

# City of London and Enbridge Gas

## Working together on low carbon solutions

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Dec. 1, 2021

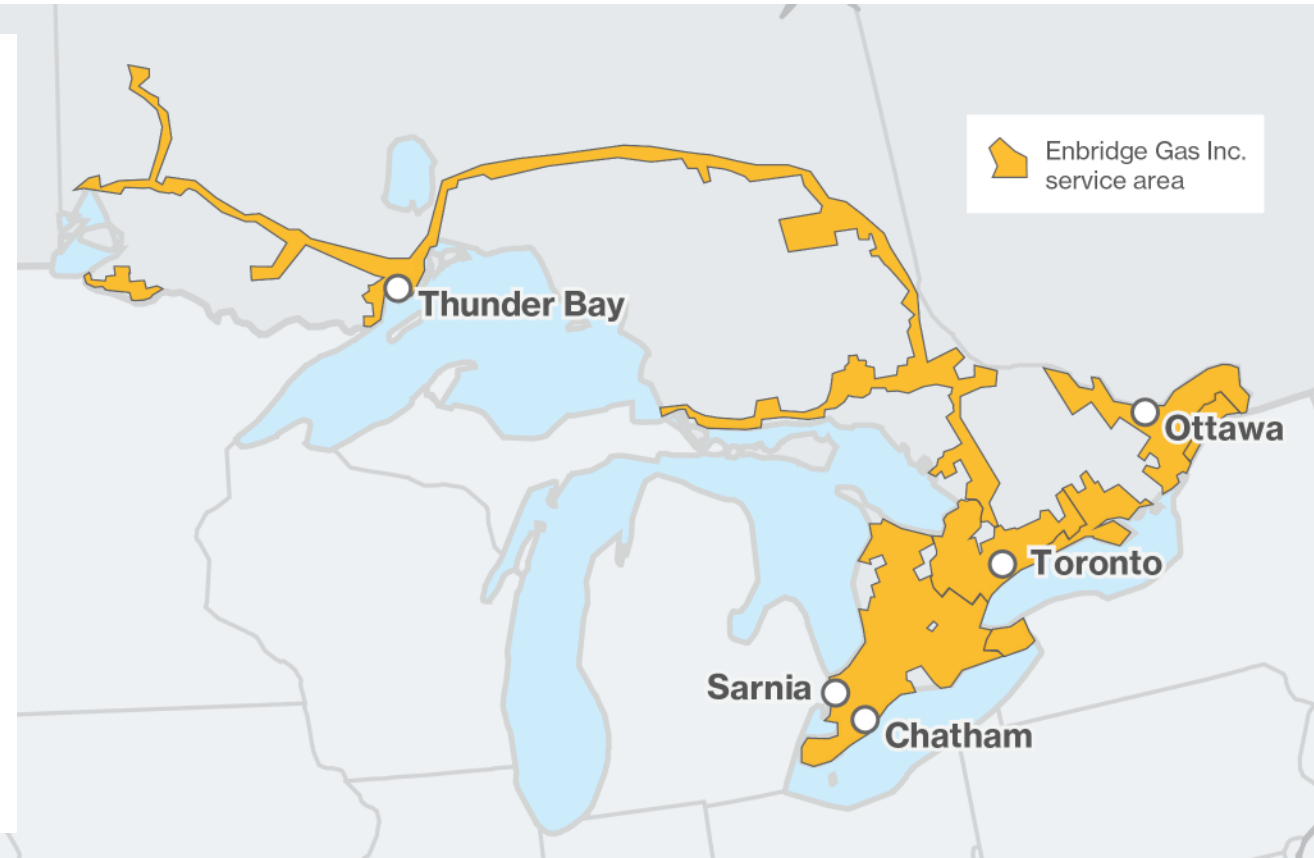
# Enbridge Gas Inc.



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

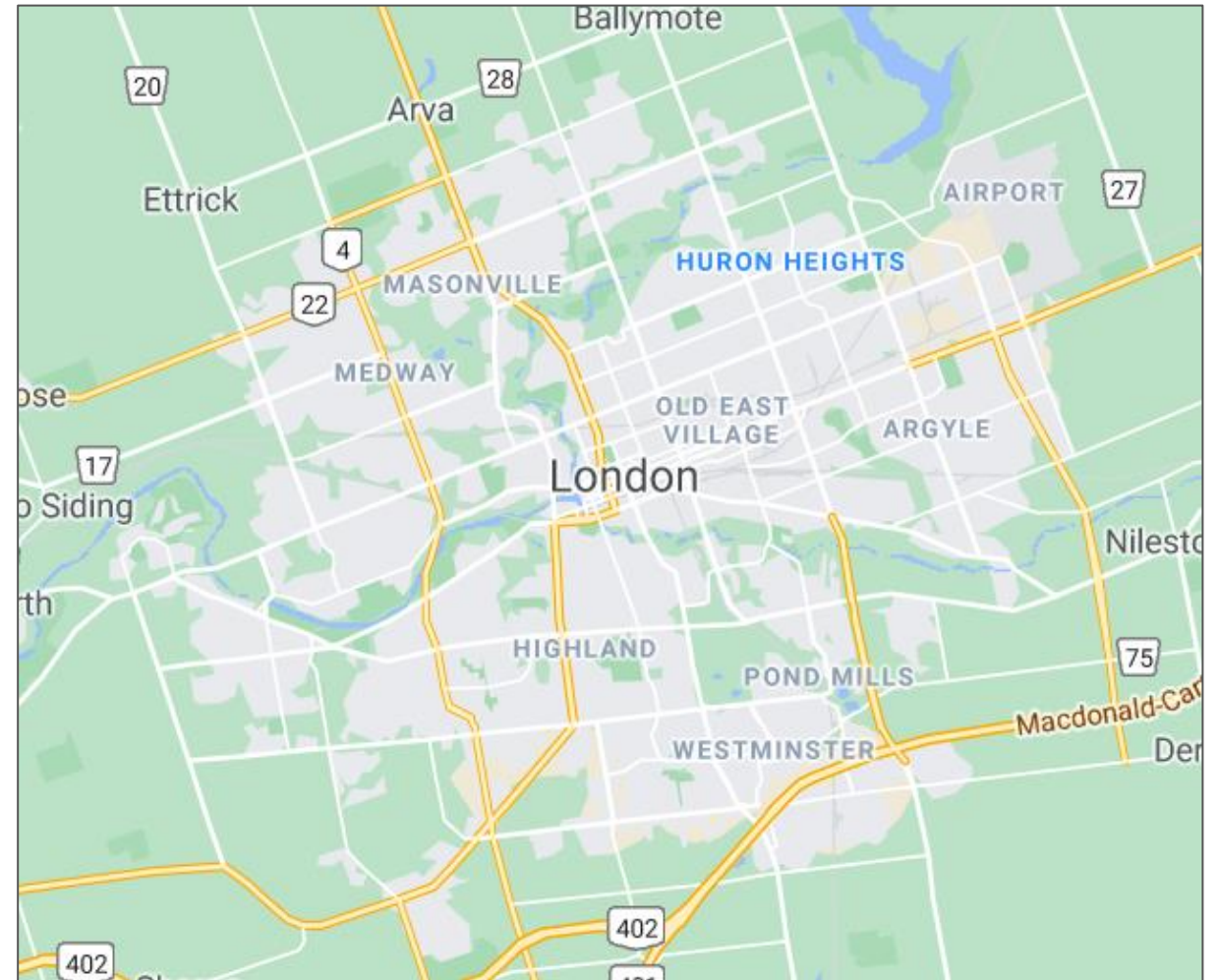
**We deliver the energy that enhances people's quality of life.**

- **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).



# Our London operations (2020 statistics)

- 129,905 customers
  - Residential: 119,206
  - Commercial: 10,418
  - Seasonal agricultural: 1
  - Industrial: 280
- Employees: ~180



# Recent announcements: what do they mean?



Enbridge Inc. has announced a goal of net-zero in our operations by 2050

## **Enbridge Sets New Environmental, Social and Governance Goals for the Future**

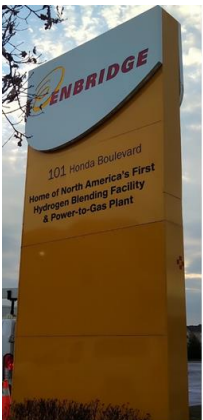
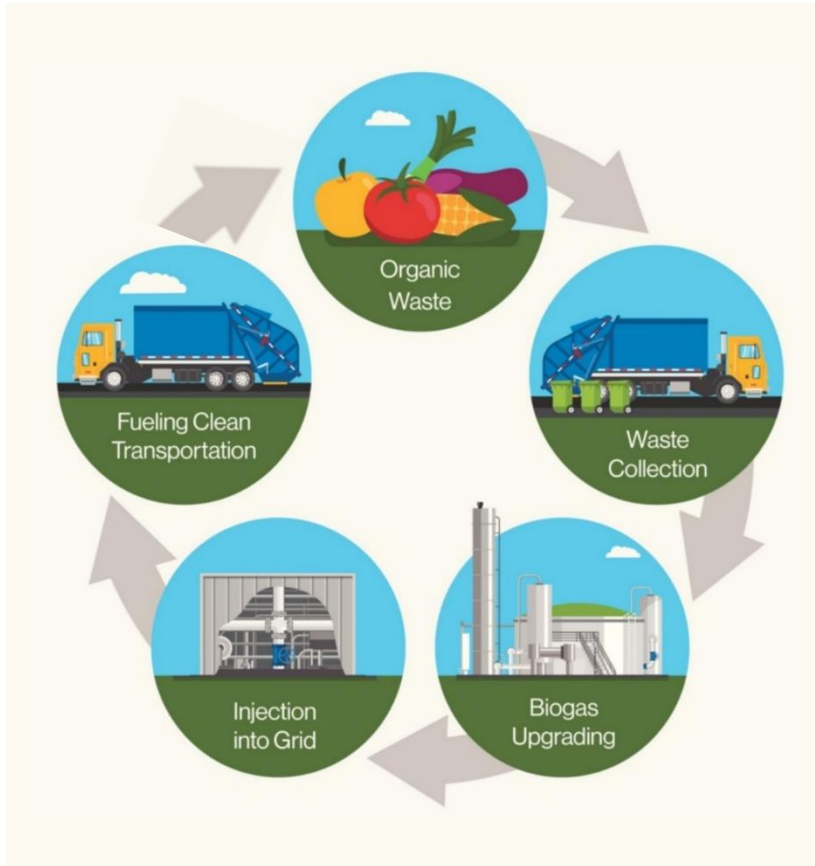
November 6, 2020

- Net zero target by 2050; 35% reduction in greenhouse gas emissions intensity by 2030
- Accelerated diversity representation in the workforce
- Incentive compensation linked to progress on ESG targets and goals

CALGARY, AB, Nov. 6, 2020 /CNW/ - Enbridge Inc. (TSX: ENB) (NYSE: ENB) (Enbridge or the Company) today announced expanded environmental, social and governance (ESG) goals and targets<sup>1</sup> related to greenhouse gas (GHG) emissions reduction and diversity and inclusion as well as increasing transparency and accountability of our ESG priorities and results. Setting goals in areas core to our business and stakeholders is just one of the ways Enbridge is further integrating ESG into strategy, operations and decision-making.

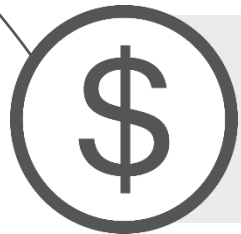
- Net zero target in our operations by 2050
- 35% reduction in greenhouse gas emissions intensity in our operations by 2030
- Incentive compensation linked to progress on ESG targets and goals
- What does that mean for Enbridge Gas?





Towards a low-carbon future

# A sustainable pathway to emission reductions



Conservation



Cleaner technologies for heat



Cleaner technologies for transport



Green fuels




# A greener future: conservation (DSM)

- Demand Side Management (DSM) refers to mechanisms such as incentives and education programs designed to modify consumer demand and incent the more efficient use of energy.
- Whether you're looking to cut costs, reduce emissions, purchase new heating equipment or create a more comfortable environment, Enbridge Gas offers a variety of programs, incentives and services to help you achieve your objectives.

Residential energy use increased



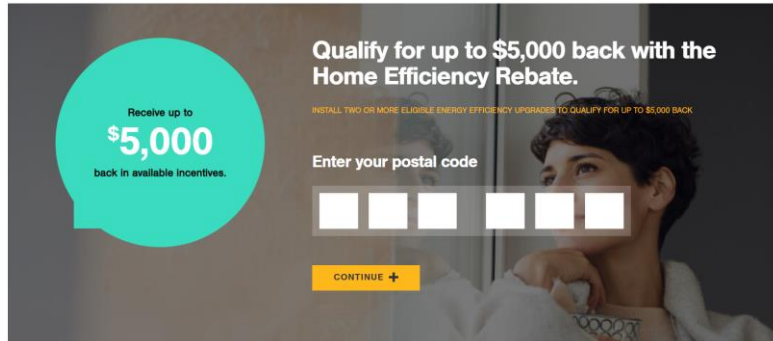
 **8.4%**  
since 1990

But would have increased by  
 **54%**  
without energy efficiency improvements

Visit [enbridgegas.com](http://enbridgegas.com) to learn more



# A greener future: conservation



Receive up to **\$5,000** back in available incentives.

Qualify for up to \$5,000 back with the Home Efficiency Rebate.

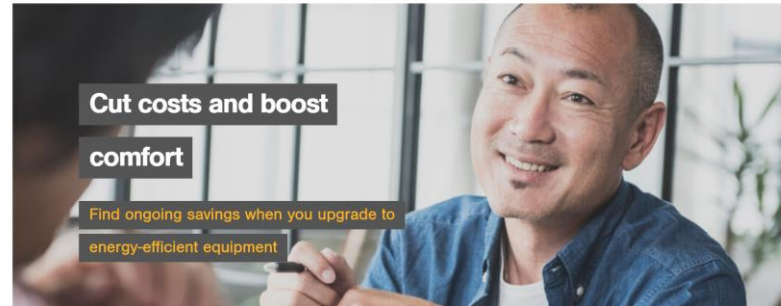
INSTALL TWO OR MORE ELIGIBLE ENERGY EFFICIENCY UPGRADES TO QUALIFY FOR UP TO \$5,000 BACK.

Enter your postal code

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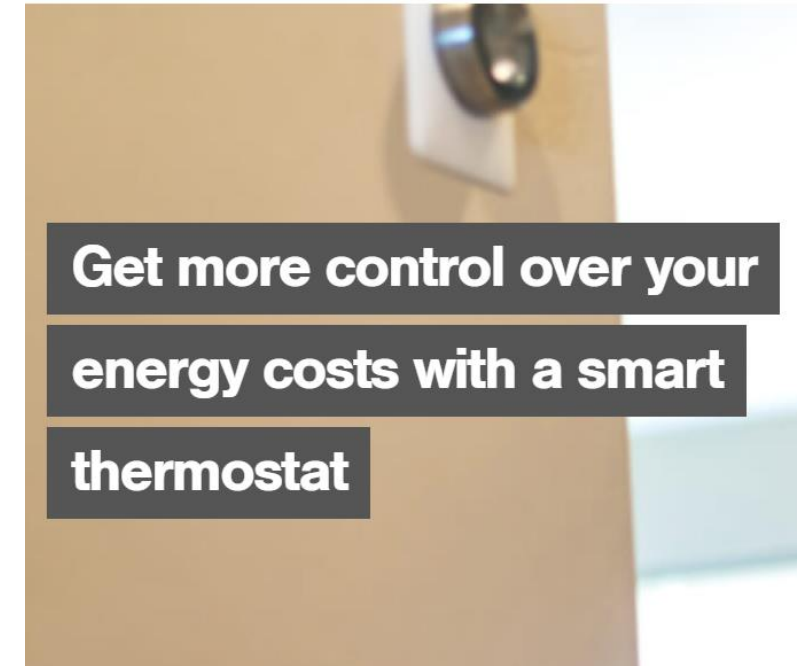
CONTINUE ➔

## Affordable Multi-Family Housing Program



Cut costs and boost comfort

Find ongoing savings when you upgrade to energy-efficient equipment



Get more control over your energy costs with a smart thermostat



Stay warm with our **FREE** Home Winterproofing Program.



Sustainable solutions for your business

We'll help you save energy, cut operating costs, reduce carbon emissions and qualify for financial incentives.



Commercial & Multi-Residential Builders

➔



Residential Builders

➔



Affordable Housing

➔



# Hybrid Heating Pilot Program

## Pilot incentive program for homes in London

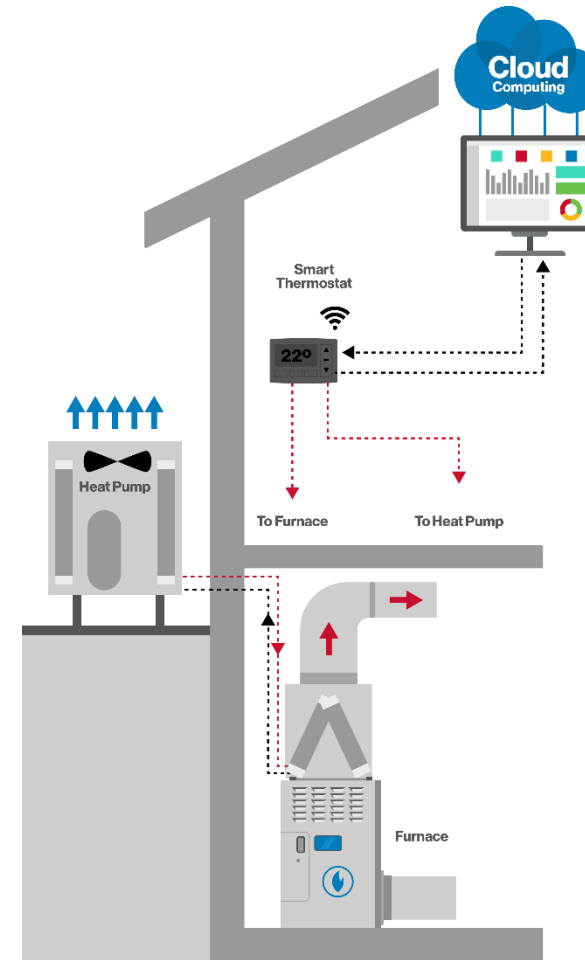
- Replacement of existing air conditioners to air source heat pumps integrated with smart controls creating a hybrid heating solution

## Purpose

- Integration of smart controls with HVAC manufacturer equipment
- Develop contractor capacity with hybrid heating systems through training, selling, installing and servicing systems
- Create awareness with homeowners, HVAC contractors and manufacturers
- Assess homeowner and contractor acceptance

## Status

- 5 HVAC manufacturers enrolled with equipment compatible with smart control platform
- 5 local HVAC contractors trained to sell hybrid heating systems
- Collaborating with HVAC manufacturers, City of London and London Hydro



Furnace provides assurance of thermal comfort on cold winter days



Heat pumps provide shoulder season heating using spare capacity on the electric grid



Smart controls respond to price signals to achieve GHG reductions without increasing energy costs



A dual-fuel system is a hedge to uncertain energy costs

Offer in field summer and fall 2021

# Conservation in the City of London



- From 2015 – 2019, **7,445** homes in London participated in Enbridge Gas' Home Efficiency Rebate Program, **saving over 4.7 million cubic metres of natural gas.**
- From 2015 – 2019, **630** income-qualified single-family and multi-family homes participated in Enbridge Gas' Home Weatherization Program or other incentive programs at no cost, **saving over 1.5 million cubic metres of natural gas.**
- From 2015 – 2019, **over 2,000** custom conservation projects or prescriptive conservation measures were undertaken by London commercial businesses using Enbridge Gas programs, **saving over 14.2 million cubic metres of natural gas.**
- From 2015 – 2019, **59** custom conservation projects were undertaken by London industries using Enbridge Gas programs, **saving over 13 million cubic metres of natural gas.**

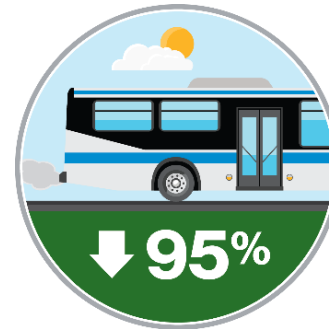
\* 2019 is the last available audited year for statistics.

# CNG: a market-ready solution to control costs and fight climate change

- Enbridge Gas can provide solutions to Municipalities and businesses to meet their Compressed Natural Gas (CNG) needs.
- CNG vehicles can reach net-zero or better when running RNG fuel.
- Some examples:
  - Hamilton: 137 City buses on CNG;
  - **London** and Toronto: Refuse trucks on CNG;
  - CNG fueling station for transports in **London** at the 401.



Up to **40%** lower fuel costs  
Compared to diesel, CNG has a more predictable fuel price.



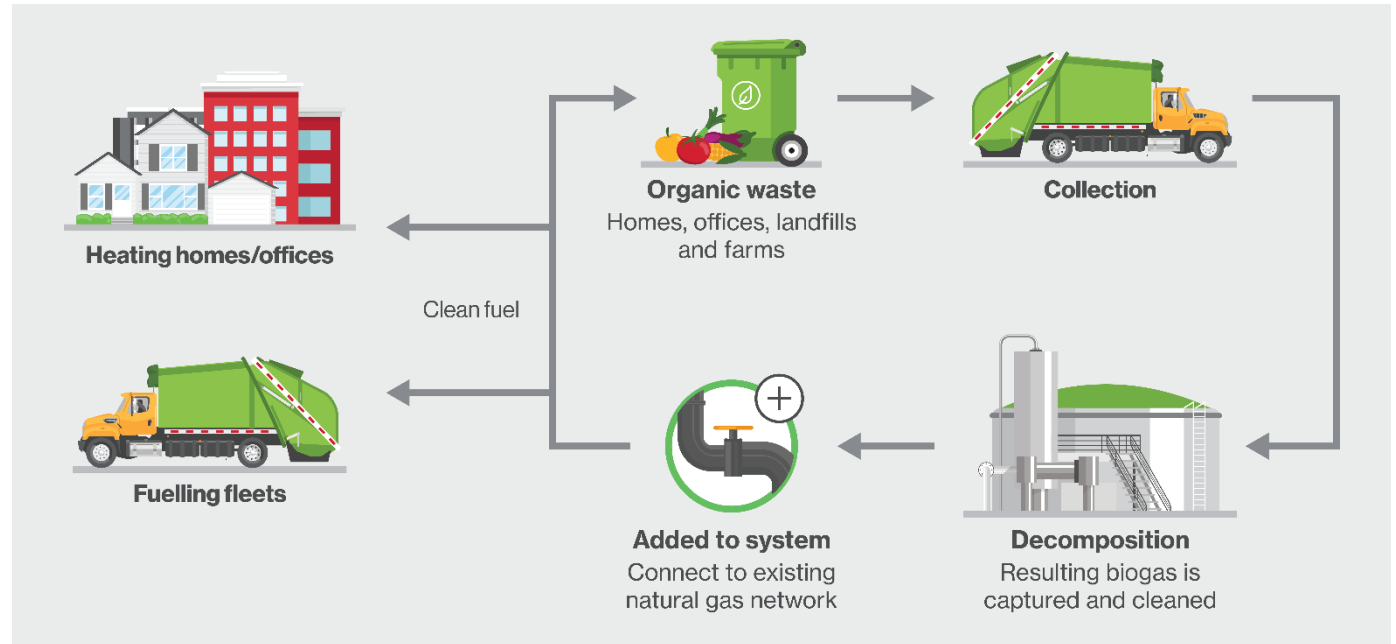
**95%**  
**fewer tailpipe emissions**  
Lower exhaust emissions can help improve air quality.



**90%**  
**quieter than diesel engines**  
CNG engines reduce noise pollution on city streets.

# RNG: convert waste into carbon-neutral energy

- Renewable Natural Gas (RNG) is a carbon-neutral fuel that reduces harmful emissions and provides a renewable source of energy.
- Waste is converted to RNG and injected into the natural gas network to fuel transportation and heat homes and businesses. Known for its carbon-offsetting advantage, RNG can manage waste, generate revenue and reduce harmful emissions to fight climate change.
- Enbridge Gas recently announced the largest RNG facility in Ontario, located at the site of Walker Environmental's landfill in Niagara Falls. This will reduce GHGs by 48,000 tonnes per year.



**Enbridge Gas and partners break ground on Ontario's largest RNG plant**





# RNG: OptUp

## OptUp

### Support a greener future for just \$2 a month

Wind and solar are popular forms of renewable energy, but did you know that food scraps, farm waste and sewage can also provide carbon-neutral renewable natural gas (RNG) that helps fight climate change? Once produced, RNG is added seamlessly to our natural gas system to be used for everyday convenience—from cosy home heating to cooking.

It's now easy and affordable to help green Ontario's natural gas supply. Sign up for OptUp. For just two dollars a month, you can contribute to making our natural gas system more sustainable with RNG; the more households that sign up, the greater the environmental impact.



- On April 6, Enbridge Gas announced the details of a new voluntary RNG program for its customers that will reduce overall emissions from Ontario's gas supply.
- Enbridge Gas' new OptUp Program will offer residential and small business customers who buy their gas from the utility the option to contribute \$2 a month as a cost-effective option to help offset the increased costs to acquire carbon-neutral RNG.
- The total RNG purchased and the emissions impact will be posted annually on the Enbridge website.
- Customers can sign up at [enbridgegas.com](https://enbridgegas.com)

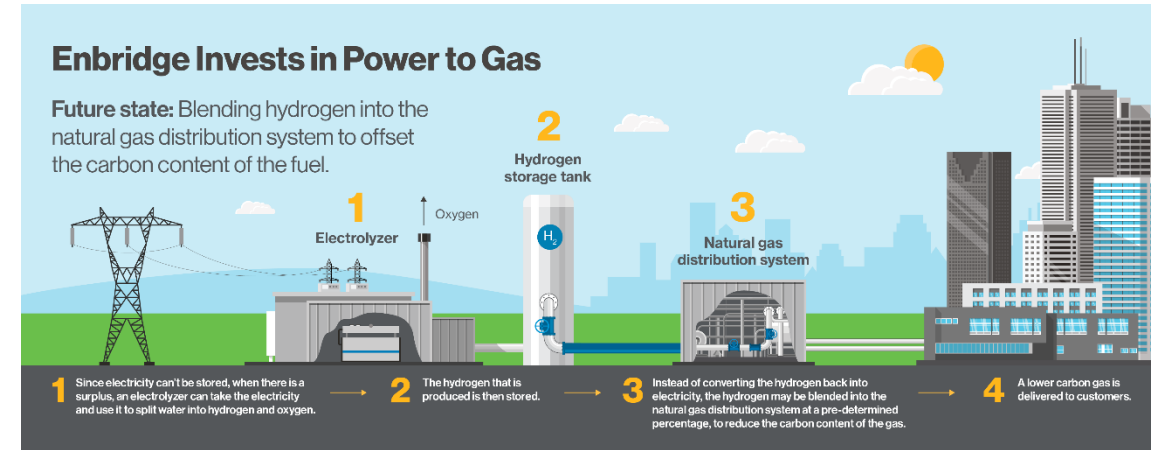
# RNG: Ontario's first carbon-negative bus

- In March 2021, the City of Hamilton and Enbridge Gas announced the first RNG-fuelled bus in Ontario.
- Hamilton Street Railway (HSR) is now the first public transportation authority in Ontario to use RNG, to transport customers.
- In one year, the HSR RNG bus will use and divert 450 tonnes of organic waste from the landfill. That's equivalent to 38 garbage trucks, while also displacing CO2 emissions from 36,000 litres of diesel consumed in a year.
- **The RNG supply for the bus comes from the StormFisher facility in London.**

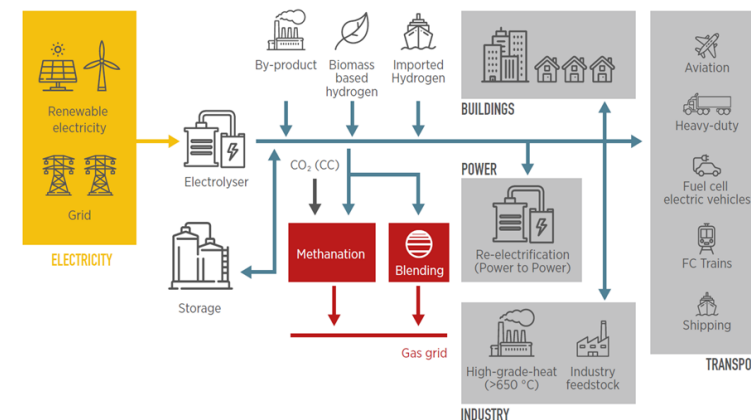


# Hydrogen/Power to Gas: cut energy costs, improve sustainability and resiliency

- Sometimes Ontario makes more electricity than is used.
- Surplus electricity can be converted and stored as hydrogen gas.
- The stored hydrogen gas can be converted back into electricity when needed, or;
- Blended with natural gas as a less carbon-intensive energy source.
- Hydrogen is a viable sustainable solution for heavy industries, hard to abate sectors and heavy-duty transportation
- In February 2021, Enbridge subsidiary Gazifère announce one of Canada's largest green hydrogen projects for injection into a natural gas distribution network in Quebec.



## The Huge Potential of Hydrogen



- **2020 – Onwards**
- Coming - Heavy Industry Decarbonization
- 2021 – First to Blend in North America
- **2019 – 2020**
- Blending into gas grid, hydrogen for transportation and power generation
- **2017 – 2018**
- First NA utility P2G plant constructed and in service, designed for future expansion
- **2014 – 2016**
- Contract with IESO



# Wastewater energy transfer

**Innovative thermal thinking powers this project**

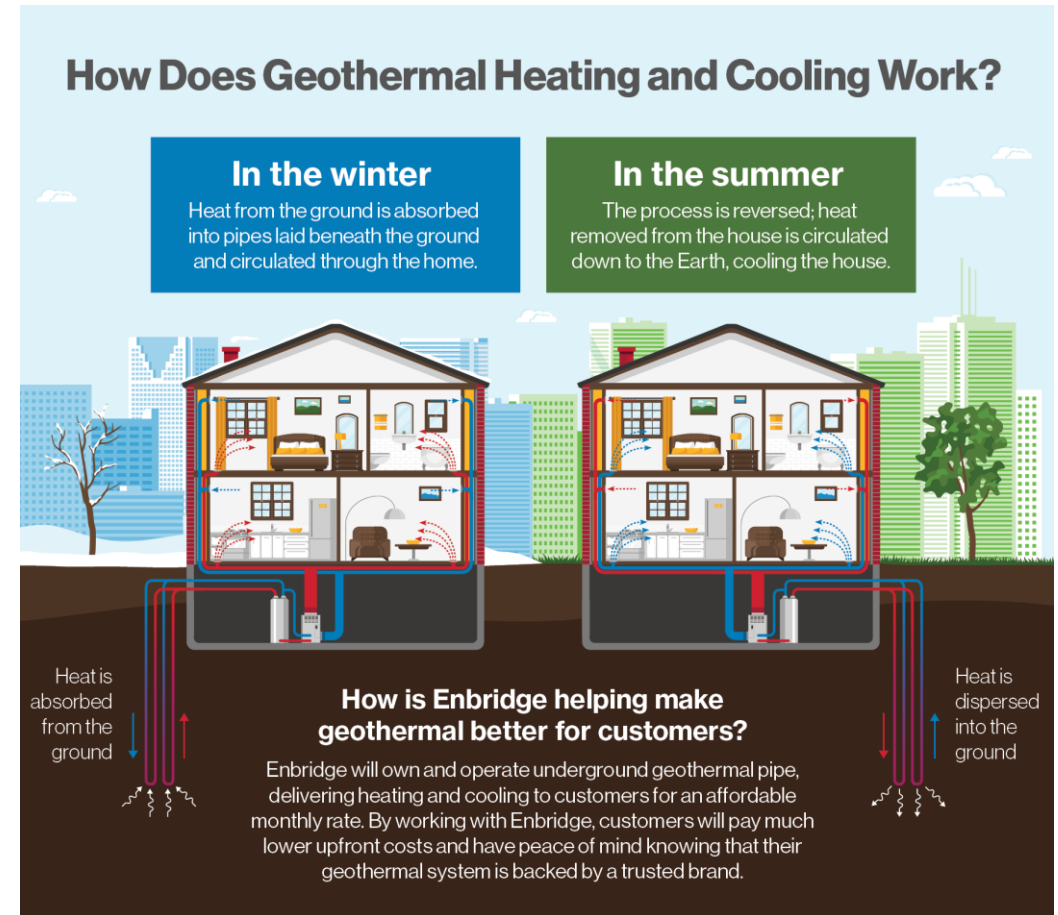


- Enbridge Gas recently teamed up with Noventa to support what will be the world's largest raw wastewater energy transfer system.
- Enbridge Gas supported the development of the wastewater energy transfer system for Toronto Western Hospital, which will provide the hospital with low-carbon heating and cooling.
- Construction on the retrofit project is expected to begin in late fall 2021.
- It's estimated the project will provide the hospital with 1.7 million megawatt-hours of thermal energy, or roughly 90% of its heating and cooling requirements over the next 30 years. Better yet, the site will see a cumulative reduction in greenhouse gas emissions of more than 250,000 tonnes over the same period—the equivalent of taking 50,000 cars off the road.



# Geothermal: a zero-carbon solution

- Enbridge Gas offers a geothermal program for homeowners and builders, providing affordable and quality access to a geothermal system.
- We work with geothermal experts to ensure pipes are installed properly plus we'll break down the full geothermal service into an affordable monthly fee.
- In most cases, geothermal loops are expensive and account for a large portion of the upfront installation cost. Through the Enbridge Gas Geothermal program we will:
  - Cover all associated material and installation costs for the geothermal loop (installed outside your home underground).
  - Provide our expertise and oversight of the installation including ongoing maintenance and repairs to the Geothermal loop.
  - Charge a monthly rental service fee for the Geothermal loops.



# Enbridge Inc. Renewable Energy

- Together, Enbridge's portfolio of renewable energy projects in-operation and under-construction have the capacity to meet the electricity needs of about 945,000 homes (net of our partners' interest). The projects in Canada, the US, and Europe include:
  - 23 wind projects
  - 21 solar energy facilities
  - 5 waste heat recovery facilities
  - 1 geothermal project
  - 1 power transmission project
  - 1 hydroelectric facility
- Enbridge has an ongoing scholarship program with **Fanshawe College** for their renewables program and has hired summer students and permanent technicians out of the program.



# Q&A

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[Enbridgegas.com](https://enbridgegas.com)