your proposed dig area with white paint, flags and/or stakes.
- Wait for utilities to locate and mark their lines before you dig.
- Physically locate marked natural gas pipelines by hand digging. If you cannot locate marked pipelines, **STOP** digging and contact National Grid immediately.
- Do not use mechanical excavation equipment within the "tolerance zone," which spans the width of a marked utility plus **18 inches** from each indicated outside edge. Use **ONLY** hand tools or vacuum technology within this safety zone.
- If you are working near an exposed natural gas cast-iron pipe, contact National Grid.



Know what's below.
811 before you dig.



A gas leak may have a distinctive, sulfur-like odor (but not always).* So be alert for other warning signs as well:

- a hissing, whistling or roaring sound
- dirt blowing into the air from a hole in the ground
- continuous bubbling in water
- dead or dying vegetation (in an otherwise moist area) over or near a pipeline
- an exposed pipeline after a fire, flood or other disaster
- a damaged connection to a gas appliance.

*The odor of natural gas comes from a chemical additive called mercaptan. Be aware that some natural gas is not odorized, so some leaks may not be detectable by smell alone. Additionally, chemical or physical processes may strip the odorant from natural gas so that the gas no longer smells. This is known as "odor fade."



If you contact a natural gas pipeline and/or suspect a gas leak, assume there's a danger:

- **Leave equipment; do NOT turn off engines or generators.** Warn others and leave the area quickly.
- **Do NOT use matches, lighters or anything electrical – even a phone.** A spark could ignite leaking gas.
- **Do NOT operate underground pipeline valves or stop the flow of gas.** Leave the excavation open.
- **From a safe location, call 911 and National Grid immediately.** Call even if there is no visible damage to the pipeline. (Excavators are required by law to call 911 if gas is escaping.)
- **Report the incident to your supervisor.**
- **Stay away from the area** until National Grid personnel say it is safe to return.

Watch out around pipeline markers

- High-visibility markers with National Grid's 24-hour emergency phone number indicate the general location of our high-pressure natural gas pipelines.
- If you notice any type of suspicious activity near a pipeline marker or you see a marker has been damaged, call National Grid immediately at the number listed on the marker.
- For security purposes, these markers do not show the exact location, path, depth or number of gas pipelines in the area. In addition, pipelines may not follow a straight course between markers.
- Never use pipeline markers or maps as a substitute for contacting 811 to have all utility lines in your dig area located and marked.



Tear along perforated line.

#11398 97685 NE
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Respond safely to natural gas emergencies

Keep this card handy in your vehicle visor or glove box.

Gas leak signs: A gas leak may have a distinctive, sulfur-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; dead or dying vegetation (in an otherwise moist area) over or near a pipeline; an exposed pipeline after a fire, flood or other disaster; or a damaged connection to a gas appliance.

1. **Leave equipment; do not turn off engines or generators.** Warn others and leave the area quickly.
2. **Do not use matches, lighters or anything electrical – even a phone.** A spark could ignite the gas.
3. **Do not operate underground pipeline valves or stop the flow of gas.** Leave the excavation open.
4. **From a safe location, call 911 and National Grid immediately.** (Excavators are required by law to call 911 if gas is escaping.)
5. **Report the incident to your supervisor.**
6. **Stay away from the area** until National Grid personnel say it is safe to return.

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Call 911 and National Grid if you suspect a gas leak or if you make ANY contact with a natural gas line, even if you just nick the pipeline or damage its coating.

Know what's below.
811 before you dig.

Excavator Safety

Employee training materials on natural gas pipeline safety enclosed

Protect yourself, your crew and the public. Urge your employees to follow the enclosed safety tips when they work around underground natural gas lines.



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Visit ngridssafety.com and connect with us on



Employee training materials on natural gas pipeline safety enclosed

nationalgrid

Dear Excavator:

Excavator pre-digging requirements by Massachusetts and Rhode Island law
Rhode Island law (Chapter 39-1.2) and Massachusetts law (Chapter 82, Section 40) require excavators to **contact Dig Safe®**, the association of registered public utilities, at least **72 hours (excluding weekends and legal holidays) before commencing excavating activity**. National Grid, as a member of Dig Safe, will be notified of your intent to excavate when you contact Dig Safe at either of the following toll-free numbers or website:
811 or 1-888-DIG-SAFE (344-7233) | digsafe.com

National Grid protocol when pipelines are identified within excavation areas

If National Grid gas pipeline facilities are within the described or pre-marked excavation area, the company will mark the location within the required safety zone with yellow paint, flags or other physical means. For larger projects, a National Grid employee or representative may contact you to coordinate scheduling of work as required by state law. Facility depth information cannot be provided because of grade changes that may have occurred after the gas facilities were installed. Facility location marks will not reflect any protrusions, appurtenances, fittings or valves that are inherent to underground pipeline facilities.

Excavation procedures once gas utilities are marked

After such markings are provided, excavating personnel must determine the exact location of all underground facilities using safe and acceptable means. The law prevents powered or mechanized excavation within 18 inches on either side of the indicated outside edge of underground facilities. Any excavation required in this zone should be performed very carefully with hand tools only and without damage to the facility. Damage includes, but is not limited to nicks, dents, cuts, scrapes or gouges to the marker balls, tracer wire, pipe surface or coating; seemingly insignificant damage can lead to a future pipeline failure. Excavators must also exercise reasonable care to support gas pipelines during excavation and backfill activities to avoid pipes being damaged by their own weight or excavation compaction. Excavators should notify National Grid whenever cast-iron gas pipe is exposed or falls within an excavation trench's angle of repose.

Excavator information sessions and safety presentations

Visit digsafe.com and click the "Education" tab to schedule on-site training on the damage prevention process, safe work practices, and an overview of the Dig Safe law.

Thank you.

Sincerely,

Mark Huck

Mark Huck
Damage Prevention
NewEnglandDamagePrevention@nationalgrid.com

Backfill for pipeline safety

- Remove sharp objects, trash, debris, wire and rocks from the trench.
- Backfill a six- (6-) inch radius of padding sand around natural gas pipelines.
- Remove rocks more than three (3) inches in diameter from the padding sand level to grade.
- Use only clean backfill materials – no paving materials, cinders, ash or flowable fill.
- Compact soil in 12-inch lifts up to six (6) inches above the pipe to a density comparable to the surrounding soil.
- Hand tamped around fittings where mechanical compaction cannot be used.
- Do not damage the copper wire that may be running near a plastic natural gas pipeline.
- Use special care to protect cast-iron pipelines from damage.



Please visit nationalgridus.com for more natural gas safety tips. Translations of important safety information and National Grid services are available by choosing the **Select Language** feature at nationalgridus.com.

See "select language" link at nationalgridus.com

Vasá el enlace "selección de idiomas" en nationalgridus.com
Veuillez cliquer sur "sélectionner la langue" sur nationalgridus.com
Vedere il collegamento "selezione lingua" su nationalgridus.com
Ver a ligação "selecionar língua" em nationalgridus.com
Click the link "Выбор языка" на сайте nationalgridus.com
Xem liên kết "lựa chọn ngôn ngữ" tại nationalgridus.com

This is an important notice. Please have it translated.

Este é um aviso importante. Questa mensagem tradurrà. Este es un aviso importante. Srvase mandarlo traduchit. Avis important. Veuillez traduire immédiatement.
Questa è un'informazione importante, si prega di tradurla.
ĐÂY LÀ MỘT BÀI THÔNG BÁO QUAN TRỌNG
XIN VUI LÒNG CHO DỊCH LẠI THÔNG BÁO NÀY
Это очень важное сообщение. Пожалуйста, попросите, чтобы Вам его перевели.

Have you notified 811 yet?

Call 811 or make an online request before you start digging. It's the law!

Five steps for safe excavation

- Plan your job and pre-mark your dig area with white paint, flags and/or stakes.
- Call 811 or make an online dig ticket request before any excavation starts: Dial **811** or **1-888-DIG-SAFE (344-7233) | digsafe.com**
- Wait the required time for utilities to locate and mark their lines: **At least 72 hours**, excluding weekends and legal holidays.
- Respect the marks and maintain them while digging.
- Dig with care and follow hand-excavating rules.

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American Public Works Association color code for locator marks



- Electric power lines
- Gas, oil or steam
- Communications lines, cables or conduit
- Temporary survey markings
- Potable water
- Reclaimed water, irrigation and slurry lines
- Proposed excavation
- Sewer and drain lines

If you find an unmarked line, stop digging and call 811 immediately.