

## **Council Meeting**

May 25, 2021

Comments Received Regarding Item 9.4 -

Notice of Motion - Gas Fired Electricity

Generation Phase Out

**From:** Carole Holmes

**Sent:** Friday, May 21, 2021 9:07 AM

**To:** Town Clerk

**Subject:** Support for Motion for Gas-fired Electricity Generation Phase Out

Name : Carole Holmes

Agenda Item : 9.4 on May 25th Agenda

Dear Oakville Mayor and Councillors,

I am writing as a private citizen of Oakville in support of the Oakville Resolution to Phase-Out Gas-Fired Electricity Generation.

The greenhouse gas (GHG) pollution from Ontario's gas-fired power plants will increase by more than 300% by 2030 and by 500% or more by 2040 as the province uses gas to replace aging nuclear plants and to meet growing demand for electricity from population growth and increased electrification (electric cars, home heating).

If this occurs, Ontario will lose roughly 40% of the pollution reduction benefits it achieved by phasing-out its dirty coal plants. We cannot let this happen.

It is critical that Ontario meets its climate goals for 2030. Most municipalities in our area have already signed their own resolutions in support of phasing out Gas-fired Electricity Generation. Oakville needs to follow suit!

Sincerely,

Carole Holmes



April 23,2021

Dear Mayor Burton and Town Councillors,

### **Oakville Resolution to Phase-Out Gas-Fired Electricity Generation – Discussion Item 9.4**

Grand(m)others Act to Save the Planet (GASP) is a grassroots, non-partisan group of grandmothers and grand ‘others’ who care deeply about the world our descendants will inherit.

The greenhouse gas (GHG) pollution from Ontario’s gas-fired power plants will increase by more than 300% by 2030 and by 500% or more by 2040 as the province uses gas to replace aging nuclear plants and to meet growing demand for electricity from population growth and increased electrification (electric cars, home heating). If this occurs, Ontario will lose roughly 40% of the pollution reduction benefits it achieved by phasing-out its dirty coal plants.

We can avoid a huge gas pollution increase by:

- a) Reverse shortsighted cuts to energy efficiency programs and stop under-investing in this quick-to-deploy and low-cost resource. We can ensure we maximize efficiency efforts by paying up to the same price per kWh for energy efficiency measures as we are currently paying for power from nuclear plants (e.g., up to 9.6 cents per kWh).
- b) Return Ontario to leadership in developing increasingly low-cost renewable energy resources. It makes no sense to ignore our lower cost options for keeping our lights on while investing in

high-cost nuclear rebuilds. We should support renewable energy projects that have costs that are below what we are paying for nuclear power and work with communities to make the most of these economic opportunities.

- c) Accept Quebec's offer of [low-cost](#) 24/7 power from its massive waterpower system. Quebec has offered power at less than one-half the cost of re-building our aging Darlington and Bruce Nuclear Stations and Ontario can only benefit by making a long-term deal with its green energy-rich neighbour. Quebec's system of reservoirs can also be used like a giant battery to backstop made-in-Ontario renewable power, eliminating the need to use gas-fired power plants.
- d) Put in place an interim cap of 2.5 megatonnes per year on our gas plant's greenhouse gas pollution and develop a plan to phase out all gas-fired electricity generation by 2030 to ensure Ontario meets its climate targets.

GASP strongly supports phasing out gas-fired electricity in Ontario by 2030. This will be an important step toward achieving critically important climate goals. Allowing a massive increase in the use of gas-fired generation makes no sense given our deepening climate crisis. We have much better, zero carbon, low-cost ways to generate electricity including wind and solar, and water power from Quebec. Both the United States and the UK are committed to transitioning to zero carbon electricity systems. Oakville must now make the same commitment.

Yours truly,

Lorraine Green and Carole Holmes, Co-Chairs GASP

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Email [info@gasp4change.org](mailto:info@gasp4change.org)

Instagram [GASP4Change](#)  
Facebook [GASP Grandmothers Act to Save the Planet](#)  
Twitter [Gasp4Change](#)

May 19, 2021

Oakville City Council  
c/o Clerks Department  
1225 Trafalgar Road  
Oakville, ON L6H 0H3

**Re: Calling on the Province to Phase-Out Gas-Fired Electricity Generation**

Dear Councillors:

I am writing to ask that council not pass the motion as currently drafted put forward by Councillor Ray Chisholm and Councillor Sean O'Meara calling on the Province of Ontario to phase-out all gas-fired electricity generation by 2030. I note that this motion follows a campaign by the Ontario Clean Air Alliance targeted at municipalities which has seen a number of municipalities pass a resolution asking for the phase-out of provincial natural gas generation specifically by 2030.

The Ontario Energy Association (OEA) is the credible and trusted voice of the energy sector. We represent Ontario's energy leaders that span the full diversity of the energy industry. Most importantly, for the purposes of this discussion, the OEA represents many members of Ontario's energy that would benefit greatly from a policy to rush the closure of provincial natural gas fired generation plants. Our membership includes companies that would provide the transmission, energy storage, demand response, renewables, nuclear and energy efficiency alternatives that would be put forward as potential replacement alternatives for the gas plants.

There are many reasons for our request for Council to not pass this resolution as currently drafted. These reasons are based on a report produced by Power Advisory LLC examining the implications for Ontarians of shutting down all of Ontario's natural gas-fired generators by 2030.

The OEA is committed to Canada's goal of achieving net zero GHG emissions by 2050 (NZ2050). Seventy-six per cent of Ontario's GHG emissions stem from energy use. However, only 2.3 per cent of emissions currently come from the electricity system. Therefore, the path to NZ2050 will necessarily involve a major transformation of Ontario's energy system.

The OEA's intention is to leverage our expertise to assist all levels of government and their agencies to find the optimal pathway to NZ2050 while ensuring that our customers maintain access to affordable and reliable energy. It is through this lens that the OEA asked Power Advisory to examine this proposal to eliminate natural gas-fired generators by 2030, which is being publicly promoted by some organizations.

The report underscores the need to maintain Ontario's natural-gas fired generation fleet to ensure Ontario homes and businesses have a reliable electricity supply both today, and as Ontario refurbishes it's nuclear fleet over the coming years.

The report is titled [Implications of Shutting Down Ontario's Gas-Fired Generators by 2030](#). It found that natural gas-fired generators, which currently provide 11,000 MW or about one third of Ontario's generation capacity, will play an essential role over the next decade in maintaining power system reliability. Maintaining these critical facilities will avoid at least a \$60 billion increase in electricity costs for residential and business electricity customers across the province.

Other key conclusions of the report include:

- No one form of alternative supply is singly capable of replacing all gas-fired generation in the next decade
- The infrastructure needed to replace the 11,000 MW of capacity currently provided by gas-fired generation does not exist today and replacing it will cost electricity customers more than \$60 billion
- Replacing gas fired generators with supply from Hydro Quebec is not feasible by 2030
  - Upgrading existing transmission lines will not provide enough capacity
  - New transmission lines across Ontario and Quebec would be required, necessitating lead times beyond 2030
  - Hydro Quebec has never offered Ontario the "firm" capacity that would be necessary to replace the role of the gas generators
  - Hydro Quebec has forecasted it will have its own 'deficit' over the next decade, limiting the firm capacity it can offer Ontario
- Gas-fired generators will be necessary for peaking capacity and system reliability past 2030
  - To support the variable energy supply from wind and solar generators
  - To support the large nuclear refurbishment until completion in the 2030s
- The IESO's "Resource Adequacy" framework will require gas plants coming off contract to face competition from alternatives, providing opportunities for zero emissions alternatives to come forward in a rationally planned process
- Gas-fired generation will be needed to enable the expansion of Ontario's already low-emissions electricity system to meet future climate change objectives

### **Ontario Has One of the Greenest Electricity Grids in the World**

Ontario already has one of the greenest electricity systems in the world. The two charts on the following page outline the "carbon intensity" of electricity systems in North America, and around the world. Ontarians have paid and continue to pay a significant price for the initiative to "green the grid".

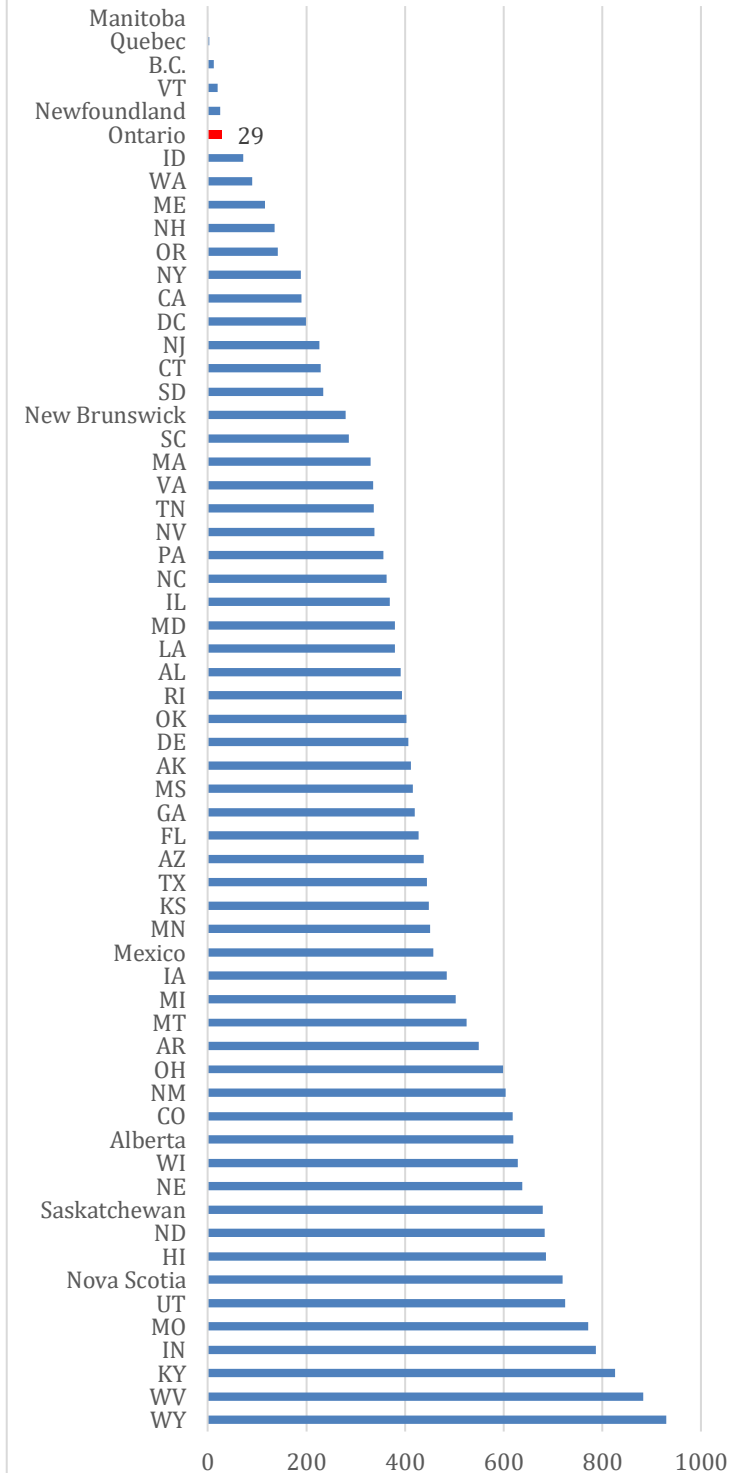
Building the current natural gas plants was a major component of our efforts to achieve our low carbon grid. The gas plants were developed to allow us to phase out of high GHG emitting coal by replacing the role of the coal plants in providing critical balancing, backstop and peaking services to our system. The presence of the natural gas plants is what enabled Ontario to add so much new renewable energy to the grid, further greening the grid.

Between 2003 and 2017, Ontario's investments in electricity generation represented a near complete overhaul of our electricity generation, excluding legacy hydro assets. The greening of our grid is something Ontarians should be proud of. However, it did come at a cost. By 2016-17, after several years of some double-digit electricity rate increases to pay for all these new investments, Ontario voters began expressing their disapproval of rate increases. In 2017, some polls indicated that electricity rates had become the number one issue facing Ontario voters. Media stories were run suggesting that people, especially those in already disadvantaged economic circumstances, were having to choose between "heating and eating".<sup>1</sup>

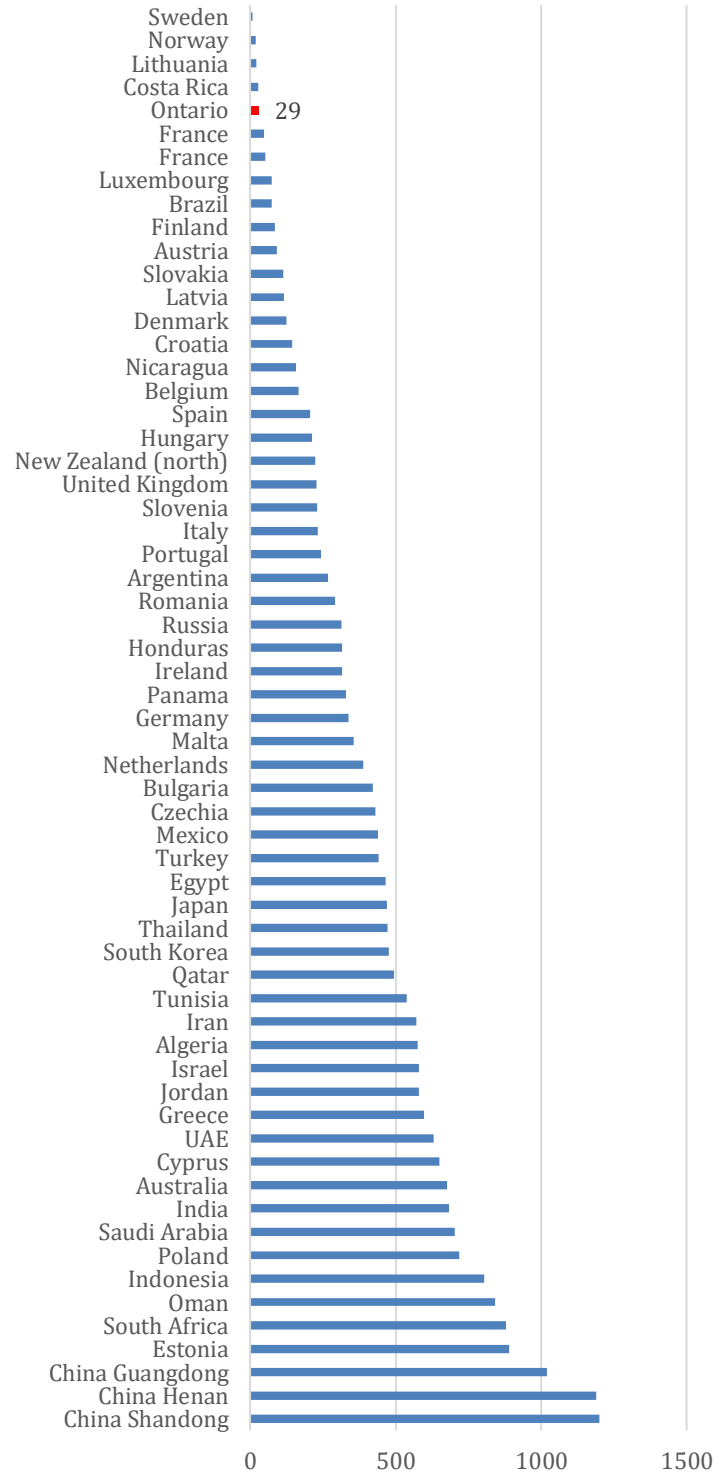
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<sup>1</sup> <https://www.cbc.ca/radio/thecurrent/the-current-for-september-1-2016-1.3744010/people-have-to-choose-between-heating-and-eating-rising-hydro-costs-hit-ontarians-1.3744013>

## Carbon Intensity of Electricity System, North America 2018, gCO<sub>2</sub>/kWh



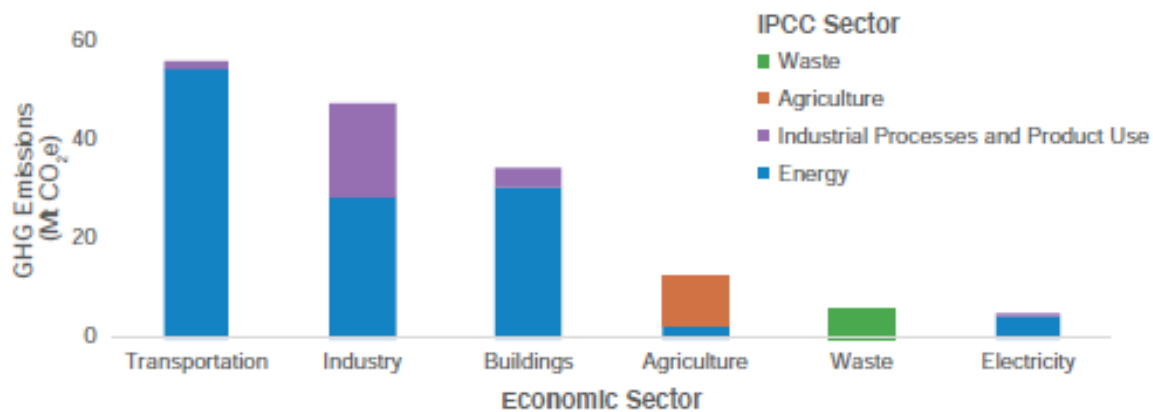
## Carbon Intensity of Electricity System, International 2018-20, gCO<sub>2</sub>/kWh





### We Should be Prioritizing Largest Sources of Emissions

The chart below outlines the source of GHG emissions by sector in Ontario. Following the greening of Ontario's electricity system, it now represents only two percent of the GHG emissions in the province.



*Source: Environmental Commissioner of Ontario, 2018*

If the City of Oakville and Ontario want to reduce GHG emissions, we will need to focus on the predominant sources of those emissions on the left side of the chart above. The City, through its areas of responsibility can have an impact on emissions from transportation, industry, buildings and waste. For example, the City has policy levers it can use to help reduce GHG emissions from transportation, the largest source of GHG emissions. The OEA notes that the fuel switching involved in reducing emissions in transportation (e.g., EVs, compressed natural gas or hydrogen alternatives) will likely benefit from the maintenance of the capacity provided by provincial natural gas fired generation to allow for the expansion of electricity usage to replace petroleum use.

Considering all of the above, it is valid to ask why we would focus on squeezing the last carbon atom out of our provincial electricity system, with the associated costs and impacts of doing so (especially on economically disadvantaged groups), when it is in other areas that we need to make more significant progress and can do so at a much lower cost.

The OEA thanks all City of Oakville councillors for considering this background prior to deliberating this motion when it comes back to Council.

Sincerely,



Vince Brescia  
President & CEO

May 25, 2021

Town of Oakville Council  
c/o Vicki Tytaneck  
Town Clerk  
1225 Trafalgar Road,  
Oakville, ON L6H 0H3

**Re: 9.4 – Notice of Motion - Gas Fired Electricity Generation Phase Out**

Dear Mayor Burton 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.

On April 14, The Ontario Energy Association (OEA) released a report produced by Power Advisory LLC examining the implications for Ontarians of shutting down all of Ontario's natural gas-fired generators by 2030.

The report underscores the need to maintain Ontario's natural gas fired generation fleet to ensure Ontario homes and businesses have a reliable electricity supply both today, and as Ontario refurbishes its nuclear fleet over the coming years.

The report is titled [Implications of Shutting Down Ontario's Gas-Fired Generators by 2030](#).

It found that natural gas-fired generators, which currently provide 11,000 MW or about one third of Ontario's generation capacity, will play an essential role over the next decade in maintaining power system reliability. Maintaining these critical facilities will avoid at least a \$60 billion increase in electricity costs for residential and business electricity customers across the province.

Enbridge's perspectives are as follows:

**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 \$580 billion<sup>1</sup>, 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<sup>2</sup> (at \$289 /tCO<sub>2</sub> for electric alone vs \$129 /tCO<sub>2</sub> 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<sup>3</sup> at a 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

<sup>1</sup> ICF. "Policy Driven Electrification in Canada." ICF. Oct. 2019. Web. <<https://www.cga.ca/news/>>.

<sup>2</sup> ICF. "Policy Driven Electrification in Canada." ICF. Oct. 2019. Web. <<https://www.cga.ca/news/>>.

<sup>3</sup> 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](https://www.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](https://www.oeb.ca/rates-and-your-bill/electricity-rates) (Rate as of September 2020))

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, called *OptUp*, which is now available.
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 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 work of the Oakville Energy Task Force, of which Enbridge is a member, and we look forward to future partnerships in innovative clean energy solutions.

Sincerely,



Murray Costello, P.Eng.  
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[Murray.Costello@enbridge.com](mailto:Murray.Costello@enbridge.com)