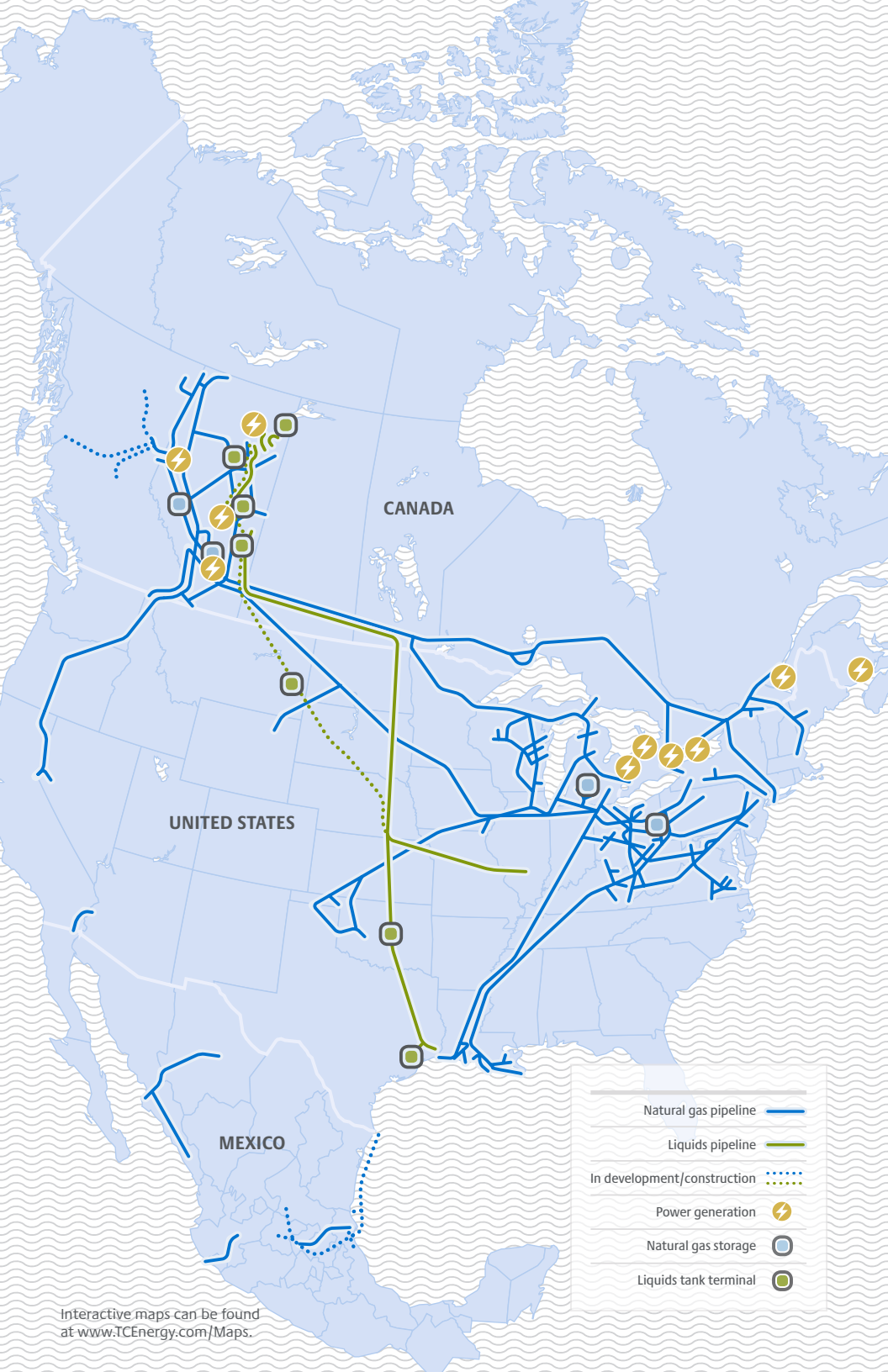


Excavation safety.

Important safety information – natural gas pipelines.
Please retain this brochure for your information.

[TCEnergy.com](https://www.tceenergy.com)





CANADA

UNITED STATES

MEXICO

- Natural gas pipeline ————
- Liquids pipeline ————
- In development/construction ······
- Power generation ⚡
- Natural gas storage ◻
- Liquids tank terminal ●

Interactive maps can be found at www.TCEnergy.com/Maps.

Our natural gas pipelines

TC Energy owns and operates pipelines and other associated natural gas facilities including meter stations and compressor stations.

Pipelines

Pipelines are the safest and most efficient method to transport energy to market.

Our pipelines are built using industry best practices, which include using the highest quality materials during construction and implementing routine quality inspections and monitoring the pipeline 24 hours per day from TC Energy's Operations Control Centre.

Meter stations

Meter stations are facilities necessary within a pipeline system that measure the volume of natural gas transported by a pipeline. Natural gas is measured at all locations where it either enters the pipeline (receipt station) or leaves the pipeline (sales station).

Compressor stations

As natural gas flows along a pipeline, it slows due to friction between it and the pipeline. This results in a loss of pressure along the pipeline. In order to make the gas flow continuously at the desired flow rate, it is re-pressurized at suitable locations along the pipeline. This is done by mechanically compressing the gas at sites connected to the pipeline known as compressor stations. The location and quantity of compressor stations required in a pipeline system is dependent on a number of factors, including the operating pressure of the pipeline, the diameter of the pipe used, elevation changes along the pipeline route and the desired volume of gas to be delivered.

Why are you receiving this brochure?

This brochure contains important safety information about natural gas pipelines. TC Energy (formerly TransCanada) has a regulatory obligation to communicate this information to stakeholders that live and work near pipelines. To help you understand the role you play in contributing to pipeline safety, we ask that you review the information provided. If you would like more information or have questions, please contact us at public_awareness@transcanada.com or call **1-855-458-6715**.

Please retain this brochure for your information.

En cas d'urgence liée à un oléoduc, appelez le **1-888-982-7222**. Si vous souhaitez recevoir des informations sur la sécurité des oléoducs en français, veuillez envoyer un courriel à l'adresse public_awareness@transcanada.com ou appelez **1-855-458-6715**.

About us

TC Energy, formerly TransCanada, is a leading North American energy infrastructure company with an industry-leading safety record. For more than 65 years, we have been building, operating, and maintaining pipeline systems in a responsible and reliable way to meet the energy needs of North America.

Maintaining pipeline safety

- TC Energy conducts a rigorous pipeline maintenance program to ensure the integrity and safety of our systems. This includes but is not limited to ground surveys, cathodic protection, hydrostatic testing, investigative digs, in-line inspections, aerial patrols, and, if necessary, ground patrols.
- TC Energy meets or exceeds all applicable federal and provincial safety standards.
- The pipeline facilities are constantly monitored to ensure safety and integrity of the entire system 24/7.
- TC Energy patrols pipeline rights-of-way to identify any unsafe or unauthorized activity within the rights-of-way which could damage the pipeline.

Pipeline location

- Most pipelines are buried underground in an area of cleared land often referred to as the “right-of-way”. Markers are used to indicate the approximate location of the pipeline, as well as important information such as the pipeline operator, the product shipped in the pipeline, and emergency contact information.
- Only a TC Energy representative can determine the location and depth of the pipeline. Pipelines may not follow a straight course between marker signs, so please ensure you request a locate prior to excavating.
- If you observe any unusual or suspicious activities near a pipeline, please immediately report the issue to law enforcement or the pipeline company.



What is the prescribed area?

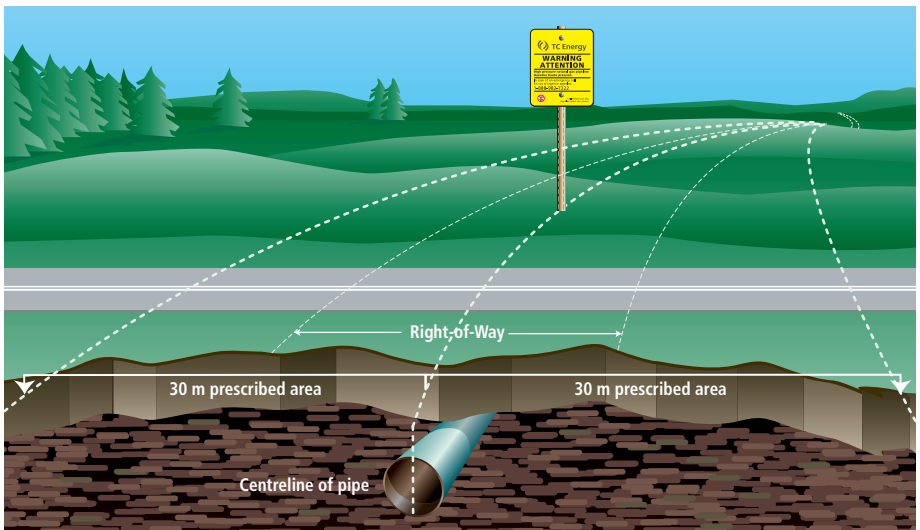
The prescribed area extends 30 meters on either side of the pipeline centerline. Excavation or ground disturbance within this zone requires written consent except for certain types of agricultural activities. See the “Agriculture Safety” section or contact TC Energy for more information on permissible agriculture activities.

The existence of the prescribed area does not necessarily mean development of the land cannot occur within the prescribed area, so contact TC Energy early to discuss your plans.

Approvals for working around TC Energy’s facilities

To ensure our pipelines and facilities operate safely, written consent from TC Energy must be obtained before any of the following:

- Constructing or installing a facility across, on, along or under a TC Energy pipeline right-of-way.
- Conducting ground disturbance (excavation or digging) on or within the prescribed area (30 meters or 100 feet from the centerline of the pipeline).
- Driving a vehicle, mobile equipment or machinery across a TC Energy pipeline right-of-way outside the traveled portion of a highway or public road.
- Using any explosives within 300 meters or 1,000 feet of TC Energy’s pipeline right-of-way.
- Use of the prescribed area for storage purposes.



Steps for approvals:

- While planning your work, **apply for written consent** using TC Energy's on-line application form (writtenconsent.transcanada.com or call 1-877-872-5177) with at least 10 business days' notice. Information such as the expected construction date, location of work, and details of the proposed activity will need to be provided. Do not start the work until written consent has been granted.
- Prior to starting your work, **make a locate request** either on-line (www.clickbeforeyoudig.com) or via phone (see the back of this booklet) at least three to five business days in advance. The One-Call Centre will notify owners of buried utilities in your area, who will send representatives to mark these facilities with flags, paint or other marks, helping you avoid damaging them. ***Note: It is important to mark the proposed work area with white flags or paint to ensure the company representatives are clear on where you plan to work and can mark the underground utilities accordingly.***

Agriculture safety

TC Energy wants to ensure the safety of anyone living or working near our facilities, and that includes Canada's active farming community.

Normal farming practices can be completed without notice to TC Energy or contacting the One-Call Centre, but ground disturbance and some other activities can pose a risk to underground utilities and may require written consent.

The activities listed below require written consent from TC Energy:

- Ground leveling
- Sludge spreading
- Clearing/brushing/grubbing
- Reducing or adding soil cover
- Trenching
- Earth moving
- Drainage ditch clean out
- Drain tile installation
- Terracing
- Fencing/landscaping
- Excavation
- Augering
- Ditching
- Stockpiling/storage/parking
- Blasting activities
- Building construction
- Controlled burning
- Asphalt milling and grinding

Consequences of unsafe digging



Interrupted services such as electricity, gas and water.
In 2017, a total of 11,383 underground infrastructure damages were reported*.



Fines and repair costs to fix the underground utility line(s).
National Energy Board Administrative Monetary Penalties:

- For individuals the daily penalty could range from \$250 to a maximum of \$25,000 per violation.
- For companies the daily penalty could range from \$1,000 to a maximum of \$100,000 per violation.

Visit www.neb.gc.ca for more information.

Provincial bodies also have the ability to fine individuals or companies.



Risk of serious injuries and death.

Since 2003, Ontario has had seven fatal accidents due to damaged underground infrastructures by excavation work and British Columbia had two fatal accidents and six seriously injured workers since 2008**.

*2018, Canadian Common Ground Alliance, DIRT Report.

**2015, CIRANO, Socio-Economic Cost Assessment for Damages to Underground Infrastructure.

Pipeline incidents

A pipeline incident could involve an uncontrolled or unplanned release of natural gas from the pipeline system. TC Energy's state-of-the-art leak detection systems, elevated safety features and specially trained staff ensure that leaks are quickly identified and addressed.

In the unlikely event an incident should occur, TC Energy will immediately investigate and respond by shutting down the pipeline (if necessary) and dispatching emergency personnel to the location of the incident. Valves spaced at intervals along all TC Energy pipelines will be shut off allowing the natural gas to be quickly and effectively isolated.

Trained crews dispatched to the site will work to further isolate the area and coordinate a response with local emergency services.

TC Energy will not restart the pipeline until the issue has been addressed and it is safe to do so.

TC Energy's policies and practices for emergency response planning go above and beyond the standard regulatory requirements for emergency response.

Safety in the community

- Safety is a core value at TC Energy. We make safety – for ourselves, each other, our contractors and for members of our communities – an integral part of the way we work. TC Energy's operations extend across North America with established offices in key communities. Each region is fully staffed with qualified employees trained in pipeline safety and emergency response to ensure the safe and efficient operation of the facilities in the area.
- We view the communities in which we operate as emergency response partners. We work collaboratively with these stakeholders on a continuous basis, inviting them to participate in exercises and training.
- We work with emergency response officials to ensure everyone is familiar with local operations and is ready to respond in the event of an incident.



Warning sign



Warning sign



Vent marker



Aerial marker

Pipeline markers

- Pipeline marker signs contain important information, including the owner of the pipeline, the product shipped in the pipeline and emergency contact numbers.
- TC Energy uses a variety of markers and signs along rights-of-way to alert people to the general location of its pipelines. Markers are typically placed where the pipeline intersects roads, railroads, rivers, fence lines and in heavily congested areas.
- **BE AWARE:** Pipeline markers will not designate the exact location, depth or number of pipelines in the area. Contact your local One-Call Centre and TC Energy and other utility companies will send a representative to the proposed excavation site to mark buried utilities at no cost to you.
- It is against the law to willfully and knowingly deface, damage, remove or destroy any pipeline sign. If these signs are missing, damaged or otherwise unreadable, please contact TC Energy to replace them.

What to do if you strike a pipeline

A “strike” is any unauthorized contact with a pipeline and can include mechanical equipment like a backhoe or hand tools, such as a shovel. Whether or not the pipe appears to be damaged, if you strike a pipeline, it is important that you follow these steps:

1. Stop all excavation and construction. Shut off all machinery and move away from the area on foot – warn others to do the same.
2. Do not attempt to repair the pipe or operate any valves.
3. Call ‘911’ as soon as you are in a safe location. Describe the situation and inform the operator of any injuries, leaking product or fire.
4. Call TC Energy’s emergency number at **1-888-982-7222** and explain the incident. This number is available on all pipeline marker signs.
5. Do not continue your project until authorized by a TC Energy representative.

The safety of the surrounding population dramatically decreases when a pipeline is damaged. Contact TC Energy as soon as possible so we can make any necessary repairs.

Being a partner in pipeline safety

Although a pipeline leak is rare, it is important to know how to recognize the signs. Use your senses of smell, sight and hearing to detect a potential pipeline leak.

What you may smell

- Transmission lines that transport natural gas across Canada are rarely odourized, but may have a slight hydrocarbon smell. Distribution lines that transport natural gas to homes and businesses are odourized and could smell skunk-like, similar to rotten eggs, or a burnt match.

What you may see

- Dead or dying vegetation on or near a pipeline in a normally green area.
- Water bubbling or blowing into the air at a pond, creek or river.
- Dirt being blown or appearing thrown into the air.
- An accumulation of ice or frost over the pipeline (in the summer).
- Low-lying, dense, white vapour cloud.

What you may hear

- A hissing, roaring or bubbling sound.

If you suspect a leak

If you witness any of the typical signs listed, or any other unusual sights, sounds or smells near a pipeline location, it is important that you follow these steps:

1. **Leave** the area immediately on foot – do not use motor vehicles or any equipment that could be a potential ignition source.
2. **Move** to a safe location, call '911'.
3. **Call** TC Energy's emergency number: **1-888-982-7222**.
This number can be found on all pipeline marker signs.
4. **Warn** others to stay away.

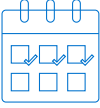


Dig with C.A.R.E.



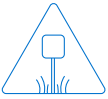
Click or call before you dig

Visit www.clickbeforeyoudig.com or call your local One-Call Centre.



Allow required time for marking

Three business days across Canada (with the exception of five business days in Ontario).



Respect the marks

Lines are marked by flags, paint or other markers (normally yellow for pipelines).



Excavate carefully

Hand dig to determine exact locations of pipelines. A TC Energy representative must be present. All digging must take place during the time allotted by the TC Energy representative.

Standardized colour code

When you request a locate, coloured flags and/or paint are used to mark the location and type of underground utility.

Proposed excavation

Temporary survey markings

Electric power lines, cables, conduit and lighting cables

Gas, oil, steam, petroleum or gaseous materials

Communication, alarm or signal lines, cables or conduit

Potable water

Reclaimed water, irrigation and slurry lines

Sewers and drain lines

Important contact information

Canadian One-Call centres

British Columbia	1-800-474-6886
Alberta	1-800-242-3447
Saskatchewan	1-866-828-4888
Manitoba	1-800-940-3447
Ontario	1-800-400-2255
Quebec	1-800-663-9228

www.clickbeforeyoudig.com

Mobile phone apps

Saskatchewan	Sask1st Call
Quebec	Info-Excavation

Emergency 1-888-982-7222

General inquiries

Phone	1-855-458-6715
Email	public_awareness@transcanada.com

Landowner inquiries

Phone	1-866-372-1601
Email	cdn_landowner_help@transcanada.com

Applying for written consent

Online	writtenconsent.transcanada.com
Phone	1-877-872-5177

Crossings inquiries

Email	crossings@transcanada.com
Quebec email	quebec_crossings@transcanada.com

The majority of TC Energy's pipelines are regulated by the National Energy Board in Canada, with some pipelines regulated provincially. For more information on NEB-regulated pipelines, visit www.neb-one.gc.ca.

