Enbridge
500 Consumers Road
North York, Ontario
M2J 1P8

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Toronto City Council
c/o Marilyn Toft
Council Secretariat Support
12th Floor, West Tower, City Hall
100 Queen Street West
Toronto, ON M5H 2N2

Re: IE26.16 – "TransformTO – Critical Steps for Net Zero by 2040"

Your Worship and members of Council:

Enbridge is delighted to see that TransformTO's strategy to achieve net-zero by 2040 highlights the positive partnership that Enbridge has with the City of Toronto. Enbridge has set similar ESG targets, and is actively supporting the transition to a low-carbon economy by advancing energy conservation, carbon neutral fuels like renewable natural gas and hydrogen and innovative energy solutions through collaborations with municipalities.

As you know, Enbridge has a longstanding relationship with the City of Toronto, and a proven track record of serving its residents safely, reliably and affordably for over a century and a half. We are confident we can support the City in achieving its TransformTO objectives in ways that keep energy affordable and reliable, reduce environmental impact and promote consumer choice.

Customer adoption of electric solutions can be enhanced by a relentless focus on cost effectiveness, reliability and customer experience. Toronto's underground natural gas network provides unparalleled resilience to weather events and three times the peak capacity of the electric network at a very affordable cost. The natural gas industry will continue to decarbonize as new renewable natural gas, and hydrogen supplies are developed which can be blended into the natural gas stream. This will result in Ontario having both a low carbon electrical system and a low carbon natural gas system.

Enbridge brings several competencies to the energy transition space. These include long standing energy conservation programs that have delivered over 55 MT of carbon reductions since 1995, carbon neutral renewable natural gas projects in partnership with the City of Toronto, a North America first hydrogen blending project in Markham and several innovative energy solutions that deliver emissions reduction at lower cost.

Earlier this year, Enbridge launched a pilot project, in partnership with London Hydro and the City of London to install hybrid heating solutions. This project is not only a great example of sector collaboration with municipalities, but will also access off peak, low carbon electricity for average use, while leveraging the natural gas system to enhance peak energy reliability.

Building heat, transportation and industry, collectively account for more than 80 percent of Ontario's emissions. Decarbonizing these areas will provide the greatest return on our energy transition efforts, and Enbridge is partnering with many municipalities across the province to implement low-carbon initiatives today (see Appendix A).

We applaud the City of Toronto for its leadership and look forward to ongoing collaboration that will deliver on our collective goal of a greener future.

Sincerely,

Cynthia Hansen
EVP & President, Gas Distribution & Storage
Cynthia.Hansen @enbridge.com

APPENDIX A

Enbridge Gas is committed to reducing greenhouse gas (GHG) emissions, and is actively engaged in innovative partnerships to advance the transition to a zero-carbon future.

Transportation
Transportation generates the largest amount of GHG emissions in Ontario. Electrification of light duty vehicles will play a significant role in decarbonizing this sector; however, this will take time. To put this into perspective, Ontario has roughly nine million light duty vehicles on the road, and electrification is estimated to add 50 to 60 TWhs of demand to the electricity system. Meeting this added demand will require significant investment in the Ontario grid, which will happen over time.

Heavy duty vehicles however, present a unique challenge, as electrification is prohibitive due to battery size and recharging requirements.

The good news is these can be cost-effectively decarbonized today through CNG, which offers up to 20 percent GHG reduction and up to 40 percent savings in fuel costs. By adding renewable natural gas (RNG) zero emissions can be achieved, a solution which many Ontario municipalities are using today, including Toronto and Hamilton.

In the longer term, hydrogen fuel cell electric vehicles are another option for zero-emission vehicles. Enbridge is working to advance hydrogen-ready pipelines, and is currently piloting hydrogen blending at our power-to-gas facility in Markham.

Project Examples:

- The City of Toronto and Enbridge Gas have partnered to combine RNG with organic waste diverted from landfills to fuel the city's solid waste collection trucks. This process converts more than 55,000 tonnes of organic waste into RNG, which will eliminate more than 9,000 tonnes of CO2 emissions each year. A similar project in the City of Hamilton uses RNG to fuel city buses. Additionally, these initiatives contribute to a circular economy—converting waste to energy.

- Enbridge Gas has partnered on three CNG stations along the 401 corridor, the most heavily travelled corridor in Ontario. These same CNG refueling stations along Ontario's Highway 401, are "roughed in" for hydrogen. Leveraging these stations could enable Highway 401 to become a "green hydrogen corridor" from Quebec City to Windsor and can be deployed in short order.

Building Heat
Heating our homes and business generates roughly a quarter of Ontario's GHG emissions. There are solutions available today that can help to decarbonize heating including conservation, low-carbon heating systems and greening the gas supply.

Conservation**:**
Many municipalities across Ontario have identified the need for deep energy efficiency retrofits for homes, businesses and industries. Enbridge is a leader in developing and delivering conservation programs. We offer proven programs for households, business and industry which have helped customers reduce GHG emissions by over 56 million tonnes since 1995. We can work with, or complement, municipalities looking to conservation as a way to decarbonize building heat.

Low-carbon Heating Technologies:
Another important way to reduce emissions from building heat is by advancing the adoption of low-carbon heating technologies such as Geothermal loops, heat pumps and hybrid heating systems and Solar Photovoltaic (PV). Enbridge has programs and incentives that are advancing these technologies:

- Geothermal loop systems heat a building in the summer and cool it in the winter using thermal energy extracted from the earth, and are three to four times more efficient than traditional heating systems. The Enbridge Geothermal Program helps provide affordable and quality access to a Geothermal System.

- Heat pumps and hybrid heating systems**,** with efficiencies greater than 100 percent, are emerging technologies that offer a cost effective, efficient, climate-friendly solution to decarbonize space heating, cooling and domestic hot water heating. Enbridge is advancing a number of pilot programs on this front.
- Solar PV generate clean, renewable electric energy, when the sun is shining, and the home is still connected to the electricity grid to draw power when it's needed. The Enbridge pilot Solar PV rental program for new builds, offers this technology with no upfront cost and a monthly rate.
- For commercial buildings, capturing the thermal heat from wastewater is a low-carbon method of heating and cooling buildings by reducing the amount of electricity, natural gas and water required for conventional systems.

Project Examples:

- Our Hybrid Heating pilot program in London, will replace 100 existing air conditioners with ducted air source heat pumps, integrated with smart controls, creating a hybrid heating solution, through a limited pilot project customer rebate of $3,200.

- Enbridge Gas recently teamed up with Noventa to support a major project that uses thermal energy from wastewater to supply up to 90 percent of the heating and cooling for Toronto Western Hospital—this is the largest delivery of the world's largest raw wastewater energy transfer project in the city.

Greening the Gas Supply

Today, about 75 percent of Ontario homes heat with natural gas, and most have a forced-air furnace. Transitioning to lower-carbon heating technologies such as those outlined above, will take time. That's why we're also working to green the gas supply by scaling up the introduction of carbon-neutral RNG and hydrogen.

These technologies offer an effective means to lower the carbon of Ontario's existing energy systems affordably by leveraging existing infrastructure while making productive and economic use of landfill and other organic waste and creating local jobs and new revenue opportunities for municipal governments.

Over the longer term, as costs for hydrogen and RNG continue to decline with innovation and deployment, we will continue to increase the percentage of RNG and hydrogen in the gas decarbonizing our natural gas system—reserving our electricity capacity growth capabilities for other sectors of the economy.

Project Examples:

- Through our voluntary RNG program, OptUp, customers can choose to support the transition to low-carbon energy through a small monthly contribution to help offset the increased costs of acquiring carbon-neutral RNG.

- Enbridge also announced the development of the largest RNG facility in Ontario, located at the site of Walker Environmental's landfill in Niagara Falls, which will reduce GHG emissions by 48,000 tonnes per year.

- Furthermore, recently, we announced a partnership with Walker Industries and Comcor Environmental to jointly develop RNG projects.

- In the City of Markham, Enbridge Gas has partnered to launch the first-of-its-kind hydrogen blending facility, which is already powering approximately 3,600 homes in the area. Hydrogen is low or zero-carbon, and this project alone will remove 117 tons of CO2 from the atmosphere annually.

Industry

Industry is the third largest contributor to carbon emissions in Ontario. Typically, industrial processes cannot be easily electrified. For these areas, Ontario will need to accelerate the ability to use hydrogen. Resources will be needed towards pilot projects and infrastructure development to allow us to scale this resource to its maximum potential by 2050. Enbridge is actively working to advance this technology through pilot projects such as the Power-to-Gas plant in Markham and related hydrogen blending, and we are working to assess the implementation of hydrogen-ready pipelines.

Carbon capture and storage (CCS) is an immediate solution existing for large point source emitters of carbon. CCS is a proven technology, available now, that offers a significant pathway to achieve GHG reductions for hard to decarbonize industries. Canada is a world leader in CCS with longstanding projects in western Canada.

The geology of southwestern Ontario is suitable for carbon storage, and Enbridge has a long history of safe and reliable underground natural gas storage. Developing carbon capture in Ontario requires a “red tape” reduction plan to amend the Oil, Gas & Salt Resources Act and remove the CO2 injection ban to eliminate the prohibition of CO2 storage in underground geological formations to allow for the needed physical testing and evaluation of this formation to occur and enable private investment to develop this Made in Ontario solution.