

A Conversation with Enbridge Gas: Your Community Partner

**Eliminating 3rd Party Damages & The Future of Energy:
Working together in a low-carbon energy future**

What we do



Enbridge is North America's largest energy infrastructure company



Liquids Pipelines

- ~27,500 km/17,000 mi. of pipe
- Moving 3 million barrels/day

25%

of crude oil produced
in North America



Natural Gas Pipelines

- ~38,375 km/23,850 mi. of pipe
- Moving 18 Bcf/day

20%

of the natural gas
consumed in the U.S.



Natural Gas Utilities

- 3.8 million retail customers
- Serving 670+ communities

75%

of Ontario residents'
energy needs delivered



Renewable Power

- 30+ renewable power facilities
- 2,075 MW generating capacity

940,000

homes powered
by our assets

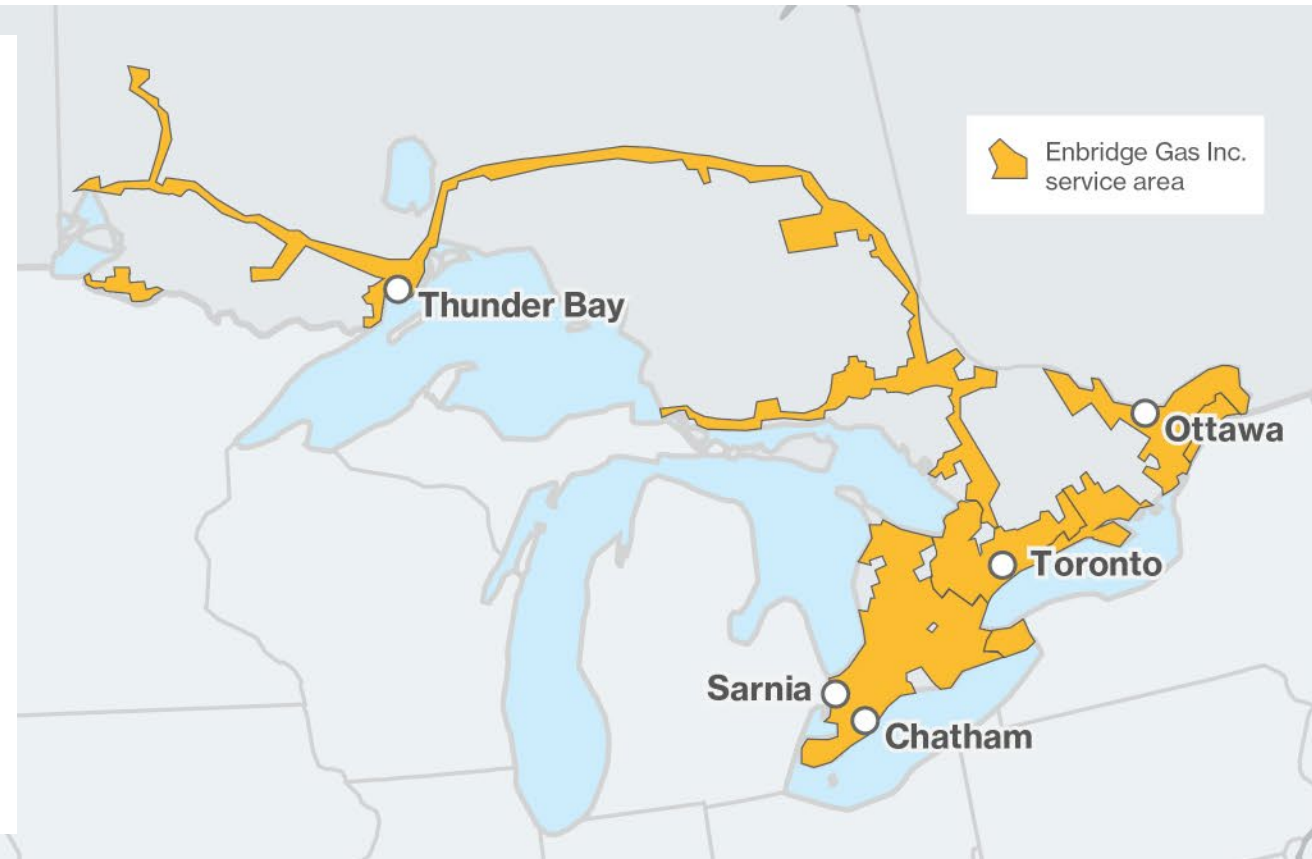
Enbridge Gas Inc.



North America's largest natural gas storage, transmission and distribution company

We deliver the energy that enhances people's quality of life.

- **Values**
Safety, Integrity, Respect, Inclusion.
- **Experience**
170+ years of experience in safe and reliable service.
- **Distribution Business**
3.8M customers, heating >75% of Ontario homes.
- **Dawn Storage Hub**
Canada's largest integrated underground storage facility and one of the top natural gas trading hubs in North America.
- **Advancing Innovative Low-Carbon Solutions**
Conservation, cleaner technologies for heat/transportation (CNG, geothermal), green fuels (RNG, hydrogen).



Safety is our #1 priority



We invested

\$2.9B

2013 – 2020 to maintain
the integrity of our system

We performed

250

pipeline integrity
inspections in 2019 – 2020

We monitor our lines

24-7-365

with people and computerized
leak detection systems

We held

41

emergency exercises
drills in 2019 – 2020



Above all else, we are always working to ensure the safety of our people, neighbours and the environment

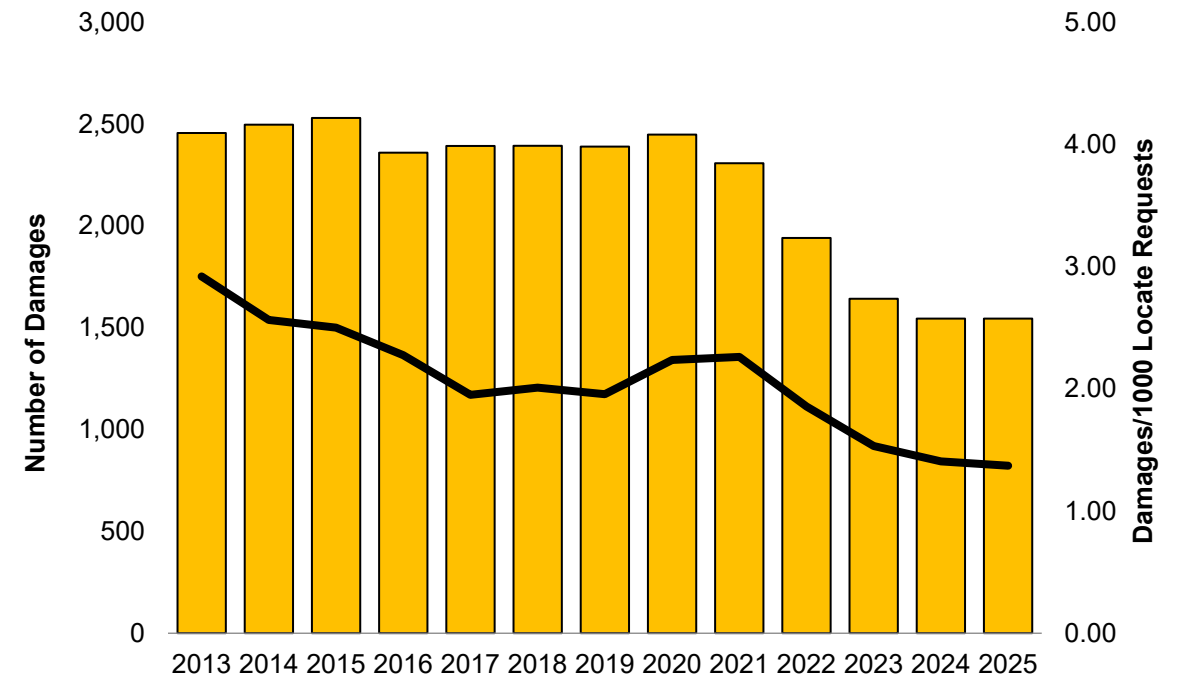
Damage Reduction Strategy

Distribution Protection

Background



- EGI encounters ~2,500 third party damages annually
- Strategy is to significantly reduce annual total damages by 2025
 - Targeting a reduction of 50%
- Metrics focused on reducing annual number of damages and risk categories (Operations, Environment, and Financial)
- Strategy Focus:
 - **Contractors** – Influence and reinforce safe behaviors for how to excavate near GDS infrastructure
 - **Homeowners** – Create awareness and provide education about locates and excavate near GDS infrastructure
 - **Technology** – Utilize analytics and emerging technologies to help Damage Prevention more efficiently execute in-field activities and effectively increase proactive efforts



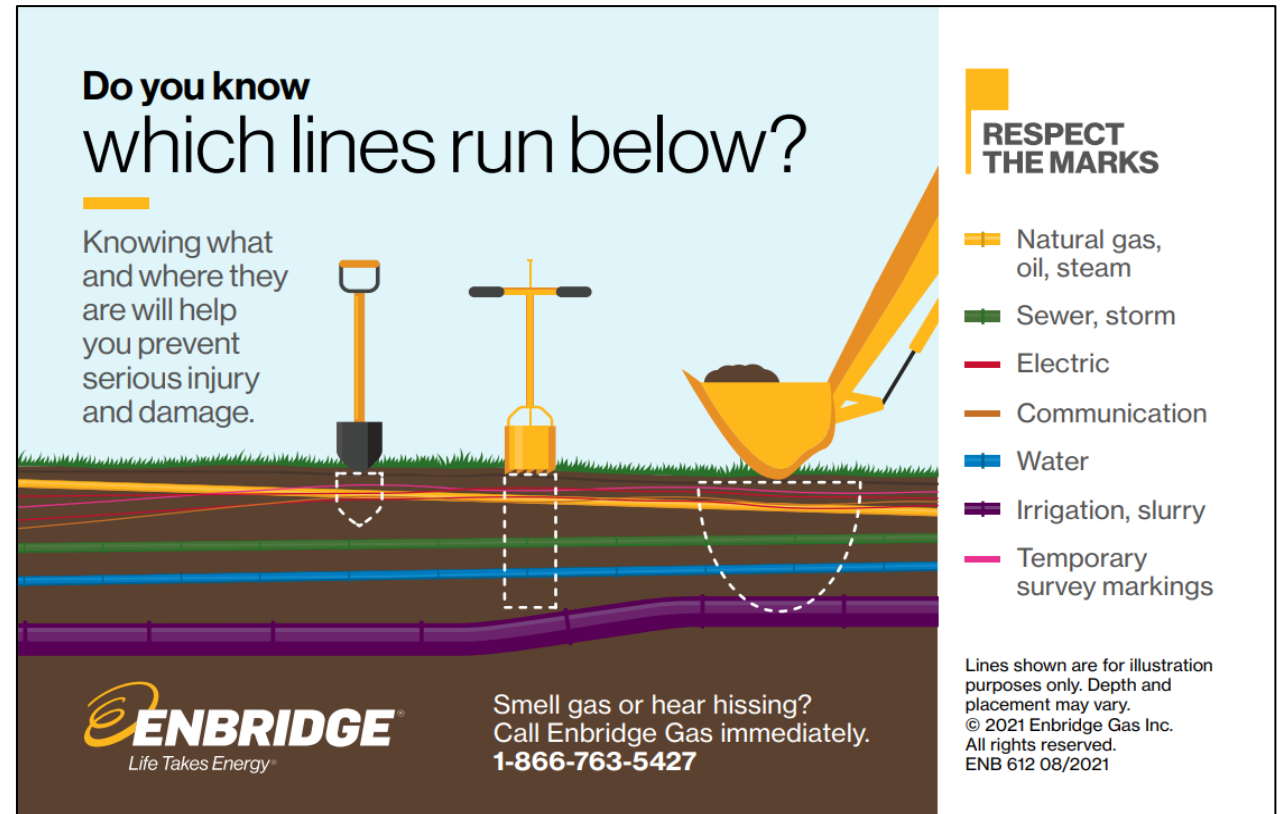
Initiative Updates

Tier I Initiatives	Description
Artificial Intelligence + Higher Risk Excavations	Implement AI software to target field resources to high-risk excavations for proactive site visits involving; education, locate accuracy QA, and promoting safe work practices.
Pipeline Patrol Technologies	Implement new pipeline patrol methods and systems to; provide real time alerts, improve unit times, and improve resource efficiency/ effectiveness.
Online Safety Portal	External website enhancements to improve: <ul style="list-style-type: none"> Public accessibility of safety ground disturbance info Locate conflict clearance processing
Enhanced Public Awareness	Increased use of digital media targeted towards reducing hits with a focus on certain regional centers and audiences.
Dedicated Locator	Promote the use and benefits of the dedicated locator model to targeted industry partners.

Tier II Initiatives	Description
Excavator Recognition	Recognition for safe excavation practices to excavators with zero damages and 500+ locates annually
Municipal Relations	Target municipalities where contractors completing municipal works are the bulk of damages to emphasize the public impacts of damages and develop collaborative solutions.
Homeowner Outreach	Partner with builders and realtors (companies and associations) to promote and distribute materials Call Before You Dig messaging to home buyers with emphasis on education of legal requirements and consequences.
Home Insurance Public Messaging	Partner with home insurance companies and associations/ groups to promote and distribute materials Call Before You Dig messaging to homeowners with emphasis on education of legal requirements and consequences.
Meter Stickers	Apply Call Before You Dig stickers to residential meter sets to remind homeowners and small contractors to obtain locates prior to excavation.

Enhanced Public Awareness + Online Safety Portal

- Three [Enbridgegas.com](https://enbridgegas.com) webpages
 - [Business to customer/ homeowner](#)
 - [Business to professional excavator/ contractor](#)
 - [Working near vital natural gas pipelines](#)
- Examples of content included
 - Locate request and ground disturbance step-by-steps
 - FAQ content + brochure
 - Checklists
 - Infographics
- Contractor safety video with partners developed
- Items in development:
 - Tool-box talk safety sheets
 - “How to” video series
 - Traditional and digital/ social media ads



Contractor work site card

Excavator Recognition

- Certificate of recognition for safe excavation practices for excavators with zero damages and 500+ locates within a calendar year
- Designed to:
 - Recognize success as a safe excavator
 - Be used as differentiation factor in bidding
 - Promote an industry standard of behavior
- 104 excavators were recognized for 2020



Meter Stickers

- Being applied to meters
 - Two sizes: 2" x 2" and 3" x 3"
- Designed to be a last layer of defense to draw attention to ordering locates
- ~190,000 stickers to be rolled out by end of 2021



Know What's Below




80%
of damages
cause a service
disruption

12,000
damages were
voluntarily
reported across
Canada in 2016

Each year,
damage to
underground
infrastructure
costs Canadians
\$1 billion

**KNOW WHAT'S
BELOW.**
ClickBeforeYouDig.com

 **CCGA**
Canadian Common Ground Alliance

CanadianCGA.com
@CanadianCGA @DigSafeCanada
#DigSafe #SupportS229

Preparing for the energy future

- We are committed to supporting North America's energy transition by:
 - modernizing our infrastructure.
 - investing in innovation and cleaner energy solutions.
- Enbridge is developing cutting-edge, innovative solutions to prepare for the energy transition.



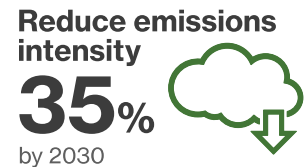
Enbridge is ensuring we will meet the growing energy needs of the future while reducing emissions

Enbridge's Sustainability Goals

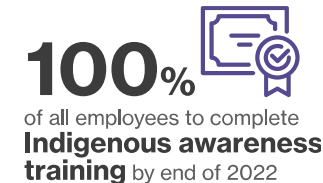
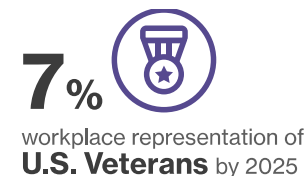


Enbridge's commitment to strong ESG practices and performance has long been core to how we do business. Our new commitments reinforce our priorities in the areas of GHG emissions, diversity and inclusion and safety. We're also increasing transparency and accountability and linking ESG to incentive compensation to achieve results.

Environment



Social



Governance

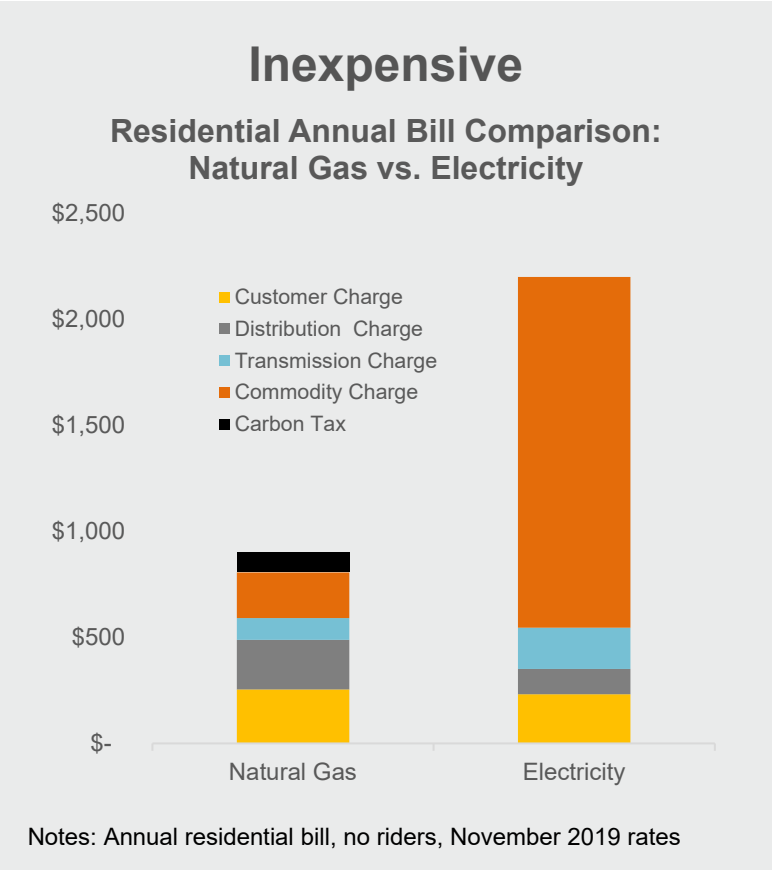
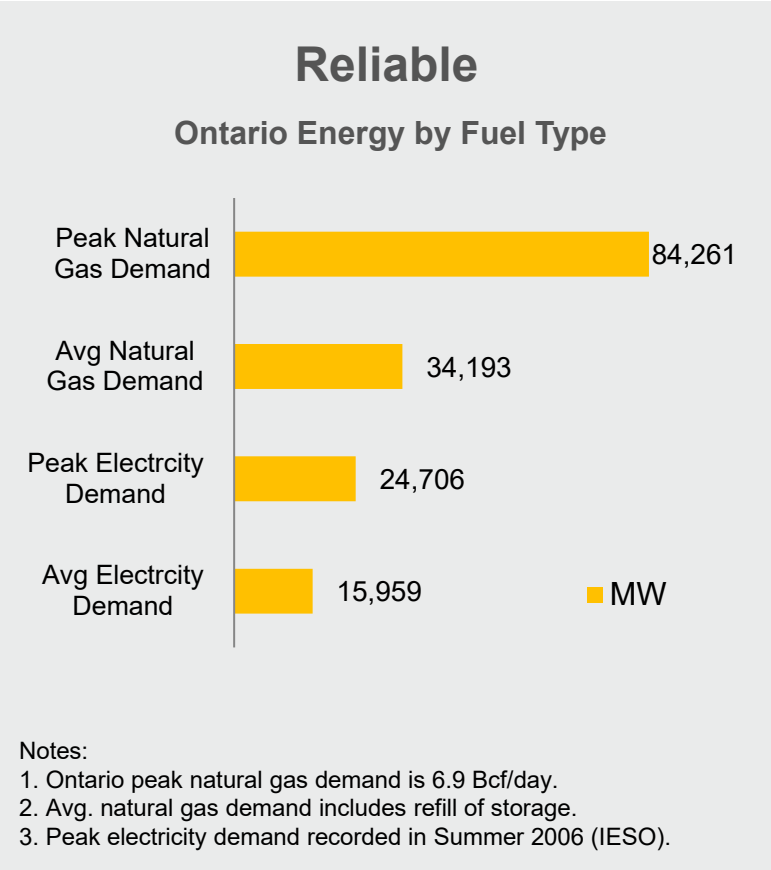
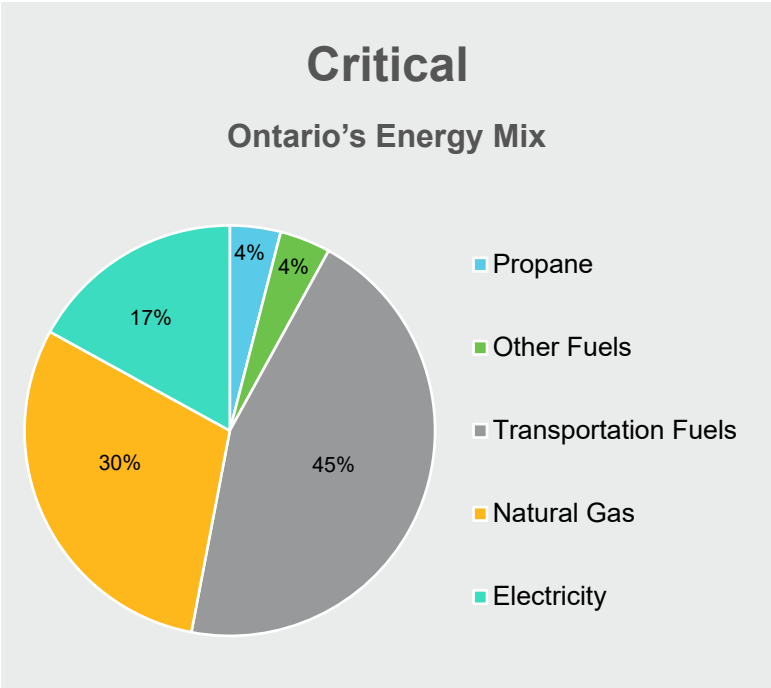


*All percentages or specific goals regarding inclusion, diversity, equity and accessibility are aspirational goals, which we intend to achieve in a manner compliant with state, local, provincial and federal law, including, but not limited to, U.S. federal regulations and Equal Employment Opportunity Commission, Department of Labor and Office of Federal Contract Programs guidance.

The energy landscape in Ontario



Natural gas provides low cost, critical and reliable energy



Ontario's energy system reality
Electrifying Ontario's residential heating would require a \$30B investment in Ontario's electric distribution infrastructure.**

* Environmental Commissioner's Annual Energy Conservation Report 2016-2017 (Volume 2) ** Enbridge's 2017 Ontario LTEP Submission.

A sustainable pathway to emission reductions



Reduce energy needs



Conservation programs for homes and businesses

Reduce fuel use

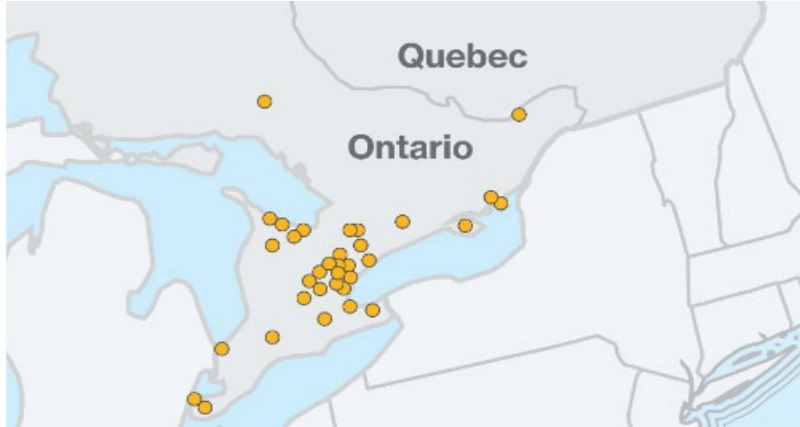


Cleaner technologies for heat and transportation, such as CNG and geothermal

Green energy



Green fuels such as carbon-neutral renewable natural gas and hydrogen Power-to-Gas



Towards a lower-carbon future

Renewable Natural Gas

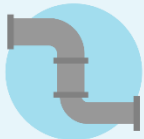
Unlike fossil fuels, RNG is created from:



Food processing organic waste



Agricultural waste, such as leftover crops and animal manure



Bio-solids from wastewater treatment plants



Landfills

①

Waste recovery

Organic waste, such as wastewater treatment sludge, food waste or manure is delivered to a biodigester.

②

Anaerobic digestion

The biodigester breaks down the organic waste, creating biogas. The byproduct of anaerobic digestion, digestate, can be converted into fertilizers that return nutrients back to the soil.

③

Upgrading

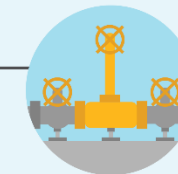
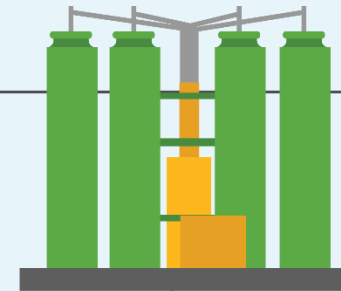
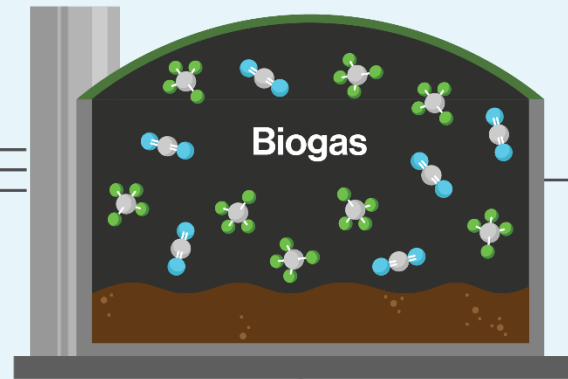
- The biogas is cleaned to meet gas quality specifications.
- Landfill gas is captured and sent directly for upgrading.

④

Added to system

The resulting RNG is added to the existing natural gas infrastructure to be sold and distributed to customers—either directly into the pipeline or to fuel the producer's own needs.

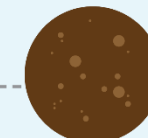
If we harness only **10%** of Canada's potential, RNG can help heat up to **one million homes for one year.***



Homes and businesses



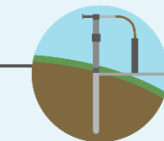
Fuel fleets



Byproduct / Digestate



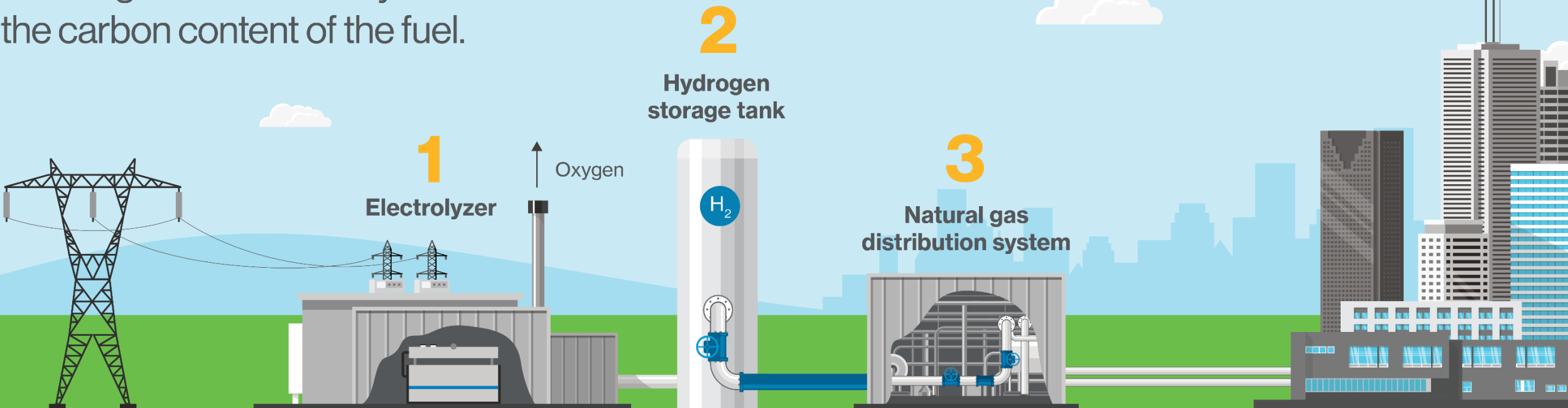
Fertilize soil



Landfill gas is captured

Enbridge Invests in Power to Gas

Future state: Blending hydrogen into the natural gas distribution system to offset the carbon content of the fuel.



- 1

Since electricity can't be stored, when there is a surplus, an electrolyzer can take the electricity and use it to split water into hydrogen and oxygen.
-
- 2

The hydrogen that is produced is then stored.
-
- 3

Instead of converting the hydrogen back into electricity, the hydrogen may be blended into the natural gas distribution system at a pre-determined percentage, to reduce the carbon content of the gas.
-
- 4

A lower carbon gas is delivered to customers.

Q&A

Contact:

Michael Abate- Specialist, Distribution Protection: Michael.Abate@enbridge.com

Keir Johnston- Municipal Affairs & Stakeholder Relations: Keir.Johnston@enbridge.com