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

Re: MM28.21 – Calling on the Province to Phase-Out Gas-Fired Electricity Generation

Dear Mayor and members of Council:

We have significant concerns with the motion to phase out gas-fired electricity generation because it ignores the practical realities of Ontario's energy system, does not offer realistic solutions, or acknowledge available, affordable low-carbon alternatives.

Ontario requires flexible generation in the electricity grid that only natural gas can provide.

- Natural gas accounts for nearly a third of the province's installed capacity and is the only energy source with the flexibility to ramp up and down quickly to meet changing electricity use on demand. Further, natural gas enables intermittent renewable electricity in times when the wind doesn't blow, the sun doesn't shine, or above-ground infrastructure is impacted by climate events.

- Today, and for the foreseeable future, electricity can't be efficiently stored. Emerging storage technologies are more expensive, can only provide energy for a set amount of time, and still rely on another source of electricity generation.

- Importing hydro electricity from Quebec is cited as an alternative to the baseload provided by natural gas, however Quebec's total generation capacity falls significantly short of Ontario's peak gas demand. Even if Ontario imported 100% of Quebec's power, we would still not meet our peak needs.

At Enbridge, we share the desire to transition to a low-carbon future. However, to achieve realistic, low-carbon solutions that are reliable and affordable, energy systems must work together, and here is why:

The infrastructure to support electrification of the baseload currently provided by natural gas, or the backup does not exist today.
Natural gas delivers almost 3.5 times as much peak energy as electricity for Ontarians across the entire province, when they need it the most. To replace the current energy provided by natural gas in Canada, would require roughly three more electric generation systems the size of Canada's current system—tripling capacity to meet peak demand. This feat would take decades

to achieve and cost over [1]$580 billion, driving up energy costs for customers. The additional cost is equivalent to increasing average Canadian household spending by 1,300 to $3,200 per year, which would present a significant hardship for many consumers at a time where we are all focusing on economic recovery.

Critical Industries can't be electrified
Electricity does not have sufficient energy intensity to power many critical technologies that our quality of life depends on like heavy transportation for the shipment of goods and steel and concrete manufacturing needed to build things like wind turbines and solar panels.

Energy systems working together can deliver less costly greenhouse gas reductions
Canada's existing natural gas and electricity systems and existing infrastructure working together can be optimized for a reliable, affordable, low emissions solution. This can be done at a significantly lower cost through a multi-grid approach that integrates natural gas solutions with the electric system rather than an electric-only option. Greenhouse gas reduction policies that entirely favour electricity over multi-grid approaches are significantly more costly [2](at $289 /tCO2 for electric alone vs $129 /tCO2 for integrated systems).

Practical, affordable low-carbon solutions exist
Immediate and affordable carbon reduction can be achieved by leveraging existing technologies and energy infrastructure:

1. **Greening the gas supply** with carbon-neutral sources including hydrogen and renewable natural gas (RNG), which are displacing traditional natural gas and reducing emissions. These technologies have the added benefits of diverting waste, leveraging existing infrastructure, stimulating regional economic development and creating local jobs [3]lower cost than electricity. Here are a few examples:
    - The Enbridge power-to-gas hydrogen plant in Markham, the first and largest of its kind in North America, is creating renewable hydrogen to balance the electrical grid and we have received approval from the provincial regulator for a pilot to blend renewable hydrogen into a portion of our grid with no cost impacts to rate payers. Successful implementation of this pilot project will support Enbridge in pursuing additional and larger scale hydrogen blending activities in other parts of its distribution system.
    - The City of Toronto has partnered with Enbridge to harvest the energy produced by organic waste to fuel the city's 150 solid waste collection trucks reducing fuel costs by as much as 20 per cent. Enbridge has also partnered with the City of Hamilton to use RNG to fuel city buses.
    - Enbridge just announced 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.
    - Enbridge took the lead on obtaining regulatory approval on a voluntary RNG program which will give customers the option to contribute $2/month for a portion of RNG blended into existing natural gas supply starting in 2021.

2. **Displacing more carbon-intensive fuels for heavy transportation** through compressed natural gas (CNG), a market-ready low-carbon alternative to diesel with up to 40 percent

[1] ICF. "Policy Driven Electrification in Canada." ICF. Oct. 2019. Web. <https://www.cga.ca/news/>.
[2] ICF. "Policy Driven Electrification in Canada." ICF. Oct. 2019. Web. <https://www.cga.ca/news/>.
[3] RNG costs $24/GJ—equivalent to $0.09/kWh (Source: cga.ca/wp-content/uploads/2020/08/RNG-Handbook-for-Municipalities-in-the-GTHA_2020-07-07.pdf); Electricity in Ontario is priced at $0.128/kWh. (Source: oeb.ca/rates-and-your-bill/electricity-rates (Rate as of September 2020))

lower fuel costs. For example, the Enbridge network of CNG fuelling stations along Highway 401 in Windsor, London and Napanee, are providing heavy-duty truck fleets with convenient access to a more affordable and cleaner-burning fuel alternative. CNG is well suited for return to base fleets like buses and garbage trucks, and when combined with RNG, can offer a zero-carbon solution.

3. **Green technologies for heat**. Opportunities exist for energy communities to partner in the development and execution of green energy technologies for heating such as highly efficient Combined Heat and Power which takes waste heat produced from the gas-fired generation of electricity and converts it to hot water or steam that can be used for heat; or Geothermal systems which use thermal energy extracted from the earth for more efficient heating and cooling. The Enbridge Gas Geothermal Program can assist customers with the installation costs and expertise.

4. **Conservation programs for homes and businesses** and investments in green technologies for home heating such as heat pumps, to help use less energy and save money. Enbridge is recognized as a leader in energy efficiency and conservation. Between 1995 and 2018, our energy efficiency programs reduced customer consumption by 28 billion cubic metres of natural gas. These gas savings have resulted in a reduction of 51.7 million tonnes of greenhouse gas emissions.

We care about our collective future and these are just some examples of the affordable, immediate and practical solutions that are shaping Ontario's clean energy transition.

We applaud the City of Toronto's Transform TO for its environment leadership in developing a Net Zero Strategy Plan and Enbridge looks forward to future partnerships in innovative clean energy solutions.

Sincerely,

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