

ONTARIO ENERGY BOARD

EB-2019-0188

IN THE MATTER OF the *Ontario Energy Board Act*, 1998, S. O. 1998, c. 15, Schedule B;

AND IN THE MATTER OF an application for leave to construct natural gas pipelines and associated facilities in the City of North Bay

SUBMISSIONS OF ENVIRONMENTAL DEFENCE

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Introduction

Enbridge proposes to build a \$10.1 million pipeline to connect an estimated 134 new customers to the natural gas distribution system over 10 years.¹ This will cost approximately \$75,000 per new customer.² The majority (\$65,000 per new customer) will be paid through a subsidy from existing customers.³ This project is expensive – it is essential that customers be fully protected from the risk of further financial liability.

This project involves substantial financial risks because the forecast revenue depends on customers spending significant sums to convert their buildings to natural gas. If fewer customers convert than forecast, the project will result in financial losses. Without mechanisms to protect against this, the risk is unfairly borne by existing gas customers.

This risk higher today because climate change is causing accelerating changes in energy use patterns. In particular, regulation and market forces are increasing the attractiveness of alternatives to fossil fuels. For example, efficient electric heat pumps are now cheaper than natural gas in terms of annual home heating costs and will likely be eligible for zero-interest eco-financing the federal government has promised.⁴ If the scales continue to tip against fossil fuels,

¹ Exhibit B, Tab 1, Schedule 1, p. 6, para 11 (cost of \$10.1 million, customer attachments of 134).

² Exhibit B, Tab 1, Schedule 1, p. 6, para 11 (cost of \$10.1 million, customer attachments of 134); calculation: $10,100,00 / 134 = \$75,373.13$.

³ Exhibit B, Tab 1, Schedule 1, pp. 1 & 6 (subsidy of \$8.7 million, customer attachments of 134); calculation: $\$8.7 \text{ million} / 134 = \$64,925.37$.

⁴ Exhibit I.ED.9, p. 2 (Enbridge estimates heat pumps will cost \$150 to \$250 less than natural gas in terms of annual home heating costs after accounting for the surcharge.); Federal Liberal Platform, 2019, p. 32 ([link](#)).

fewer customers will convert to gas and financial losses will increase for this pipeline. These submissions are aimed at protecting customers from this significant risk.

As you might expect, Environmental Defence does not support subsidies to fund the expansion of fossil fuel infrastructure in the midst of a climate crisis. However, we understand that this broader question is outside of the scope of this proceeding. Our comments are limited to proposed changes to better protect the interests of gas consumers with a particular focus on the financial risks associated with climate change.

Revenue Shortfall Liability

Years 1-10: no deferred recovery for shortfalls arising in years 1-10

Environmental Defence requests that the OEB confirm in its decision or in conditions that revenue shortfalls arising in the first ten years cannot be recovered by Enbridge from customers after the end of the initial rate stability period. We asked Enbridge to undertake this and were surprised that it declined to do so.⁵ Instead, it said that it would seek to recover revenue shortfalls arising in the first ten years in base rates at the end of the rate stability period. Enbridge stated as follows in response to Environmental Defence Interrogatory 3(b) regarding shortfalls in years 1-10:

Any revenue shortfalls or surpluses associated with this Project will be eligible for recovery or reduction in base rates at the end of the Rate Stability Period. The only difference in this case from any other utility capital project undertaken by the Company is that such recovery or reduction is delayed until the end of the Rate Stability Period for this Project.⁶

Enbridge is saying that it will seek to recover shortfalls arising in years 1-10 at a later time. The “only difference”, according to Enbridge, is that any such recovery is “delayed.” This is inconsistent with the OEB decision in the Generic Proceeding on Community Expansion.⁷ It is also inconsistent with the OEB decision in the Union Gas expansion proceeding, which stated: “Union will not attempt to recover any forgone revenue for the expansion projects if the forecasted attachments or volumes are not achieved during the first 10 years of the projects.”⁸ We ask that the OEB make it fully clear in its decision or in conditions that revenue shortfalls arising in years 1-10 cannot be recovered at any time, including on a deferred basis after year 10.

⁵ Exhibit I.ED.3(b).

⁶ Exhibit I.ED.3(b) [emphasis added].

⁷ EB-2016-0004, *Decision with Reasons, Generic Proceeding on Community Expansion*, November 17, 2016, p. 18-21.

⁸ EB-2015-0179, *Decision and Order, Union Gas Limited Community Expansion Application*, August 10, 2017, p. 12.

Years 11-40: no cross-subsidies to recover shortfalls arising in years 11-40

Environmental Defence requests that the OEB confirm in its decision or in conditions that revenue shortfalls arising in years 11-40 should not be recovered through cross-subsidies. As noted above, Enbridge seeks to recover any revenue shortfalls “in base rates” after the end of the rate stability period.⁹ This is contrary to the OEB decision in the Union Gas expansion proceeding (EB-2015-0179). The OEB specifically addressed the possibility that Union would seek recovery for shortfalls arising after year 10 and ruled out a cross-subsidy from base rates. It said:

The OEB will determine the appropriate revenue recovery methodology at that time. The OEB’s determination in the Generic Proceeding that cross-subsidies from existing customers are inappropriate will govern that review.¹⁰

Environmental Defence asks that the Board confirm this critical proviso with respect to Enbridge’s current application.

This confirmation is also necessary to ensure compliance with the OEB decision in the generic proceeding on community expansion. The OEB determined that there should *not* be any cross-subsidies and did not create an exception to that rule. For example, it determined that “there will be no risk to existing ratepayers” (emphasis added).¹¹ Similarly, it stated that existing customers will be held harmless:

As mentioned above the rate stability feature of the framework introduces a discipline that significantly reduces the need to scrutinize a proponent’s projected revenues. As the rates will be stand-alone and designed to cover the costs of the proposed expansion **the existing customers will be held harmless.** (emphasis added)

Enbridge appears to interpret the rate stability period discussed in the Generic Proceeding decision as allowing shortfalls arising in years 11-40 to be cross-subsidized via base rates. This misunderstands the Generic Proceeding decision. The rate stability period is meant to protect potential new customers. It does *not* create an exception to the rule against cross-subsidies or decrease protections for existing customers. Enbridge can seek to increase rates for new customers to cover revenue shortfalls, but this will require OEB approval and Enbridge will have a strong incentive not to do so as this would discourage further customer attachments and could cause customers to convert away from gas, further reducing revenues.

The relevant portion of the Generic Proceeding decision reads as follows:

⁹ Exhibit I.ED.3(b).

¹⁰ EB-2015-0179, *Decision and Order; Union Gas Limited Community Expansion Application*, August 10, 2017, p. 14.

¹¹ EB-2016-0004, *Decision with Reasons, Generic Proceeding on Community Expansion*, November 17, 2016, p. 19.

The selected proponent would then be incented to maintain low rates in order to be attractive to potential customers which would in turn should increase its margins. A minimum rate stability period of 10 years (for example) would ensure that rates applied for are representative of the actual underpinning long-term costs. The utility would bear the risk for that 10-year period if the customers they forecast did not attach to the system.

... As the rates will be stand-alone and designed to cover the costs of the proposed expansion the existing customers will be held harmless. ... Where there is no competition, a proponent will still be incented to have as low a rate as it can afford to encourage customers to connect and provide the return on the proponent's investment during the rate stability period. The proponent will also have to obtain approval to adjust rates [i.e. the above-referenced stand-alone rates for new customers] beyond the rate stability period.

The rate stability period pertains to the rates for *new* customers. The base rates for all customers are protected *throughout the life of the project* by the rule against cross-subsidies. The rates for new customers are protected by the rate stability period and after that period by the market-based pressure discussed above and the need for OEB rate approval. The end of the rate stability period is relevant for the rates for new customers but *does not* mean the rule against cross-subsidies is lifted for base rates.

Enbridge's proposal to recover shortfalls arising in years 11-40 via a cross-subsidy would also be unfair to new proponents, who would not have this option. They would be required to assume a greater degree of risk and therefore be disadvantaged in bidding processes vis-à-vis Enbridge. This is particularly important as the Board begins to consider future gas expansion projects.

Enbridge's proposal to recover future shortfalls in base rates is also contrary to the gas expansion regulation (O. Reg. 24/19). The regulation clearly sets a "maximum" amount per project to be funded from existing ratepayers.¹² O. Reg. 24/19 allows a cross-subsidy, but only up to a clearly delineated *maximum*. It would be contrary to the intent of O. Reg. 24/19 to allow Enbridge to increase the cross-subsidy in the future by recovering revenue shortfalls from base rates. This understanding of O. Reg. 24/19 is also confirmed by the Minister of Energy's recently letter to the OEB regarding gas expansions, which states that there should be "a demonstrated commitment by the proponent that it would be willing to be held to the project cost, timelines and volumes forecasts as set out in their project proposal."¹³

¹² O. Reg. 24/19 (*Expansion of Natural Gas Distribution Systems*), s. 5(2)(1) [referring to "the maximum amount of the rate reduction that may be provided over the course of all fiscal quarters is the amount set out in Column 3 of the Table to Schedule" & Schedule 1 [providing for a "Maximum amount of rate reduction, in dollars" of \$8,670,000 for this project].

¹³ Minister of Energy, Letter to the Ontario Energy Board, December 12, 2019, p. 2.

The OEB was clear in the Generic Proceeding and the Union Gas expansion proceeding. As clearly stated by the OEB in the latter, if Enbridge seeks to recover shortfalls arising in year 11-40, “[t]he OEB’s determination in the Generic Proceeding that cross-subsidies from existing customers are inappropriate will govern that review.”¹⁴ We ask that the OEB reiterate this proviso or reflect it in the conditions of its order.

Revenue shortfall risk: impact of climate change on fossil fuels versus alternatives

This financial risk associated with gas expansion is much higher today than it was in the past because climate change is causing accelerating changes in energy use patterns. In particular, regulation and market forces are increasing the attractiveness of alternatives to fossil fuels. In five years, natural gas may not be the preferred option for customers in the project area. In ten years, that is even more likely to be the case. Even more so in 20 years or longer. This could cause significant financial losses over the economic life of the project.

For example, increased carbon pricing could cause consumers to convert to efficient electric heat pumps instead of natural gas furnaces.¹⁵ This could also happen as the result of any number of other factors, such as subsidies for low-carbon alternatives, increased economies of scale for low-carbon alternatives, technological advancements, increased accounting of fugitive emissions associated with natural gas fracking and transmission, and so on.

The financial risks associated with continued investments in fossil fuels are widely acknowledged by financial leaders. For example, Mark Carney recently warned that global warming could render the assets of many financial companies worthless because they have been too slow to cut investment in fossil fuels.¹⁶

These risks increase over time as market forces and regulation accelerate the shift away from fossil fuels. It is particularly concerning that Enbridge proposes to put risks on consumers for years 11 through 40, when the likelihood of this pipe becoming stranded or underutilized is increasing.

¹⁴ EB-2015-0179, *Decision and Order, Union Gas Limited Community Expansion Application*, August 10, 2017, p. 14.

¹⁵ Canada’s Ecofiscal Commission, *Bridging the Gap: Real Options for Meeting Canada’s 2030 GHG Target*, November 2019, <https://ecofiscal.ca/wp-content/uploads/2019/11/Ecofiscal-Commission-Bridging-the-Gap-November-27-2019-FINAL.pdf>.

¹⁶ Financial Post, *Global warming could render the assets of many financial companies worthless, Mark Carney warns*, December 30, 2019, <https://business.financialpost.com/news/fp-street/boes-carney-says-finance-must-act-faster-on-climate-change>.

Revenue shortfall risk: fundamental flaws in the customer attachment forecast

The risk of a revenue shortfall is particularly for this specific project because the customer attachment forecast and the survey it is based on are fundamental flawed.

The customer attachment survey does not accurately predict how many customers will convert to natural gas because it did not provide the respondents with information on the alternative option of converting to an efficient electric heat pump. Enbridge's own calculations show that customers would save approximately \$200 *more* on their annual heating costs if they convert to an electric heat pump instead of natural gas.¹⁷ However, customers were not told this. They were only given one option to reduce annual heating costs – natural gas.

Furthermore, the heating cost comparisons provided in the survey were based on a now-outdated carbon price of \$3.421 ¢/m³.¹⁸ As of 2022, the carbon price will be 9.79 ¢/m³.¹⁹ This difference further increases the annual heating savings from heat pumps vis-à-vis natural gas by an additional \$140 per customer (to \$340).²⁰ Also, it seems likely that carbon prices will increase further between now and the end of the economic life of this project in 2060.

Further still, the survey respondents were not told about the other benefits and cost savings from heat pumps relating to home *cooling*. One of the main benefits of heat pumps is that a single system can provide both heating and cooling.²¹ Furthermore, a ground-source heat pump uses about half the electricity of a traditional air conditioning system, which can generate significant savings.²² Survey respondents were not advised of these benefits and savings. Nor were the savings accounted for in Enbridge's comparison of the cost of heat pumps and natural gas.²³

Further still, survey respondents were not told that electric heat pumps cause far fewer carbon emissions in comparison to natural gas, which would be an important factor for some customers.

Enbridge may point out that the cost of converting to ground-source heat pumps is higher than natural gas. However, heat pumps will likely be eligible for the interest-free energy retrofit loans the federal government has promised.²⁴ This would mean a heat pump conversion would have no

¹⁷ Exhibit I.ED.9(d).

¹⁸ Exhibit I.ED.7, Attachment 1, p. 2.

¹⁹ Enbridge Gas, *Federal Carbon Charge*, <https://www.enbridgegas.com/Natural-Gas-and-the-Environment/Enbridge-A-Green-Future/Federal-Carbon-Pricing-Program>.

²⁰ Exhibit I.ED.8, Attachment 1, p. 1, FN 1 (average annual residential consumption = 2,243 m³); *supra*. note 18 (assumed carbon price = \$3.421 ¢/m³); *supra*. note 19 (carbon price in 2022 = 9.79 ¢/m³; calculation: 2,243*(0.0979-0.03421).

²¹ EB-2016-0004, Dr. Stanley Reitsma, *Evidence for the OEB in the Generic Proceeding EB-2016-0004 Community Expansion of Natural Gas*, March 21, 2016, p. 3 ([link](#)).

²² *Ibid.*, p. 6.

²³ Exhibit I.ED.9; Exhibit I.ED.7.

²⁴ Federal Liberal Platform, 2019, p. 32 ([link](#)); Exhibit I.ED.9, p. 2.

immediate costs whereas a natural gas conversion would require between \$4,500 to \$12,500.²⁵ Furthermore, air-source heat pumps are relatively inexpensive to install and are particularly attractive for homes without forced-air because ducts are not necessarily not required.

In sum, customers were not given any comparison between natural gas and heat pumps, let alone a fair one. If they had been, how many would still have indicated that they were likely to convert to natural gas? The fact that this information was not provided and customers were not asked these questions raises significant concerns about forecast revenues. Enbridge should bear those risks, not ratepayers.

In addition, the door-to-door survey was confusing. For example, information on conversion costs, potential savings excluding the surcharge, and surcharge costs were provided separately and over a long series of questions.²⁶ Respondents would have had to retain each figure in their head and perform mental calculations to understand the likely benefits. No information sheets or pamphlets were given to customers.²⁷

Furthermore, those with wood heating were told that “savings will likely be minimal” but “you wouldn’t need to split or store wood.”²⁸ This is quite misleading. With the surcharge factored in, the annual cost to heat with natural gas would be \$300 **more** than wood.²⁹ Eighteen percent of customers with wood heating said they were “very likely” to convert to natural gas.³⁰ It is unlikely that they understood that this would cost them \$4,500 - \$12,500 upfront and another \$300 each year after factoring in the surcharge (or \$440 each year with current carbon prices).³¹ It is even less likely that they understood that heat pumps would result in significantly lower annual heating costs *and* lower annual cooling costs compared to natural gas.

Environmental Defence is not raising these concerns to suggest that Enbridge’s customer attachment forecast or its application should be rejected. Instead, these concerns represent an important additional reason to confirm that Enbridge is responsible for its forecast and will not be allowed to recover revenue shortfalls from existing customers via base rates.

²⁵ Exhibit I.STAFF.5, Attachment 1 (*Natural Gas Pipeline Expansion Study, North Bay, February 2018*), p. 10 (q. H7a).

²⁶ For example, a customer with wood heating would be given the conversion costs (\$4,500 - \$12,500) and annual savings (\$200) early on in question H7a without any reference to the surcharge (p. 10). They would then be asked four questions about water heating (p. 12-13). Then, after the water heating discussion, they would be told that there would be a surcharge costing \$500 per year (p. 14, q. SUR #A4). It is unlikely that respondents standing at their front door would have remembered the figures provided earlier to determine that a conversion would result in \$300 per year in *additional* costs.

²⁷ Exhibit I.ED.6(d),

²⁸ *Ibid.*, p. 14 (q. SUR #A2).

²⁹ *Ibid.*, pp. 10 & 14 (q. H7a & SUR #A2).

³⁰ *Ibid.*, p. 3.

³¹ *Ibid.*, pp. 10 & 14 (q. H7a & SUR #A2); re carbon costs, see footnote 20 above.

Abandonment Costs

Environmental Defence asks that Enbridge be required to reserve a portion of the capital budget to cover future abandonment costs (i.e. costs to safely cease operations of the proposed pipeline). Without this, Enbridge would collect funds from existing ratepayers to cover abandonment costs.³² This would constitute another cross-subsidy.

Although E.B.O. 188 does not require that abandonment funds be set aside, the matter was not considered at the time and current circumstances project warrant it. For example:

- Since the decision in E.B.O. 188, the Canadian Energy Regulator now requires that funds be set aside for future abandonment.³³
- The possibility of abandonment is now higher due to the accelerating movement away from fossil fuels associated with climate change.
- E.B.O. 188 required “a positive NPV including a safety margin (for example, corresponding to a P.I. of 1.10).”³⁴ This project does not include that safety margin and does not benefit from the diversification inherent in the portfolio approach used by E.B.O. 188. There is no margin within which items like abandonment costs can be covered.

The capital budget for this project is far higher than comparable projects based on the size of the pipe, length, and material.³⁵ Enbridge could, if so directed, set aside some of this budget for abandonment costs.

In the alternative, if the OEB believes the treatment of abandonment costs in these applications is a wider issue requiring input from more parties, Environmental Defence asks the issue be flagged as one to be addressed in a future regulatory proceeding.

Upstream Reinforcement Costs

Proponents are required to include upstream reinforcement costs in community expansion leave to construct applications.³⁶ Enbridge has not done so even though it is seeking leave to construct in a separate application for a related upstream project – the Hamilton Pipeline.³⁷ In its evidence in EB-2019-0159, Enbridge asserts that the Hamilton Pipeline is needed to meet “demand

³² Exhibit I.ED.4.

³³ NEB, RH-2-2008, *Reasons for Decision*, (re Pipeline Abandonment – Financial Issues) May 2009.

³⁴ E.B.O. 188, *Final Report of the Board*, January 30, 1998, para. 2.3.10.

³⁵ Exhibit I.STAFF.3, Attachment 1.

³⁶ EB-2016-0004, *Decision with Reasons, Generic Proceeding on Community Expansion*, November 17, 2016, p. 20.

³⁷ EB-2019-0159, Exhibit A, Tab 6, p. 12.

growth” in the Union Rate Zone, which includes North Bay. If that is true, the Hamilton Pipeline is required for this North Bay expansion.

Enbridge did not address the question of upstream projects in its application. In response to Environmental Defence interrogatory #14, it was unable to say whether the project would be fed through the Hamilton Valve.³⁸ Enbridge has not met its burden to address the issue of upstream costs.

Although this project is small, failing to address upstream reinforcement costs would set a bad precedent. In the very least, Enbridge should be required to consider and include such costs more rigorously going forward.

Conclusion

As detailed above, Environmental Defence asks that the Board:

1. Confirm that revenue shortfalls arising in years 1 to 10 cannot be recovered from customers after year 10 on a deferred basis;
2. Confirm that revenue shortfalls arising in years 11 to 40 will be subject to the OEB’s determination in the Generic Proceeding that cross-subsidies from existing customers are inappropriate;
3. Require Enbridge to reserve a portion of the capital budget to cover future abandonment costs or, in the alternative, flag this issue as one to be addressed in a future regulatory proceeding; and
4. Direct Enbridge to provide evidence regarding demand-driven upstream pipeline projects in this and future community expansion projects.

As Mark Carney warns, climate change represents a major financial risk. That risk is particularly high for energy consumers investing in fossil fuel infrastructure. Consistent with the decades-old principle against cross-subsidization, the Board’s decision in the Generic Proceeding, and the fact that O. Reg. 24/19 sets out a *maximum* financial contribution to this project, existing ratepayers should be protected from revenue shortfalls for the economic life of this project.

³⁸ Exhibit I.ED.14, p. 3.