

Elson Advocacy

January 11, 2024

BY RESS

Nancy Marconi

Registrar

Ontario Energy Board

2300 Yonge Street, Suite 2700, P.O. Box 2319

Toronto, Ontario M4P 1E4

Dear Ms. Marconi:

**Re: EB-2022-0111 – Enbridge Gas – Bobcaygeon Gas Expansion Project
EB-2023-0200 – Enbridge Gas – Sandford Gas Expansion Project
EB-2023-0201 – Enbridge Gas – Eganville Gas Expansion Project
EB-2023-0261 – Enbridge Gas – Neustadt Gas Expansion Project**

I am writing on behalf of Environmental Defence regarding the above gas expansion cases to respond to the questions posed by the OEB on December 28, 2023.

Heat pump evidence

Question: Does Environmental Defence seek to file heat pump evidence as well as survey evidence for each of the above noted natural gas expansion projects, or is Environmental Defence withdrawing its original requests to file evidence relating to cost-effectiveness of heat pumps and the risk that Enbridge's forecast revenue forecast will not materialize due to customers choosing to adopt alternatives to natural gas over time?

Environmental Defence continues to seek to file heat pump evidence. However, as detailed below, we are proposing heat pump evidence that is reduced in scope and cost.

Evidence details

Question: Please provide further details regarding the timing and costs for the evidence (heat pump, survey, or both) that it wishes to submit for each of the above noted Enbridge Gas natural gas expansion projects.

Survey evidence

Environmental Defence wishes to retain a public opinion research firm to conduct community surveys to gauge the likely number of connections and to test the survey and customer connection forecast evidence submitted by Enbridge. Environmental Defence's survey would be similar to Enbridge's survey but would correct a number of methodological errors. For instance, it would expand on the information provided to respondents to also include the average annual

heating costs of gas versus heat pumps prior to asking customers to gauge their likelihood of switching to gas. To avoid any suggestion that those figures are biased, we would use the estimates from the recent gas expansion discussion paper published by the Ministry of Energy (showing that electric heat pumps would save customers in the range of \$700 to \$1,300 each year in gas expansion communities on average, not including savings from cooling).¹ The survey would be conducted by mail, phone, and door-to-door.

By providing the survey respondents with accurate and unbiased information, we believe the survey would produce much more robust results on which to estimate the number of customers that are likely to connect to the gas system. In the very least, it would provide the OEB with a different perspective from Enbridge's. This evidence would also address the main criticisms that Enbridge has made to the evidence that Environmental Defence has proposed to submit previously as well as its criticisms of the survey conducted by Elizabeth Carswell in Sandford.

We anticipate the cost to run the survey in all four communities to be \$26,000 (plus tax). We believe interrogatories can be avoided by providing granular response data. However, interrogatories or a technical conference may involve additional modest cost. I anticipate five hours of incremental counsel time in relation to this work.

This cost is very modest in comparison to the ratepayer funds that are at stake. The Bobcaygeon project alone requires \$142 million in customer revenue over 40 years to break even (i.e. achieve a profitability index of 1) and to avoid further subsidies from existing customers.² The large majority of that revenue (\$120 million) is forecast to occur in years 11 to 40, after the rate stability period, at which point any shortfalls are more likely fall on existing customers.³ However, if the OEB is concerned about the cost, the survey scope could be reduced by limiting it to one community and decreasing outreach methods. However, we believe it would be best to proceed without a reduction in scope in order to maintain a high response rate.

We believe the work could be completed in three weeks if necessary. However, that timing would be very tight and we would prefer to have four weeks to account for contingencies, such as inclement weather that interferes with door-to-door efforts.

Heat pump evidence

Environmental Defence wishes to retain Dr. Heather McDiarmid to prepare a review of Enbridge's evidence relating to the comparison of heat pump and gas heating costs. This would be reduced in scope from the heat pump evidence initially proposed by Environmental Defence, which we believe is possible as Enbridge has submitted additional evidence and the Ministry of Energy has developed its own analysis. The focus of Dr. McDiarmid's evidence would be to respond to Enbridge's evidence, not develop a new model. It is relevant for the same reasons we have previously outlined with respect to Environmental Defence's heat pump evidence and goes

¹ Ministry of Energy, *Future of Natural Gas Expansion and Home Heating Affordability - Discussion Paper for Consultation*, August 2023, p. 10-11 ([link](#)).

² EB-2022-0111, Exhibit I.ED.41, Page 2.

³ *Ibid.*

to the reasonableness of the revenue forecast and the veracity of Enbridge's communications with customers. We may also ask Dr. McDiarmid to comment on the survey script.

This evidence could be completed for \$4,500, plus tax and any time associated with interrogatories. It would involve 2 hours of incremental counsel time. It could be completed in one week if necessary. However, we would request two weeks to address contingencies, such as the exact timing of any OEB procedural order that would start the clock on the time to prepare the evidence.

Future cases

Does Environmental Defence plan to advocate for a heat pump study and/or survey evidence in all future Natural Gas Expansion Program Leave to Construct applications?

A decision regarding survey evidence in future proceedings will depend on a number of unknowns, such as the outcomes of the surveys in this case (if approved), the OEB decisions in this case, and whether Enbridge updates its own survey evidence. For instance, if Enbridge updated its own survey to address the concerns raised by Environmental Defence, additional surveys would not be required in future proceedings.

Timing of evidence

Why did Environmental Defence not request leave to file survey evidence earlier in these proceedings?

Enbridge has alleged that Environmental Defence has filed a "late" request for leave to file survey evidence. This is unfair and inconsistent with OEB practices. Typically, the OEB provides a deadline for intervenors to provide details of any proposed evidence, including the scope and cost, by way of a procedural order.⁴ That step has not occurred in any of these cases. Environmental Defence has had the reasonable expectation that it would have an opportunity to provide details and submissions regarding evidence pursuant to a future procedural order.

The specific proposal to provide survey evidence arises from recent circumstances, including the OEB's decision in recent gas expansion cases, the OEB's decision in Environmental Defence's review motion, and the submissions by other parties made in that motion. The survey evidence is being proposed in part in response to suggestions that evidence on the cost of competing heating technologies is insufficiency probative regarding the customer connection forecast, and is trumped by customer survey evidence. One way we propose to address that argument is by conducting a survey that is balanced and provides customers with the information they need to make informed responses.

In all of these proceedings, the issue of intervenor evidence has been deferred by way of a procedural order or has not been addressed by a procedural order. In this context, it cannot be said that Environmental Defence is "too late." On the contrary, Environmental Defence has been

⁴ See e.g. EB-2021-0002, Decision on Issues List and Procedural Order No. 3, September 9, 2021, p. 16; EB-2022-0157, Procedural Order No. 1, August 12, 2022, p. 4; EB-2022-0200, Procedural Order No. 1, December 16, 2022

proactive in letting the OEB know about its intention to provide survey evidence very soon after the release of the decision in the review motion rather than wait for a procedural order asking for details on proposed intervenor evidence.

Deficiencies in Enbridge Survey

What information does Environmental Defence suggest is deficient in the Enbridge Gas survey that necessitates a new and separate survey by Environmental Defence?

The surveys conducted by Enbridge are biased and unreliable.

Most importantly, the surveys failed to provide key information before asking customers whether they were likely to connect to the gas system. This missing information included the following:

1. That the federal government is offering \$5,000 rebates for customers to switch to high-efficiency electric heat pumps, which are not available for gas furnaces.⁵
2. That the federal government is offering an *additional* \$5,000 in rebates for customers to switch from oil to high-efficiency electric heat pumps if they earn a median income or lower (e.g. \$122,000 after-tax income for a family of 4 in Ontario) through the Oil to Heat Pump Affordability Program.⁶
3. That the federal government is now providing up to \$40,000 in interest free loans, which can be put towards conversions to electric heat pumps, and not gas equipment, through the Greener Homes Loan.⁷ (Note: The survey script does include a vague reference to heat pump rebates.⁸ However, that is a far cry from actually indicating the high level of rebates that are available. In addition, the script fails to note that the rebates *and interest free loans* can make a heat pump installation less expensive than a gas furnace coupled with a traditional air conditioner.)
4. That heat pumps could save a customer approximately \$1,200 in annual heating costs versus a gas furnace for a house with a moderate heat load (or whatever Enbridge's estimated savings are).⁹
5. An estimate of the extra line charge based on the distance of the building from the road.
6. That heat pumps significantly reduce summer cooling costs.

⁵ EB-2022-0249, Exhibit I.ED.20 & Exhibit I.ED.5 (substantially the same script has been used in each gas expansion area – see EB-2022-0111, Exhibit I.ED.10).

⁶ EB-2022-0249, Exhibit I.ED.20 & Exhibit I.ED.5.

⁷ EB-2022-0249, Exhibit I.ED.20 & Exhibit I.ED.5.

⁸ EB-2022-0249, Exhibit I.ED.5, Attachment 1, Page 52.

⁹ EB-2022-0249, Exhibit I.ED.16, Attachment 7, Ottawa, 4 Ton Heating Load, “Cost savings” row, averaged; EB-2022-0249, Exhibit I.ED.5.

7. That natural gas is a potent greenhouse gas and its combustion generates approximately 1/3rd of Ontario's greenhouse gas emissions.¹⁰
8. That heat pumps result in far less greenhouse gas emissions than gas furnaces.¹¹

Instead of noting the concrete benefits of heat pumps, the script emphasizes that a heat pump may require ductwork changes and an electrical upgrade, even though these are often not required.¹²

Enbridge's decision not to provide customers with an estimate of the savings from installing a heat pump versus a gas furnace is particularly concerning. Enbridge *does* tell customers how much they will save as between gas and oil, propane, or electric baseboards.¹³ There is no reason why Enbridge could not do this for heat pumps as well. Although the upfront costs vary, the operating costs of heat pumps are as consistent as the operating costs of the other heating systems that Enbridge forecasts.

The survey script is also misleading. For example:

1. It states that heat pumps “could result in lower annual operating costs compared to other energy sources.”¹⁴ The impression left by this statement is that some modest savings are merely possible. In contrast, Enbridge's own analysis shows that heat pumps result in far lower annual operating costs that *in each and every scenario* examined – ranging from \$10,000 to \$20,000 lower operating costs over the lifetime of the equipment.¹⁵
2. The script refers to “high upfront costs” for heat pumps and implies that they are greater than gas upfront costs.¹⁶ However, heat pumps likely have lower upfront costs versus gas equipment (a) in homes heated with baseboards (see above re ductless heat pumps), (b) in rural buildings with high extra length charges, and (c) in homes receiving the \$10,000 Oil-to-Heat-Pump rebate. In other cases, heat pumps will still often be cheaper than a gas furnace and traditional air conditioner after accounting for the federal rebates and interest free loan.
3. The script also leaves the impression that it is a challenge to heat homes with heat pumps in cold climates without “specialized” equipment or “a supplementary heating source.”¹⁷ In reality, all that is needed is an inexpensive built-in backup heating coil that comes standard in markets like Ontario.

¹⁰ EB-2022-0249, Exhibit I.ED.5.

¹¹ *Ibid.*

¹² EB-2022-0249, Exhibit I.ED.5, Attachment 1, Page 52.

¹³ EB-2022-0249, Exhibit I.ED.5, Attachment 1, Page 58 (“With the surcharge added, an average home will save approximately [H5SEL] per year by switching heating equipment to natural gas. Savings are likely greater for businesses Considering this, how likely are you to convert your heating system to natural gas?”).

¹⁴ EB-2022-0249, Exhibit I.ED.5, Attachment 1, Page 52.

¹⁵ EB-2022-0249, Exhibit I.ED.16, Attachment 7, Ottawa, 4 Ton Heating Load, “Cost savings” row, averaged; EB-2022-0249, Exhibit I.ED.5.

¹⁶ EB-2022-0249, Exhibit I.ED.5, Attachment 1, Page 52.

¹⁷ EB-2022-0249, Exhibit I.ED.5, Attachment 1, Page 52.

The lack of information on heat pumps is a problem because current customer knowledge of heat pumps is low but increasing. Customers are likely to learn more before they actually invest in new equipment. Over the 10-year customer connection forecast, knowledge will be greater than it was back in 2022 when the surveys were conducted. Until recently, gas was the cheapest way to heat a home. Most customers likely assume that to be the case. But that has changed because of the following:

- Advancements in heat pump efficiency, which lowers heating costs;
- The advent of cold climate heat pumps and built-in backup electric heating elements;
- The federal government's rebates and interest free loan program;
- The carbon price, which was only established in 2019 and adds 12.39 cents/m³ now, and will add 32.40 cents/m³ by 2030.¹⁸

In this changing environment, it is not sufficiently reliable to base revenue forecasts on the state of customer knowledge in 2022 when the surveys were conducted. That knowledge has already evolved by now and will keep evolving over the revenue horizon. Enbridge could have corrected for this factor by informing customers of the above details in its survey scripts, but it did not do so.

Future Enbridge Surveys

What specific information might Enbridge Gas provide to future survey respondents that would satisfy Environmental Defence's concern regarding the economics of heat pumps versus natural gas?

To generate more accurate results, the Enbridge surveys should include heat pumps in operating cost comparisons provided to customers and provide more balanced information on heat pump pros, cons, and costs. For more details, see the answer to the question above. For future Enbridge surveys, Environmental Defence would be happy to work with Enbridge to come up with proposed changes to the script, if Enbridge was open to do so.

Future Gas and Electric Costs; Retrofit Costs; Future Subsidies

What information would Environmental Defence seek to provide to the community in a survey that is related to the future costs of electricity and natural gas?

What information would Environmental Defence include in the survey related to the potential need and costs for household renovations to accommodate a heat pump into an existing home?

Does Environmental Defence expect the current levels of heat pump subsidies to continue for the duration of these projects' pay-back periods?

Environmental Defence would work with the public opinion research firm and Dr. McDiarmid to ensure that the survey script provides fair information about gas costs, electricity costs, and fuel switching costs. With respect to future gas and electricity costs, it is uncertain how they will

¹⁸ Enbridge Gas, Federal Carbon Charge ([link](#)).

change as a result of decarbonization over the 40-year project pay-back periods. Expert evidence provided in Enbridge’s rebasing case found that decarbonized gas (i.e. renewable natural gas) would raise the cost of gas heating far more than decarbonized electricity (i.e. renewable energy) would raise the cost of electric heating.¹⁹ However, it is likely best if the survey script avoids predictions about future prices and instead notes that future heating costs will depend on future energy prices.

Uncertainties around future energy prices and variability in fuel switching costs would not be valid reasons to reject Environmental Defence’s proposed evidence. Those factors also impact fuel switching to gas, and thus impact the information provided in Enbridge’s own survey. For instance, Enbridge’s survey script already provides price comparisons that depend on the differential between gas and electricity prices – namely cost differential between gas heating and electric resistance heating. It also provides information about the need for home renovations to accommodate fuel switching. For gas, those renovations are greatest when moving from electric resistance baseboards as it requires ductwork, the price of which can vary considerably and be very high.

With respect to the specific question of whether we expect the subsidies for heat pumps to continue for the 40-year revenue horizon, it is not possible to predict. But that question appears to be getting at a broader question of how the relative all-in cost of heating with heat pumps and gas might change over time. All indications are that heat pumps will continue to become less and less expensive vis-à-vis gas. That is in part because decarbonized gas heating is far more expensive than decarbonized electric heat pump heating.²⁰ Furthermore, heat pumps are continuing to get more and more efficient and equipment prices are expected to decrease as they become more widespread.

Enbridge Allegation of Bias and Omissions

Enbridge’s letter of December 21, 2023 suggests that Environmental Defence’s survey will be biased and will omit critical information. There is no basis for those allegations. It is Enbridge that has a vested interest in increasing capital spending and gas demand in order to increase its profits.

New Survey Needed to Correct Misinformation

Finally, we note that a new survey is needed to ensure that the responses are based on accurate information. Enbridge has been using deceptive marketing materials in gas expansion communities that tell potential customers that gas is the cheapest way to heat homes. That is not true.²¹ Enbridge is currently the subject of an active Competition Bureau Inquiry for these allegedly deceptive marketing materials. This Inquiry was requested by Environmental Defence,

¹⁹ Evidence of the Energy Futures Group in OEB File # EB-2022-0200, p. 24-26 ([link](#)).

²⁰ Evidence of the Energy Futures Group in OEB File # EB-2022-0200, p. 24-26 ([link](#)).

²¹ See, for instance, the Evidence of the Energy Futures Group in OEB File # EB-2022-0200, p. 23 ([link](#)); Dr. Heather McDiarmid, *An Analysis of the Financial and Climate Benefits of Electrifying Ontario’s Gas-Heated Homes by Installing Air-Source Heat Pumps*, August 2, 2022, p. 11 ([link](#)); Corporate Knights, *GREEN house effect: Calculate the savings from electrifying your home*, June 20, 2023 ([link](#)); Ontario Ministry of Energy, Discussion Paper, August 2023, pp. 10-11 ([link](#)).

the Ontario Clean Air Alliance, the Canadian Association of Physicians for the Environment, and a number of local residents in gas expansion areas. A copy of the request for this Inquiry is attached.

Yours truly,

A handwritten signature in blue ink, appearing to read 'K. Elson', written in a cursive style.

Kent Elson

cc: Parties in the above proceeding



environmental
defence
INSPIRING CHANGE

June 19, 2023

Josephine Palumbo

Deputy Commissioner, Deceptive Marketing Practices
Competition Bureau
Place du Portage I
50 Victoria Street, Room C-114
Gatineau, Quebec K1A 0C9
Josephine.Palumbo@canada.ca

Dear Ms. Palumbo,

Re: Enbridge Gas Deceptive Marketing Practices

We are writing to request that the Commissioner of Competition commence an inquiry into deceptive marketing practices by Enbridge Gas Inc. (“Enbridge”) under s. 9 of the *Competition Act*. As detailed below, Enbridge is misleading consumers into connecting to its gas system using false and misleading representations contrary to sections 52 and 74.01 of the *Competition Act*. Enbridge is telling potential customers that gas is the most cost-effective way to heat their homes and suggesting that it is “clean energy” and “low carbon.” None of these representations are true.

These representations are causing real harm. Customers in gas expansion areas stand to lose approximately \$20,000 on average if they switch to gas instead of installing a high-efficiency electric heat pump (over the lifetime of the equipment).¹ This will also create far more carbon pollution, making it more difficult and expensive to reach federal climate targets.

We also request temporary orders to stop Enbridge from deceiving potential customers while the proceeding progresses. Enbridge is making these false and misleading representations on an ongoing basis. With each week that passes, more customers sign up to convert their heating to gas instead of purchasing a high-efficiency electric heat pump resulting in unnecessarily high energy costs and carbon pollution to the detriment of consumers, competition, and the climate.

¹ Dr. Heather McDiarmid, *An Analysis of the Financial and Climate Benefits of Electrifying Ontario’s Gas-Heated Homes by Installing Air-Source Heat Pumps*, August 2, 2022, p. 11 ([link](#)); For the difference in costs with the latest gas prices, see Ontario Clean Air Alliance, *Heat Pump Calculator for New Gas Communities* ([link](#)); see also Evidence of the Energy Futures Group in Ontario Energy Board File # EB-2022-0200, p. 23 ([link](#)). The actual savings depend on a variety of factors. See pages 5 and 6 for examples.

Background

Enbridge Inc. and Methane Gas

Enbridge owns nearly all of the methane gas distribution pipelines in Ontario. Methane gas is commonly known as “natural gas”. However, methane gas is a potent greenhouse gas that pollutes the environment and causes climate change when it is burned and when it leaks from hydraulic fracturing extraction sites, pipelines, storage facilities, and customer equipment. The combustion of methane gas alone is responsible for approximately one-third of Ontario’s greenhouse gas emissions.² Heating homes and businesses with gas accounts for approximately 19% of Ontario’s green house gas emissions.³

In Ontario, Enbridge earns profit by investing in gas pipelines. It therefore has a strong financial interest in encouraging Ontario homes and businesses to switch to gas and remain with gas. The more capital that needs to be invested in pipelines, the more Enbridge stands to earn in profit. Enbridge also has a strong financial interest in gaining and keeping customers to pay for the pipelines it has already built through gas distribution charges that are levied on all customers on their gas bills.

Enbridge has no real competition when it comes to the distribution of gas in Ontario.⁴ Due to a past market consolidation, Enbridge serves over 99.7% of all gas customers in the province.⁵

Enbridge’s main competitors in Ontario are in fact electricity distribution companies. Most of these electricity distribution companies are owned by municipalities, like Toronto Hydro or Hydro Ottawa. The biggest threat to Enbridge’s business is that its customers convert from gas heating to high-efficiency electric cold climate heat pumps. Another threat is that customers with expensive oil heating decide to switch to electric heat pumps instead of gas.

Enbridge has an additional interest in gaining and keeping gas customers in Ontario because it and its parent and sister companies own many of the large gas transmission pipes that bring gas to Ontario and move it between regions within

² Enbridge Evidence in Ontario Energy Board File #EB-2022-0200, Exhibit 1, Tab 10, Schedule 3, Page 2 ([link](#)).

³ Dr. Heather McDiarmid, *An Analysis of the Financial and Climate Benefits of Electrifying Ontario’s Gas-Heated Homes by Installing Air-Source Heat Pumps*, August 2, 2022, p. 8 ([link](#)).

⁴ Gas distribution pipelines are a natural monopoly. Each gas distribution company has a monopoly in the area it serves.

⁵ Ontario Energy Board, *Yearbook of Natural Gas Distributors, 2021/22*, p. 15 ([link](#)).

Ontario. If gas demand stops growing or falls, Enbridge and its parent and sister companies could lose revenue.

The Context: Gas Expansion Communities

The deceptive marketing in this case was (and continues to be) directed to customers in gas expansion communities. These are small existing communities that Enbridge is adding to its gas system through a government program.⁶ Like everywhere else in its system, Enbridge has an interest in signing up new customers in these communities, to help to trigger “upstream” capital investments that Enbridge profits from. New customers also help to generate the revenue needed to pay for existing infrastructure.

Enbridge has a particularly strong interest in signing up new customers in these gas expansion communities because it is required to maintain a “ten-year rate stability period” for each project.⁷ That means that Enbridge bears the financial risk for that ten-year period that too few customers connect to the new pipeline to pay for it.⁸

The Competition: High-Efficiency Cold Climate Heat Pumps

For a long time, methane gas was the cheapest way to heat homes. However, electric cold climate heat pumps are now much cheaper than gas for consumers.⁹ Annual costs are lower because heat pumps are approximately three times more efficient than gas furnaces (or five times for ground-source heat pumps, also known as geothermal) and because customers can avoid paying monthly charges to Enbridge for use of its gas system.¹⁰ Upfront equipment costs are also often lower because heat pumps provide both heating and cooling in one unit and because of federal rebates.

Heat pumps are so efficient because they *move* heat instead of *converting* gas or electricity into heat. Standard gas and electric heating cannot surpass 100% efficiency, whereas heat pumps can be multiple times more efficient – they can use 1 kW of electricity to move 3 kW of heat (or more) indoors. They can do this even

⁶ For background on the program, see: Globe and Mail, *Ontario increasing reliance on natural gas as others move away from fossil fuels*, June 11, 2021 ([link](#)).

⁷ Ontario Energy Board, Letter Re Potential Projects to Expand Access to Natural Gas Distribution, March 5, 2020. p. 7-8 ([link](#)).

⁸ *Ibid.*

⁹ Evidence of the Energy Futures Group in Ontario Energy Board File # EB-2022-0200, p. 23 ([link](#)); Dr. Heather McDiarmid, *An Analysis of the Financial and Climate Benefits of Electrifying Ontario’s Gas-Heated Homes by Installing Air-Source Heat Pumps*, August 2, 2022, p. 11 ([link](#)); For the difference in costs with the latest gas prices, see Ontario Clean Air Alliance, *Heat Pump Calculator for New Gas Communities*, ([link](#)).

¹⁰ National Resources Canada, *Heating and Cooling With a Heat Pump*, ([link](#)).

in cold temperatures because, counterintuitively, there is still a great deal of heat energy in very cold air.¹¹

Customers are very vulnerable to deceptive advertising about the benefits of gas heating because most are not aware of heat pumps or the advancements that have been made in heat pumps in recent years. Recent changes that have made heat pumps less expensive than gas heating include the following:

- The efficiency of heat pumps has been increasing with advancements such as variable speed compressors.¹² Units available in Canada are up to 380% efficient even in cold areas like Ottawa (and more for ground source heat pumps).¹³ More efficient units are cheaper to operate because they use less electricity.
- Heat pumps are now able to provide heating in Ontario's cold winters.¹⁴
- Canada's steadily increasing price on carbon pollution makes gas heating more and more expensive every year vis-à-vis electrical heating. By 2030, the carbon pollution price on gas will equal 32.40 cents/m³.¹⁵ By comparison, that amounts to over *three times* the price charged by Enbridge for methane gas in Toronto in January of 2020 (10.19 cents/m³).¹⁶

¹¹ National Resources Canada, *Heating and Cooling With a Heat Pump*, ([link](#)) ("It may be surprising to know that even when outdoor temperatures are cold, a good deal of energy is still available that can be extracted and delivered to the building. For example, the heat content of air at -18°C equates to 85% of the heat contained at 21°C. This allows the heat pump to provide a good deal of heating, even during colder weather.")

¹² Enbridge Gas, *Federal Carbon Charge* ([link](#)).

¹³ National Resources Canada, *Heating and Cooling With a Heat Pump* ([link](#)). National Resources Canada notes: "On a seasonal basis, the heating seasonal performance factor (HSPF) of market available units can vary from 7.1 to 13.2 (Region V). It is important to note that these HSPF estimates are for an area with a climate similar to Ottawa. Actual savings are highly dependant on the location of your heat pump installation." Most Ontarians live south of Ottawa. The conversion factor between HSPF and a seasonal Co-Efficient of Performance (sCOP) is HSPF*0.293. An HSPF of 13.2 amounts to an sCOP of 3.8676, which equates to the heat energy output from the unit being 386% of the electrical energy input into the unit.

¹⁴ National Resources Canada, *Heating and Cooling With a Heat Pump*, ([link](#)) ("More recently, air-source heat pumps that are better adapted to operating in the cold Canadian climate have been introduced to the market. These systems, often called cold climate heat pumps, combine variable capacity compressors with improved heat exchanger designs and controls to maximize heating capacity at colder air temperatures, while maintaining high efficiencies during milder conditions.")

¹⁵ Enbridge, *Federal Carbon Charge* ([link](#)).

¹⁶ Ontario Energy Board, *Historical Natural Gas Rates* ([link](#)).

- The federal government is now providing \$5,000 incentives for customers to switch to high-efficiency electric heat pumps as part of its Greener Homes Grant.¹⁷
- The federal government is now providing an *additional* \$5,000 in incentives for customers to switch from oil to high-efficiency electric heat pumps if they earn a median income or lower (e.g. \$122,000 after-tax income for a family of 4 in Ontario) through the Oil to Heat Pump Affordability Program.¹⁸
- The federal government is now providing up to \$40,000 in interest free loans, which can be put towards conversions to electric heat pumps, and not gas equipment, through the Greener Homes Loan.¹⁹

A typical homeowner in a gas expansion community would save approximately \$20,000 with an electric heat pump versus gas heating over the lifetime of their heating equipment.²⁰ These savings mainly come from lower ongoing heating costs and cooling costs, which arise because electric heat pumps are more efficient at heating and cooling in comparison to traditional gas equipment paired with an air conditioner. As noted above, savings can also arise from lesser upfront costs. The \$20,000 savings figure does not incorporate the benefit from interest-free financing available for heat pumps or the new \$5,000 oil to heat pump incentive.

The actual savings will fluctuate depending on building characteristics, energy prices, and assumptions such as equipment costs. For instance, the savings from heat pumps will decline if, for example, gas prices drop or if a customer requires an upgrade to their electrical panel for the heat pump (which costs approximately \$2,000).²¹ On the other hand, savings from heat pumps will increase if gas prices increase, a house is heated with electric baseboards (because gas heating requires approximately \$7,000 to add ducts whereas heat pumps can be installed without ducts),²² or a customer with oil heating is eligible for \$10,000 in federal rebates.²³ An expert analysis conducted by the Energy Futures Group found that heat pumps are still cheaper on a full lifetime basis even if various assumptions are adjusted to

¹⁷ Government of Canada, *Canada Greener Homes Grant* ([link](#)).

¹⁸ Government of Canada, *Oil to Heat Pump Affordability Program* ([link](#)).

¹⁹ Government of Canada, *Canada Greener Homes Loan* ([link](#)).

²⁰ Dr. Heather McDiarmid, *An Analysis of the Financial and Climate Benefits of Electrifying Ontario's Gas-Heated Homes by Installing Air-Source Heat Pumps*, August 2, 2022, p. 11 ([link](#)); For the difference in costs with the latest gas prices, see Ontario Clean Air Alliance, *Heat Pump Calculator for New Gas Communities*, [link](#); see also Evidence of the Energy Futures Group in Ontario Energy Board File # EB-2022-0200, p. 23 ([link](#)).

²¹ Evidence of the Energy Futures Group in Ontario Energy Board File # EB-2022-0200, p. 24 ([link](#)).

²² Enbridge, *Response to Board Staff Interrogatory 4 in EB-2022-0249*, Exhibit I.STAFF.4 ([link](#), pdf page 23).

²³ Government of Canada, *Oil to Heat Pump Affordability Program* ([link](#)); Government of Canada, *Canada Greener Homes Grant* ([link](#)).

favour gas heating even outside community expansion areas where the 23 cents/m³ surcharge applies.²⁴

False and misleading representations

Enbridge is misleading customers into connecting to its gas system through deceptive marketing. These representations are being made in materials sent by mail, delivered at the doorstep, and posted at community events. A full package of these materials is attached. They are discussed below.

Deceptive representation 1: That gas is the most cost-effective way to heat homes

Various Enbridge marketing materials explicitly state that gas is the most cost-effective way to heat homes. That is false. As noted above, electric heat pumps are far less expensive for homes in Ontario. An example is excerpted below:

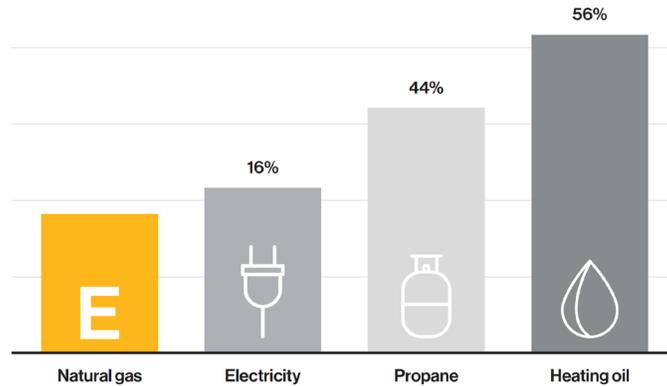


In addition, other materials may not *explicitly* say that gas is the most cost-effective way to heat homes, but they leave that general impression. This includes the “annual cost comparison” bar chart shown below:

²⁴ See, for example, the analysis in the following evidence at pages 23-24 of cost-effectiveness based on different assumptions: Evidence of the Energy Futures Group in Ontario Energy Board File # EB-2022-0200, pp. 23-24 ([link](#)).

Residential annual heating bills

Annual cost comparison:
space and water heating*



In addition, the above bar chart explicitly states that gas heating is less expensive than electric heating, which is false. As noted above, electric heat pumps are much less expensive. Old-style electric baseboard heaters may be more expensive than gas, but that is not what Enbridge's materials state – either in the main body of the materials or the fine print. They state that annual heating is cheaper with "natural gas" versus "electricity." As another example, see the following letter sent to residents:



We're proud to energize the Township of Selwyn!

Dear Selwyn Resident,

Now's the time to apply for natural gas

We have some good news to share with you. Your address is identified as in scope for receiving natural gas shortly, and we want to make sure you're in the best position to connect as soon as possible. By signing up now, we'll be able to prioritize your service install as soon as the natural gas main is installed in front of your house. You may see us working on your street, including items such as survey stakes or locates.

If you're considering converting to natural gas, the earlier you apply the better as permits and locates can take time.

Refer to the Four-Step Process card when you're ready to apply, then visit enbridgegas.com/savewithgas to start your application. You're required to agree to the Terms and Conditions – either electronically during sign up at enbridgegas.com/savewithgas, or you can complete and email this to our Community Expansion Advisors at ceapplications@enbridge.com when the form is complete.

Unlock the value of natural gas

When compared to using electricity, propane or oil, natural gas could save you up to 54%* per year on home and water heating costs. Natural gas is also the most affordable way to run appliances like ranges, clothes dryers and barbecues.

Various Enbridge marketing materials state that customers will save money by switching to gas. That may be true if a customer is switching from oil or propane. But it is highly misleading because it omits two important caveats: (a) customers could save far more by switching to an electric heat pump instead and (b) customers who already have a heat pump (which are admittedly few) would lose money by switching. An example is excerpted below:



Deceptive representation 2: That methane gas is “low carbon” and “clean energy”

Various Enbridge marketing materials use deceptive wording relating to heating by methane gas, including “low carbon” and “clean energy.” They leave the general impression that methane gas can be accurately described with those terms and that switching to gas is environmentally conscious, which is false. Methane gas is a potent greenhouse gas that pollutes the environment and causes climate change when it is burned and when it leaks without being combusted.

Switching from propane or oil to gas may result in lower carbon emissions. But switching from electricity to gas will result in *higher* carbon emissions. And heating with heat pumps results in the lowest carbon emissions.

Two examples of deceptive representations are excerpted below:

Why choose natural gas?

- **More affordable, reliable and abundant**
- **Comfort and convenience**
- **Part of a clean energy future**

Lower carbon emissions

Natural gas is cleaner than other fuels and can help reduce your home's carbon footprint.

Knowledge

Enbridge knows that the above representations are false, that gas is not the most cost-effective way to heat homes, and that gas is a potent greenhouse gas that contributes far more to climate change when used to heat homes in comparison to electricity.

Knowledge re cost-effectiveness of heat pumps

In 2020, Enbridge acknowledged in an Ontario Energy Board proceeding that customers would have higher annual heating costs with gas in comparison to high-efficiency electric heat pumps in gas expansion communities. This would have certainly come to the attention of upper-level Enbridge managers because it was discussed in a report of Ontario's Auditor General. The report contained the following passage:

For example, in 2020, the OEB approved a utility proposal to construct a \$10.1-million natural gas pipeline to connect new customers in North Bay. An Enbridge survey had indicated there was interest in doing so from homeowners who were using costly oil, propane or low-efficiency electric baseboards for heating. Once approved by the OEB, the project was eligible to receive a subsidy of \$8.7 million to be paid by existing ratepayers. Without this subsidy the project was not economically feasible for the estimated 134 potential new natural gas customers. Even with an average subsidy of \$65,000 per potential new customer, **the utility estimated that the potential customers would have higher annual heating costs than if high-efficiency electric heat pumps were used.** (emphasis added)²⁵

Enbridge is also aware that heat pumps are more cost effective than gas from evidence in other proceedings it has been involved in and from a recent decision of the Ontario Energy Board, which approved incentives to switch from gas to electric heat pumps on the basis that this would be "a major benefit for customers."²⁶

²⁵ Office of the Auditor General of Ontario, *Value-for-Money Audit: Reducing Greenhouse Gas Emissions from Energy Use in Buildings*, November 2020, p. 18 ([link](#)).

²⁶ Ontario Energy Board, *Decision and Order in EB-2021-0002*, November 15, 2022, p. 28 ([link](#)).

Knowledge that methane gas is not “low carbon” or “clean energy”

According to Enbridge’s own evidence in Ontario Energy Board proceedings:

- The combustion of methane gas is responsible for approximately one-third of Ontario’s greenhouse gas emissions;²⁷ and
- Gas heating results in far more carbon emissions than electric heating, even if the electric heating is with baseboards instead of high-efficiency electric heat pumps.²⁸

Harm

Enbridge’s deceptive representations cause significant harm whenever they succeed in convincing a customer to connect to Enbridge’s gas system instead of lowering their bills with heat pumps. Most obviously, it will result in approximately \$20,000 in unnecessary costs to the customer over the lifetime of the equipment.

In addition, customers are often effectively locked into gas when they connect to the gas system. For a customer to switch over to gas, they typically must spend thousands of dollars replacing their heating equipment. Enbridge estimates the cost at \$5,000 for a home heated with oil and \$12,000 for a home heated with electric baseboards.²⁹ This effectively locks those customers into gas because it is most cost-effective to switch to an electric heat pump when your existing heating equipment requires replacement in any event. That time of “natural replacement” will not occur until their new gas equipment comes to the end of its life in roughly 15 years. Stated differently, the switch to gas wastes money on gas equipment that could have been spent switching over to a heat pump instead.

There are negative impacts on competitors too. More people converting to gas means less demand for heat pumps. This negatively impacts heat pump manufacturers, distributors, and installer. It also negatively impacts companies that generate or transport electricity.

²⁷ Enbridge Evidence in Ontario Energy Board File #EB-2022-0200, Exhibit 1, Tab 10, Schedule 3, Page 2 ([link](#))

²⁸ Enbridge Response to Interrogatories in EB-2019-0188, Exhibit I.ED.7, Attachment 1, Page 2 ([link](#), pdf page 180).

²⁹ Enbridge, *Response to Board Staff Interrogatory 4 in EB-2022-0249*, Exhibit I.STAFF.4 ([link](#), pdf page 23). According to Enbridge, customers can convert their existing propane furnace to burn methane gas for \$600. However, these customers lose the benefit of securing new heating and cooling equipment and would need to incur future equipment replacement costs when their furnace and/or their air conditioner reaches the end of its life. They will also end up with higher heating and cooling costs.

Society as a whole suffers as well. If fewer heat pumps are installed, Ontario's carbon pollution will be higher and it will be more difficult and more expensive to meet our carbon reduction targets. The carbon impacts are particularly problematic because they will persist for the lifetime of the equipment in question. If a consumer installs a gas furnace instead of a heat pump today, that choice could continue to result in higher-than-necessary carbon pollution until 2040.

Temporary orders

Environmental Defence requests that the Commissioner apply for a temporary order to stop the harm described above. Enbridge forecasts connecting 3,855 customers to its gas system in these gas expansion communities alone over 2023 to 2025.³⁰ If a temporary order is not made, thousands of customers could connect to the gas system while this matter is under consideration, losing approximately \$20,000 each on average.

We therefore request an order that Enbridge write to all customers in the gas expansion communities and provide information on the cost-effectiveness of electric heat pumps versus gas equipment for an average customer, including all lifetime costs (equipment, heating, and cooling costs), and specific details of the rebates available for customers from the federal government, with the content to be approved by the Commissioner.

In addition, a temporary order is warranted regarding ongoing marketing. We also request an order that all future marketing materials that refer to the price of gas versus other energy options indicate the comparative cost-effectiveness of electric heat pumps versus gas equipment for an average customer, including all lifetime costs (equipment, heating, and cooling costs), and specific details of the rebates available for customers from the federal government, with the content to be approved by the Commissioner.

Disclosure re other marketing

This request primarily focuses on the deceptive marketing to customers in community expansion areas as these are the only marketing materials that we have access to. However, it is likely that deceptive representations are being made to other potential customers. This likely includes broad-based marketing and materials used with other prospective homeowners inquiring about switching to gas as well as builders and subdivision developers considering which equipment to install in new construction. These other potential customers are important. Enbridge forecasts

³⁰ Enbridge Gas Inc., Answer to Interrogatory from Environmental Defence in Ontario Energy Board File # EB-2022-0200, Exhibit I.2.6-ED-94, p. 5, ([link](#)) (The forecast customers over 2021 to 2023 are 2,150).

connecting over 100,000 customers between 2023 and 2025 alone (with over 13,000 switching to gas and the remaining as new construction).

We therefore request that the Commissioner require Enbridge to disclose all materials with representations relating to potential savings arising from gas, including advertising and materials that Enbridge has provided to homeowners, builders, and subdivision developers.

Although the savings from heat pumps are highest in gas expansion areas where the 23 cents/m³ charge applies, heat pumps are still much less expensive for the average customer outside these areas.³¹ These other customers are very numerous and will still lose large sums if they end up purchasing gas equipment instead of electric heat pumps.

Conclusion

Enbridge's marketing materials combine both falsehoods about the true cost of heating with gas and deceptive greenwashing. Consumers are highly susceptible to these falsehoods and deceptive messages because heat pump awareness is very low among most Ontarians. We ask that the Commissioner commence an inquiry, require further disclosure from Enbridge on its other marketing materials, institute proceedings, seek interim orders to stop the ongoing deception, and request the maximum penalties, all for the sake of protecting consumers, competition, and the climate.



Keith Brooks
Programs Director
Environmental Defence

Attachment 1: Material required by s. 9 of the *Competition Act*

Attachment 2: Marketing material in community expansion areas

³¹ Evidence of the Energy Futures Group in Ontario Energy Board File # EB-2022-0200, p. 23 ([link](#)); Dr. Heather McDiarmid, *An Analysis of the Financial and Climate Benefits of Electrifying Ontario's Gas-Heated Homes by Installing Air-Source Heat Pumps*, August 2, 2022, p. 6 ([link](#)).