PAID POST

ADVERTISING FEATURE PROVIDED BY ENBRIDGE. THE GLOBE AND MAIL'S EDITORIAL DEPARTMENT WAS NOT INVOLVED.

Why Ontario's natural gas pipelines matter in a net-zero future

As Canada moves towards a net-zero future, the need to ensure reliable access to affordable and readily available lower-carbon fuels has never been more critical. Ontario is well positioned to transition smoothly into this future, thanks to an extensive natural gas infrastructure ready to deliver low-carbon fuels such as made-in-Ontario renewable natural gas (RNG) now and hydrogen in the near future.

Leveraging existing assets

"It makes sense to use today's existing pipeline infrastructure – which, in Ontario, stretches out almost 154,000 kilometres – to deliver today and tomorrow's low-carbon fuels to consumers and businesses," says Gordon Lau, renewable natural gas manager at Enbridge Gas, Canada's largest natural gas storage, transmission and distribution company.

- Enbridge Gas invests more than $2-billion in Ontario each year to safely maintain and operate its pipelines.
- Because they're shielded from many effects of the weather, the pipelines can be relied on to deliver the energy Ontarians need throughout the year.
- Today, 75 per cent of Ontario consumers are served by this natural gas infrastructure.

Electrification will take a lot of time and money

- A Natural Resources Canada report says that at our current retrofit rate of less than 1 per cent a year, it will take 142 years to retrofit all homes – including electrification of space and water heating – and 71 years to retrofit all commercial and public buildings.[1]
- The same report estimates retrofitting the country's buildings by 2050 would cost between $20-billion to $30-billion a year.
- Ontario's Independent Electricity System Operator (IESO) says it would cost the province about $400 billion over 25 years to upgrade to an energy system with no new gas generation.[2]
- The IESO also notes that it can take 10 to 15 years to build large energy infrastructure such as hydroelectric, nuclear facilities and transmission.
- In the transportation sector – which produces the most emissions in Ontario[3] – electric buses have proved to be problematic[6] because of poor battery performance, especially in cold weather, and limited charging infrastructure. Public transit operators in places outside Ontario have had similar experiences. In Edmonton, about half of the electric bus fleet rolled out in 2020 were out of service within just three years.[4]

Renewables aren't ready for large-scale deployment

- Renewable energy such as wind and solar continue to be intermittently available and costly to store.
- Energy pathway studies for the City of Ottawa describe wind power generation in Ontario as having only a small number of high production hours.[5]

Renewable natural gas – delivered through existing pipelines – is ready today

- Created through a process that captures and purifies methane emissions from landfills and other sources, biogas is treated and converted to renewable natural gas, which is a clean energy solution that's market ready.
- RNG is easily blended into existing natural gas distribution and transmission networks to heat homes, businesses and factories and fuel transit fleets as a low-carbon, drop-in fuel to replace conventional natural gas and diesel.
- In Hamilton, the first bus powered by carbon-negative RNG – produced from organic waste diverted from landfill – hit the road in 2021.
- In Toronto, 35 per cent of the city's organic waste is converted to RNG and added to the existing natural gas system. Electricity producers can use RNG for immediate power generation without changing equipment.
- Large emitters in Ontario can now use Ontario-made RNG through the existing natural gas distribution and transmission networks to reduce their emissions footprint reported to the Ministry of Environment, Conservation and Parks, under a new program introduced in April.

Hydrogen brings added value with zero-emission capabilties

- In 2022, Enbridge Gas became the first utility in North America to blend hydrogen – a zero-emission capable fuel – with natural gas. This further reduced the carbon footprint of natural gas.
- Today, Enbridge Gas delivers hydrogen-blended gas to about 3,600 customers in Markham, Ont., using the same pipelines it uses to deliver non blended natural gas.
- Surplus renewable electricity can be transformed and stored as pure hydrogen, called green hydrogen, which can later be injected into natural gas.
- The existing natural gas infrastructure can be utilized to produce low-carbon hydrogen using methane splitting technology through pyrolysis.
- Enbridge Gas has installed North America's first 100-per-cent hydrogen-fuelled 115 kW Combined Heat and Power (CHP) system at its building in Markham.

Pipelines are an asset we mustn't waste

In the net-zero future, the pipelines we have today can be used to deliver RNG and hydrogen-blended natural gas to Ontario consumers and businesses.

"We need to leverage the existing pipeline infrastructure and make it part of a reliable and affordable low-carbon energy solution," says Mr. Lau. "The pipelines are an invaluable asset, today and tomorrow."

[1] https://natural-resources.canada.ca/sites/nrcan/files/engagements/green-building-strategy/CGBS%2cDiscussion%20Paper%20-%20EN.pdf; [2] https://www.ieso.ca/en/Learn/The-Evolving-Grid/Pathways-to-Decarbonization; [3] https://www.cer-rec.gc.ca/en/data-analysis/energy-markets/provincial-territorial-energy-profiles/provincial-territorial-energy-profiles-ontario.html; [4] https://globalnews.ca/news/9011225/edmonton-electric-bus-fleet-problems-issues/. [5] https://documents.ottawa.ca/sites/documents/files/energy_pathway_phase1_en.PDF; [6] Minnesota Cities Went All-In for Electric Transit, But the Buses Couldn't Handle the Cold (msn.com)

Tomorrow is happening right now.

Tomorrow is on.™
Now, more than ever, the world needs safe, secure, sustainable and affordable sources of energy. That's why Enbridge is modernizing our systems and advancing new technologies and lower-carbon solutions like renewable natural gas and hydrogen power. Putting in the work today, we're bridging to a sustainable energy future.

tomorrowison.com

ENBRIDGE