ENBRIDGE GAS INC.

Answer to Undertaking from
Environmental Defence (ED)

Undertaking

Tr: 157

(a) to respond to questions in Exhibit K2.4; (b) to confirm Guidehouse applied taxes to the electricity costs, but not the gas costs, even though they are both taxed.

Response:

The questions posed in Exhibit K2.4 are as follows:

1. The cost comparison does not account for the monthly customer charge (this can be confirmed by using the "trace dependents" command on the "utility data" worksheet, which shows that the monthly charge is not used in any functions)

2. The cost comparison is based on 2023 only, and therefore does not account for carbon price rising beyond that date (this can be confirmed on page 4 of the Guidehouse memo and by reviewing the excel formulas)

3. The cost comparison is based on the existing rate design, not the proposed SFVD (this can be confirmed on the "utility data" worksheet)

4. The cost comparison does not account for savings from more efficient cooling as between a heat pump and traditional air conditioning

5. If the savings from avoiding the monthly customer charge with all-electric heating are factored in, then all-electric heating is cheaper than hybrid gas/electric heating in all locations, and by over $250 a year in Toronto (this can be confirmed by manually adding those savings at page 8 of the Guidehouse memo)

Responses to this undertaking are provided separately from Guidehouse Inc. (Guidehouse) and Enbridge Gas as indicated below.

The responses from Guidehouse below are regarding the model outputs reported by Guidehouse within its memo dated May 19, 2023, referenced by ED within its compendium, Exhibit K2.4. The memo was filed by Enbridge Gas at Attachment 2 of the

Company's May 31, 2023, updated interrogatory response to Exhibit I.ED.16 within the Hidden Valley Community Expansion Project proceeding[1].

The following responses have been provided by Guidehouse (and are unchanged from the original response to this undertaking filed on July 18, 2023):

a)
1. Confirmed. Gas consumption was assumed to be maintained to support other appliances – DHW, stove, clothes dryer, fireplace, etc. As a result, monthly charges for electricity and natural gas were considered neutral and not accounted for in this analysis.

2. Confirmed. The utility rates used in the analysis reflect current rates at the time the analysis was completed and do not account for any future utility rate impacts.

3. Confirmed.

4. Confirmed. The hybrid configuration includes an electric heat pump with a back-up natural gas furnace. Analysis of air conditioning impacts were not in scope for this study. However, the cooling performance from the hybrid heating qualified product list ranges from SEER 17-21, which is consistent with the market performance for cold climate heat pumps. Whether it's a hybrid heating system that is installed or an all-electric cold climate heat pump, the cooling load will be satisfied with comparably efficient cooling equipment. As a result, any potential cooling savings would be expected to be neutral for this analysis.

5. Confirmed. The savings presented in this analysis relate to annual operation costs only and do not consider upfront costs to convert the home to an all electric configuration. In order to completely disconnect from gas, a number of additional steps will likely have to be taken including upgrading any gas appliances (DHW, stove, clothes dryer, fireplace, etc.), upgrading the electric panel and potentially other electric infrastructure within the home, and capping existing gas connections. "Savings" attributed to avoided monthly customer gas charges would be relative to the total costs needed to go all electric. These additional costs can vary widely and are outside the scope of this analysis.

b) Enbridge Gas provided cost data to Guidehouse for this analysis. A more detailed response to this question will be provided by Enbridge Gas in its update to this undertaking response at a later date.

[1] EB-2022-0249.

The following responses have been provided by Enbridge Gas:

The responses below are regarding the lifetime cost-effectiveness analysis prepared by Enbridge Gas and filed at the May 31, 2023, updated response to Exhibit I.ED.16, including Attachments 4-7, within the Hidden Valley Community Expansion Project proceeding.[2]

It should be noted that the analysis/conclusions provided by Enbridge Gas within Exhibit I.ED.16 did not rely on the model inputs/outputs used by Guidehouse for the memo dated May 19, 2023. Rather, the Company used the Guidehouse spreadsheet model (filed at Attachment 3 of the interrogatory response) in conjunction with more precise model inputs to establish its analysis/conclusions. As a result, Guidehouse's responses to ED's questions differ in some instances from Enbridge Gas's responses to similar questions.

The responses to parts (a) and (b) below are regarding the above-mentioned lifetime cost-effectiveness analysis prepared by the Company, as well as the energy cost data provided by the Company to Guidehouse, which Guidehouse used for the memo.

a)

1. Not confirmed. Enbridge Gas's lifetime cost-effectiveness analysis included the monthly customer charge. Please refer to the Company's argument-in-chief for the Hidden Valley Community Expansion Project, Selwyn Community Expansion Project, and Mohawks of the Bay of Quinte Community Expansion Project dated July 25, 2023 for further details.[3]

2. Not confirmed. Enbridge Gas's lifetime cost-effectiveness analysis included the federal carbon charge increasing to \$170/tCO_2e by 2030. Please refer to the Company's argument-in-chief for the Hidden Valley Community Expansion Project, Selwyn Community Expansion Project, and Mohawks of the Bay of Quinte Community Expansion Project dated July 25, 2023, for further details.[4]

3. Confirmed.

4. Confirmed. Please refer to the Company's argument-in-chief for the Hidden Valley Community Expansion Project, Selwyn Community Expansion Project,

[2] EB-2022-0249.
[3] The OEB allowed Enbridge Gas the option of filing a single argument-in-chief for three community expansion projects: Hidden Valley Community Expansion Project (EB-2022-0249), Selwyn Community Expansion Project (EB-2022-0156), and Mohawks of the Bay of Quinte Community Expansion Project (EB-2022-0248).
[4] Ibid.

and Mohawks of the Bay of Quinte Community Expansion Project dated July 25, 2023, for further details.[5]

5. Not applicable. As per the Company's response to part a) subpart 1. above, Enbridge Gas's lifetime cost-effectiveness analysis included the monthly customer charge. Additionally, the question appears to be related to annual operational costs and not lifetime cost-effectiveness, which was the basis for the Company's analysis. Annual operational costs do not include upfront capital costs which are an important factor when assessing consumer energy solution decisions.

b) Regarding the model results displayed in the Guidehouse memo, the energy cost data provided by Enbridge Gas to Guidehouse included tax for electricity and did not include tax for natural gas. However, as described above, Enbridge Gas did not rely on the model inputs/outputs used by Guidehouse within its memo. Rather, the Company used the model in conjunction with more precise model inputs to establish its analysis/conclusions.

Regarding Enbridge Gas's lifetime cost-effectiveness analysis/conclusions, the energy cost data used did not include tax for natural gas or electricity.

[5] Ibid.

ENBRIDGE GAS INC.

Answer to Undertaking from
Pollution Probe (PP)

Undertaking

Tr: 11

Enbridge will advise as to whether the maximum rebate is available to customers who are transitioning away from gas; and will advise to whether and/or how its marketing or program materials make that clear; and will advise as to whether any change has been made in the underlying agreement between Enbridge Gas and Enercan, to reflect the availability of the maximum rebate or incentive for customers who are switching away from gas.

Response:

Enbridge Gas can confirm that it has modified the HER+ eligibility requirements consistent with the OEB Decision in EB-2021-0002 (DSM Plan proceeding).[1] This includes modification of the marketing and implementation materials used during training/roll out for the Service Organizations that perform the D and E audits (as defined in the excerpts below). The contract with NCRan has not been amended as none of the contractual terms in that agreement stipulate eligibility requirements or funding caps based on Enbridge Gas funding, so there are no items to amend. The Company can confirm that Enbridge Gas has clearly communicated the OEB Decision and implications for HER+ to NRCan and that, to the best of Enbridge Gas's knowledge, Service Organizations are aware of the HER+ program requirements.

The following is an excerpt from the Service Organization training/rollout communications and serves to demonstrate the HER+ eligibility requirements:

> "In order to be eligible for the enhanced Enbridge incentives participants must have Enbridge natural gas space heating at the time for the pre-retrofit energy assessment (the "D Audit") ***and/or*** the post-retrofit energy assessment (the "E Audit")." [***Emphasis added***]

There are three specific use cases encompassed in the language which are intended to broadly define a gas customer to be consistent with the OEB DSM Plan Decision and

[1] In Exhibit K7.2, page 5, Pollution Probe provided an excerpt from a filing of unredacted materials that were created prior to the OEB's EB-2021-0002 Decision.

any of the following cases are eligible for the enhanced measure rebates and increased funding cap of $10,000.

1) At the time of "D" **and** "E" – Gas customer both before and after the audits
2) At the time of "E" **only** – New gas customer attaching to the gas system
3) At the time of "D" **only** – Existing gas customer detaching from the gas system

Additional information/FAQ on the HER+ program, including eligibility requirements, can be found at: https://www.enbridgegas.com/residential/rebates-energy-conservation/home-efficiency-rebate-plus/faq

The Company has also provided selected images of the marketing material below describing the program eligibility as requested.

Eligibility

Eligibility criteria

In order to be eligible, homeowners MUST meet the following criteria:

- All homeowners in Ontario qualify for the Home Efficiency Plus (HER+) program except,
  - Homes not space-heated by Enbridge Gas, where the owner is not the primary resident (rental units).
  - The homeowner has already started work on the upgrades before they conduct their pre-retrofit energy assessment.
  - The home was built less than 6 months ago.
  - The home is a multi-unit residential building (MURB) with more than 3 storeys or a footprint bigger than 600 m^2.
  - Less than 50 percent of the building is residential living space.
  - Homeowners who have already gone through the Home Efficiency Rebate Plus (HER+) or Canada Greener Homes Grant (CGHG) programs and maxed out their incentive at $10,000 for Enbridge Gas space heated customers, and $5,000 for non-Enbridge Gas customers.
- For the enhanced Enbridge Gas rebates funded by Enbridge Gas,
  - The home must be space heated by Enbridge Gas, and the homeowner resides or owns the property at the time of the pre-retrofit energy assessment,
  - Or the home is converting their space heating to Enbridge Gas natural gas.
- You must,
  - Use a Natural Resources Canada approved Registered (NRCan) Energy Advisor.
  - Complete a pre- and post-energy assessment, it is recommended that you use the same Service Organization for both assessments.
  - Complete at least one qualifying upgrade recommended by the Registered Energy Advisor. If you install a thermostat or any of the resiliency measures, you must complete another measure beyond these.
  - Follow the specific measure requirements that are provided
  - All participants must provide a copy of their invoices, proof of address and property tax bill before the Registered Energy Advisor can submit the file for payment.

Home / Residential / Rebates & Energy Conservation / Home Efficiency Rebate Plus

Program Terms and Conditions

Below is a summary of the Terms and Conditions. For the complete Terms and Conditions, ask your Registered Energy Advisor (a "REA") for a printed copy.

Enbridge Gas and the Canada Greener Homes Initiative are partnering to provide grants towards eligible retrofits such as home insulation, windows and doors, heat pumps and renewable energy systems, up to a maximum of $10,000 in rebates. To qualify for a grant, eligible participants must: (a) complete a pre-retrofit EnerGuide home energy evaluation, (b) install at least one of the qualifying retrofit measures recommended in the Renovation Upgrade Report, and (c) complete a post-retrofit EnerGuide home energy evaluation by **March 31, 2027**. The pre-retrofit home energy evaluation and the post-retrofit home energy evaluation must be completed by a Registered Energy Advisor (REA) that is licensed by Natural Resources Canada and it is highly recommended that the same Service Organization conducts both the pre- and post-retrofit home evaluation.

Participants must have their home space heated with Enbridge Gas at the time of the pre-retrofit EnerGuide evaluation or be converting their home to be space heated by Enbridge natural gas, to get the enhanced rebates.

ENBRIDGE GAS INC.

Answer to Undertaking from
Federation of Rental-housing Providers of Ontario (FRPO)

Undertaking

Tr: 148

To provide a full description of line 4, which is other Dawn-to-Parkway System capacity changes, which results in the total in line 3 being reduced by that amount for the total forecasted Dawn-to-Parkway system capacity in line 5.

Response:

The Dawn Parkway System capacity is derived as the design day demands plus the capacity surplus or shortfall. The capacity represents the demands that can be served by the system and does not represent the demands that are able to move from Dawn to Parkway. The capacity is not static, and changes based on the specific location of demands on the Dawn Parkway System (e.g. Union South in-franchise demands, Dawn to Kirkwall, Kirkwall to Parkway or Dawn to Parkway). The capacity recognizes that gas moving further from Dawn to Parkway uses more system capacity. For example, a demand in London and a demand in Milton are each equal to one design day demand but the demand in London will have less impact on system capacity surplus or shortfall than demand in Milton, as demand in Milton travels further from Dawn on the Dawn Parkway System. For this reason, if Dawn to Kirkwall turnback is repurposed to provide Dawn to Parkway service, the amount of Dawn Parkway System capacity will decrease.

Table 1 provides the detail for the 222 TJ/d decrease of other Dawn Parkway System capacity changes for the Winter of 2015/2016 as provided at Exhibit I.4.7-FRPO-169, Attachment 1, column (c) and as discussed in Tr. Vol 7. Other years have similar changes in these categories based on both in-franchise and ex-franchise demand changes, PDO (Parkway Delivery Obligation) changes, modelling changes and heat value of gas changes.

Table 1
Winter 2015/2016 Details of Other Dawn Parkway System Capacity Changes in Line 4

Line No.	Other Dawn Parkway System Capacity Changes	(TJ/d)
1	South and North In-Franchise Demand	85
2	Ex-franchise Demand	(153)
3	PDO	(155)
4	Model	(57)
5	Heat Value	58
6	Total (1)	(222)

Note:
(1) The decrease in capacity of 222 TJ/d for the Winter 2015/2016 is relative to the forecast capacity from Union's 2013 Cost of Service (EB-2011-2010).

These changes include:

- 85 TJ/d of incremental design day demand for the Union South and North rate zones.
- (153) TJ/d of ex-franchise demands due to contracting changes. The changes include impacts of: Marcellus gas region development and the corresponding turnback of Dawn to Kirkwall capacity; increase in Kirkwall to Parkway and Dawn to Parkway path shippers; long haul to short haul shifting for eastern customers and the EGD GTA project which increased demand but also shifted EGD rate zone suction gas to Parkway discharge.
- (155) TJ/d shift in Parkway delivery obligations from Parkway to Dawn and other year-to-year PDO changes.
- (57) TJ/d of changes to gas properties, model corrections as examples.
- 58 TJ/d of changes related to higher energy content gas arriving at the utility.