ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998,* S.O. 1998, c. 15, Schedule B; and in particular sections 90(1) and 97 thereof;

AND IN THE MATTER OF an application by Enbridge Gas Inc. for an order granting leave to construct natural gas distribution pipelines and ancillary facilities that make up a Community Expansion Project to serve the Township of Selwyn in the County of Peterborough;

AND IN THE MATTER OF an application by Enbridge Gas Inc. for an order granting leave to construct natural gas distribution pipelines and ancillary facilities that make up a Community Expansion Project to serve the community of Mohawks of the Bay of Quinte First Nation and part of Tyendinaga Township;

AND IN THE MATTER OF an application by Enbridge Gas Inc. for an order granting leave to construct natural gas distribution pipelines and ancillary facilities that make up a Community Expansion Project to serve the Hidden Valley community in the Town of Huntsville and District of Muskoka;

AND IN THE MATTER OF applications by Enbridge Gas Inc. for an Order or Orders approving the proposed forms of agreements for Pipeline Easement and Options for Temporary Land Use associated with each of the aforementioned applications seeking leave to construct.

ENBRIDGE GAS INC.

ARGUMENT-IN-CHIEF

Table of Contents

A. Introduction

1. Enbridge Gas Inc. ("Enbridge Gas" or the "Company") filed three separate applications with the Ontario Energy Board ("OEB") under section 90 of the *Ontario Energy Board Act, 1998* ("OEB Act") for orders granting leave to construct for the following projects (collectively referred to as the "Projects"):

   (a) Selwyn Community Expansion Project, EB-2022-0156 ("Selwyn Project")

   (b) Mohawks of the Bay of Quinte ("MBQ") Community Expansion Project, EB-2022-0248 ("MBQ Project")

   (c) Hidden Valley Community Expansion Project, EB-2022-0249 ("Hidden Valley Project")

2. In each application, Enbridge Gas has also applied to the OEB under section 97 of the OEB Act for approval of the form of land-use agreements it offers to landowners for the routing and construction of each Project.

3. This is the Argument in Chief ("AIC") of Enbridge Gas in respect of each of the three applications. Enbridge Gas is filing this AIC in respect of each of the applications noted since there are many common issues applicable across the applications. It is highlighted below where specific submissions relate to a particular application or to facts particular to an application.

4. The Selwyn Project will make natural gas available to approximately 87 customers in the Township of Selwyn. Enbridge Gas seeks an order granting leave to construct in the Township of Selwyn natural gas pipelines and facilities that are:

   (a) approximately 1.8 km of Nominal Pipe Size ("NPS") 2 high pressure polyethylene ("HPPE") natural gas pipelines, and

   (b) approximately 6.6 km of NPS 4 HPPE natural gas pipelines.

5. The MBQ Project will make natural gas available to approximately 151 customers in the community of MBQ First Nation and 28 residential customers in Tyendinaga Township. Enbridge Gas seeks an order granting leave to construct in the Tyendinaga Mohawk Territory and the Township of Tyendinaga natural gas pipelines and facilities that are:

   (a) approximately 2.8 km of NPS 4 polyethylene ("PE") natural gas pipelines, and

   (b) approximately 14.5 km of NPS 2 PE natural gas pipelines.

6. The Hidden Valley Project will make natural gas available to approximately 130 customers in the Hidden Valley community within the Town of Huntsville and District of Muskoka. Enbridge Gas seeks an order granting leave to construct in the Town of Huntsville and District of Muskoka natural gas pipelines and facilities that are:

   (a) approximately 4 km of NPS 2 PE natural gas pipelines.

7. The Projects are in the public interest and each requested leave to construct should be granted. The Projects are required to support the Government of Ontario's Natural Gas Expansion Program ("NGEP") and are designed to expand access to safe, reliable, and affordable natural gas to areas of Ontario that do not currently have access to natural gas. The need for the Projects is directly supported by each community's municipal and Indigenous government (as the case may be) through their request for natural gas for their constituents. Core to the need for the Projects is the clearly expressed preference and interest in natural gas service from future customers within each community in question. Through the combination of attachments, NGEP funding and the application of the planned System Expansion Surcharge ("SES"), each of the Projects is economic.

B. Project Need

8. The need for the Projects is directly justified by the support of the Government of Ontario through the NGEP, municipal and Indigenous governments as applicable to enable natural gas access for their constituents and the clear and demonstrable interest in natural gas service within each community as derived from the market research survey results, as further discussed below. This combined with price competitiveness results in attachment

forecasts showing a large percentage of residents surveyed will choose to access natural gas if given the opportunity to do so.

Community Support

9. The Projects will further the Government of Ontario's efforts pursuant to its NGEP. The Projects were previously approved to receive funding assistance from Phase 2 of the NGEP. The Government of Ontario describes the NGEP as follows:

> The Natural Gas Expansion Program was created under the *Access to Natural Gas Act, 2018* to help expand access to natural gas to areas of Ontario that currently do not have access to the natural gas distribution system. This program encourages communities to partner with gas distributors on potential expansion projects that would not be built without additional financial support and submit information on these proposals to the Ontario Energy Board.[1]

10. As part of Phase 2 of the NGEP process, on June 9, 2021, the Government of Ontario announced that 28 projects across 43 communities were selected for funding under Phase 2 of the NGEP. The Projects were included in those that were selected for funding.[2]

11. Consistent with the NGEP's intent of a partnering between communities and Enbridge Gas to bring natural gas to unserved areas, Enbridge Gas has conducted extensive consultation with each of the communities and their representative governments. With respect to the Hidden Valley Project, support for the Project has come from a variety of sources including the Town of Huntsville and the residents in the Project area. In a letter dated July 31, 2020, the Town of Huntsville indicated its written support for the Project.[3] Likewise, the Township of Selwyn has emphasized its support for the Selwyn Project via a council resolution dated March 12, 2020 and a letter of support dated May 6, 2022.[4] After conducting extensive consultation within the Mohawks of Bay Quinte First Nation ("MBQFN") and the Township of Tyendinaga, a letter dated September 15, 2022 from

---

[1] Government of Ontario, *Natural Gas Expansion Program* <https://www.ontario.ca/page/natural-gas-expansion-program#:~:text=The%20Natural%20Gas%20Expansion%20Program,the%20natural%20gas%20distribution%20system>

[2] Exhibit B-1-1 – Hidden Valley (EB-2022-0249), p. 2; MBQ (EB-2022-0248), p. 1; Selwyn (EB-2022-0156), p. 2

[3] Hidden Valley (EB-2022-0249), Exhibit B-1-1, p. 2, Attachment 2

[4] Selwyn (EB-2022-0156), Exhibit B-1-1, p. 2, Attachments 2 and 3

the MBQFN and a letter dated May 3, 2022 from the Township provided a clear indication of support for the MBQ Project.[5]

12. To gauge community-based support, Enbridge Gas has also held customer outreach events within the relevant communities. In Selwyn, Enbridge held well attended and positively received customer-facing events on May 4 and October 4, 2022. At the time of filing the application for the Selwyn Project, Enbridge Gas was in various stages of executing applications for natural gas attachment with approximately 40 customers (representing nearly half of the total 10-year forecasted attachments and exceeding the first year of the forecasted customer attachments for the Project).[6]

13. After consulting with the MBQFN, the preferred method of gauging community interest in converting to natural gas within the MBQFN was in-person delivery both at the Fall Fair and door-to-door. The same method was also extended to the Township.[7] The questionnaire requested information pertaining to dwelling characteristics, current fuel type and interest in converting to natural gas-fueled appliances or other fuel types and appliances.

14. Similar to the use of the MBQFN questionnaire, layered upon the community outreach for the Hidden Valley Project and the Selwyn Project, Enbridge Gas retained Forum Research, a third-party research supplier, to conduct surveys by telephone, online and in-person of potential residential customers in the Project areas between August 23 and September 18, 2022 for the Hidden Valley Project and in the summer of 2022 for the Selwyn Project.[8]

15. The survey informed residents and commercial/industrial consumers about the proposed Project and sought information pertaining to the characteristics of dwellings/buildings, including:

[5] MBQ (EB-2022-0248), Exhibit B-1-1, p. 2
[6] Selwyn (EB-2022-0156), Exhibit B-1-1, pp. 2-3
[7] MBQ (EB-2022-0248), Exhibit B-1-1, p. 2 and Attachment 3
[8] Exhibit B-1-1 – Hidden Valley (EB-2022-0249), p. 3; and Selwyn (EB-2022-0156), p. 3

- their nature (i.e., residential, commercial or industrial space, etc.);
- the current fuel type relied upon; and
- interest in converting to natural gas-fueled equipment and/or appliances.[9]

16. For each of the Projects, the survey or questionnaire results are summarized below:

***Hidden Valley**:* A total of 61 surveys were completed. 69% of respondents indicated that they would be likely (extremely likely, very likely or likely) to convert to natural gas if made available. Of those respondents likely to convert to natural gas, 66% indicated that they would convert within the first year of natural gas service becoming available, 29% indicated they would convert within 2 years of natural gas service becoming available, and 5% indicated they would convert within 2-3 years of natural gas service becoming available.[10] Enbridge Gas has forecasted that 20 attachments will occur in the first year of the Project.[11] As of April 2023, there have been 18 attachment applications for natural gas services completed and submitted to Enbridge Gas as well as 20 additional customers that have expressed interest in converting to natural gas. Additionally, the Condo Board at Turner Drive has expressed interest in natural gas service to 6 buildings which contain a total of 64 units.[12]

***Selwyn**:* A total of 49 surveys were completed. 80% of respondents indicated that they would be likely (extremely likely, very likely or likely) to convert to natural gas if it were made available. Of those likely to convert, upon natural gas service becoming available, approximately 77% indicated that they would convert within 1 year, 21% indicated they would convert within 1-2 years, and the remaining 3% would convert in 2-3 years.[13] Enbridge Gas has forecasted that 34 attachments will occur in the first year of the Project.[14] As of May 2023, 20 residential and 7 commercial applications for natural gas services have been completed and received by Enbridge

[9] Ibid, Selwyn (EB-2022-0156), p. 3; and Hidden Valley (EB-2022-0249), pp. 2-3

[10] survey indicated that the split between fuel sources for residents in the Town of Huntsville is currently 77% Propane, 18% Electricity, 3% Oil, 2% Wood; Exhibit B-1-1, p.3 Hidden Valley EB-2022-0249

[11] Hidden Valley (EB-2022-0249), Exhibit B-1-1, Table 2

[12] Hidden Valley (EB-2022-0249), Exhibit I.STAFF.2, part c)

[13] survey indicated the split between fuel sources for residents in Selwyn is currently approximately 61% propane, 16% oil, 14% electricity, 6% wood and 2% geothermal or ground source heat pumps; Exhibit B-1-1, p. 3 Selwyn EB-2022-0156

[14] Selwyn (EB-2022-0156), Exhibit B-1-1, Table 2

Gas. The Company is also aware of an additional 13 customers that are waiting for HVAC contractors to submit an application for their properties.[15]

MBQ: As of October 12, 2022, Enbridge Gas has received 68 Questionnaire responses, showing 97% of respondents are in favor of the Project. Likeliness to convert was 34% (extremely likely), 34% (very likely), 22% (likely) and 10% (not very likely and not at all likely). 73% would convert within the first 12 months, with 9% within 1-2 years and 16% after 3 years. 9% of respondents indicated they live in a home smaller than 1000 square feet, 40% ranging from 1000-1500 square feet, 24% ranging from 1501-2000 square feet and 21% over 2000 square feet[16]. Enbridge Gas has forecasted that 45 attachments will occur in the first year of the Project.[17] As of April 2023, 8 service applications have been completed and received by Enbridge Gas. Additionally, MBQ Chief and Band Council have provided a letter of intent to convert all 24 band owned properties to natural gas.[18]

Enbridge Gas also conducted a door-to-door Expression of Interest ("EOI") survey between December 14 and 16, 2022, to supplement the MBQ questionnaire and to answer questions related to the Project. As of March 30, 2023, 103 EOI responses confirming interest in receiving natural gas services have been collected (12 from Shannonville and 91 from MBQ, not including 24 band owned properties expected to attach). This EOI outcome represents over 60% of the 10-year attachment forecast, exceeding the cumulative year 3 attachment forecast.[19]

Price Competitiveness

17. Natural gas continues to maintain price competitiveness against other energy alternatives in Ontario. Enbridge Gas provided comparative analysis showing this price advantage even with the inclusion of the proposed \$0.23/m^3 SES. Based on prices available at the

[15] Selwyn (EB-2022-0156), Exhibit I.STAFF.2, part a)

[16] questionnaire indicated the split between fuel sources for residents in the MBQ Project area is propane forced air (39%), oil forced air (29%), and propane boiler (16%), wood (8%), electric baseboard (3%) and electric forced air (1%); Exhibit B-1-1, p. 3 MBQ (EB-2022-0248)

[17] MBQ (EB-2022-0248), Exhibit B-1-1, Table 2

[18] MBQ (EB-2022-0248), Exhibit B-1-1, Attachment 5

[19] MBQ (EB-2022-0248), Exhibit I.STAFF.1 part d)

time the Company's interrogatory responses were submitted, for the typical residential Rate 1 and Rate 01 NE customer,[20] there were savings relative to heating oil, propane and electricity (non-heat pump) with the latter inclusive of the Ontario Electricity Rebate that suppresses the cost of electricity.[21]

Growth Forecast

18. Informed by continued relative price advantage of natural gas over other energy sources, current Municipal Property Assessment Corporation ("MPAC") data and the above survey and questionnaire results showing high level of likely conversions, the Company provided an expected ten-year growth forecast for customer additions in each of the Project areas.

[20] MBQ (EB-2022-0248) and Hidden Valley (EB-2022-0249) general service customers are subject to Rate 01 NE. Selwyn (EB-2022-0156) general service customers are subject to Rate 1.

[21] MBQ (EB-2022-0248) and Hidden Valley (EB-2022-0249) typical Rate 01 NE customer savings compared to Natural Gas by fuel source: 59% savings for Heating Oil compared to Natural Gas, 11% savings for Electricity compared to Natural Gas and 15% savings for Propane compared to Natural Gas; Exhibit I.ED.1, Attachment 3. Selwyn (EB-2022-0156) typical Rate 1 customer savings compared to Natural Gas by fuel source: 65% savings for Heating Oil compared to Natural Gas, 24% savings for Electricity compared to Natural Gas and 35% savings for Propane compared to Natural Gas; Exhibit I.ED.1, Attachment 3.

Table 1: Forecasted Customer Attachment for the Hidden Valley Project[22]

Customer Additions	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total Forecasted
Residential Single Family Conversion	13	18	18	9	9	4	4	4	4	4	87
Residential Multi-unit building	7	9	9	4	4	2	2	2	2	2	43
Commercial											
Industrial											
Total	20	27	27	13	13	6	6	6	6	6	130

Table 2: Forecasted Customer Attachment for the Selwyn Project[23]

Customer Additions	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Forecasted
Residential	25	13	8	6	4	4	2	2	1	1	66
Commercial	6	4	3	1	1						15
Industrial	3	2	1								6
Total	34	19	12	7	5	4	2	2	1	1	87

Table 3: Forecasted Customer Attachments for the MBQ Project[24]

Customer Additions	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total Forecasted
Residential	45	40	15	11	8	10	9	10	9	9	166
Commercial/Institutional		5	4	2	1	1					13
Industrial											
Total	45	45	19	13	9	11	9	10	9	9	179

C. Alternatives

19. Based on the Decision and Order for Enbridge Gas's Integrated Resource Planning Framework Proposal (EB-2020-0091) and the Integrated Resource Planning Framework for Enbridge Gas ("IRP Framework"), Enbridge Gas has applied the Binary Screening Criteria and determined the Projects meet the definition of community expansion projects, as defined in the IRP Framework. The IRP Framework Decision explains that

[22] Hidden Valley (EB-2022-0249), Exhibit I.STAFF.3 part e)

[23] Selwyn (EB-2022-0156), Exhibit B-1-1, p. 7

[24] MBQ (EB-2022-0248), Exhibit B-1-1, p. 8

"Given the goal of the Ontario Government's Access to Natural Gas legislation to extend gas service to designated communities, the OEB will not require Enbridge Gas to develop an IRP Plan or consider alternatives to the infrastructure facilities to meet this need." Consequently, per the IRP Binary Screening Criteria (iv), the need underpinning the Project does not warrant further IRP consideration or assessment.[25]

20. Considering that each proposed Project was previously reviewed and approved by the Government of Ontario and the OEB for the purposes of granting funding under Phase 2 of the NGEP, Enbridge Gas did not assess other facility alternatives.[26]

21. Within its Procedural Order No. 3 for the Hidden Valley Project and the Selwyn Project and Procedural Order No. 4 for the MBQ Project (collectively referred to as the "Procedural Orders"), the OEB requested that Enbridge Gas provide responses within its AIC to seven of nine issues raised by Environmental Defence ("ED") in its June 14, 2023 correspondence.

22. The issues raised by ED appear to be driven by a misunderstanding of standard modelling practices and the information provided by the Company within its updated response to Exhibit I.ED.16, part e), and its June 13, 2023 correspondence. As a result, the issues raised by ED unnecessarily confuse matters and are baseless.

23. Throughout its response to Exhibit I.ED.16, part e), and summarized within its June 13, 2023 correspondence[27], Enbridge Gas established a clear distinction between the deliverables provided by Guidehouse Inc. ("Guidehouse") which included a working model and a report/memo, and the additional/comprehensive analysis conducted by the Company which leveraged the model.

24. Regarding the Guidehouse deliverables, a working[28] version of the model was developed and filed at Attachment 3 of the response to Exhibit I.ED.16. Enbridge Gas engaged

[25] Exhibit C-1-1 – Hidden Valley (EB-2022-0249); MBQ (EB-2022-0248); and Selwyn (EB-2022-0156)

[26] Ibid.

[27] Enbridge Gas correspondence (June 13, 2023), pp. 4-5

[28] The model was filed without fixed input assumptions and with the intention of providing parties the ability to run the model with customizable input assumptions.

Guidehouse to develop the model to support the assessment of annual operating costs of high-efficiency electric cold climate air source heat pumps.[29] The model was developed to be used in conjunction with customizable input assumptions. Guidehouse also provided Enbridge Gas with a report/memo (filed at Attachment 2 of the response to Exhibit I.ED.16) which consisted of information related to the model, including the scope of the model and some modelling results based on a limited set of fixed input assumptions.

25. ED's issues within its June 14, 2023 correspondence are based on a continued and inappropriate focus on the Guidehouse report/memo and the working version of the model while ignoring the Company's additional and comprehensive analysis.

26. The analysis conducted by Enbridge Gas (provided at the response to Exhibit I.ED.16, part e), including Attachments 4 to 7) consisted of information related to upfront capital costs for conversions to electric heat pump and natural gas furnace configurations – which was outside of the scope of the Guidehouse deliverables[30] – as well as modelling results completed by the Company based on additional and more precise input assumptions than what was considered for the Guidehouse report/memo. In fact, these additional input assumptions are the specific input assumptions which are the basis for several of ED's issues (i.e., the inclusion of the monthly customer charge, the inclusion of the Federal carbon charge escalating to $170/tCO2e by 2030, and the inclusion of the SES).

27. By incorrectly and inappropriately referencing the Guidehouse deliverables and ignoring Enbridge Gas's additional and comprehensive analysis/information, ED unnecessarily confuses matters and the information provided by the Company. ED's issues and the Company's responses are provided below.

    (a) Issue #1: "ED's position is that certain formulas and assumptions are missing and/or not clearly described in Enbridge Gas's spreadsheets. ED stated that the

[29] Hidden Valley (EB-2022-0249), Exhibit I.ED.16, part e), p. 2
[30] Ibid, p. 3

figures in the spreadsheets are 'static' and do not include the formulas used to calculate the outputs. ED requested that the assumptions and formulas for Enbridge Gas's calculations be provided."[31]

Within ED's June 14, 2023 correspondence regarding this issue, ED stated: "Enbridge says that the calculations and formulae underlying its own analysis appear in attachment 7. This is simply not true. In particular, the savings figures appear in the Enbridge spreadsheet as static numbers, not formulas, making it impossible to determine exactly how they were calculated and what factors were included." Additionally, ED provides a screenshot (at Attachment 2 of its correspondence) of Attachment 7 of Enbridge Gas's response to Exhibit I.ED.16 which displays a static annual operational cost figure of $602.

Enbridge Gas's Response

ED appears to have ignored the information provided by Enbridge Gas and has unnecessarily confused matters. No assumptions are missing from the information provided by Enbridge Gas, and the Company reiterates "there is no additional information, calculations, models, or assumptions that the Company has on the topic that it did not provide via the updated response and attachments."[32]

ED references Enbridge Gas's use of a static figure ($602) within the Company's analysis. This figure is one of forty-eight unique model outputs developed by Enbridge Gas within its analysis,[33] representing annual operational costs for one year in one scenario. In referencing this static figure, ED suggests that the Company has not provided the complete basis for its analysis. ED ignores that Enbridge Gas explicitly stated that these annual operational cost figures are provided in a static format, due to the fact that they are model outputs, at footnote 2 of page 6 of the Company's response to Exhibit I.ED.16: "Annual operational

[31] Procedural Orders, p. 4

[32] Enbridge Gas correspondence (June 13, 2023), p. 5

[33] The model outputs developed by Enbridge Gas within its analysis are identified in green cells at Attachment 7 of the response to Exhibit I.ED.16. There are forty-eight unique model outputs in total.

cost savings figures are not formulaic as they are outputs from the spreadsheet model."[34]

For context regarding why this figure is static – in order to produce annual operational cost figures (including the figure noted above) for each year of each scenario within Enbridge Gas's analysis, the Company was required to manually run the model forty-eight times using unique input assumptions for each scenario and year in question. As an example of an input assumption that can vary from year-to-year requiring a manual model run for each year, the Federal carbon charge increases each year from 2023 to 2030, [35] resulting in a different energy price assumption for those years and therefore a different annual operational cost model output. Enbridge Gas manually ran the model and reported the outputs in Attachment 7, explicitly stating so in the footnote mentioned above. Because the scope of the model does not include consideration of upfront capital costs and a lifetime cost-effectiveness analysis (only an assessment of annual operating costs),[36] the model outputs are treated as inputs into the lifetime cost-effectiveness analysis and the figures are necessarily static within that analysis.

Regarding how the static figures were calculated, ED's claim that it is "impossible to determine exactly how they were calculated and what factors were included" is not correct. Enbridge Gas also filed a working version of the model (at Attachment 3 of the response to Exhibit I.ED.16) which allows any party including ED to manually run the model using any input assumptions, including those used by the Company.[37] As such, Enbridge Gas not only provided all assumptions it used in its analysis but also a workable version of the model so that parties could reproduce and verify the model output figures, if they desired.

---

[34] The spreadsheet model referenced is the model described above and provided at Attachment 3 of the response to Exhibit I.ED.16.

[35] The Federal carbon charges used in each year of Enbridge Gas's lifetime cost-effectiveness analysis can be found at Attachment 6 of the response to Exhibit I.ED.16.

[36] Hidden Valley (EB-2022-0249), Exhibit I.ED.16, part e), p. 2

[37] The input assumptions used by the Company are provided at Attachments 6 and 7 of the response to Exhibit I.ED.16.

(b) Issue #2: "The monthly customer charge is referenced by Guidehouse but not included in its formula in the model. The monthly customer charge appears to be included in Enbridge Gas's analysis. However, this is not entirely clear as Enbridge Gas's spreadsheets are "static" without access to the formulas used. Environmental Defence asked that Enbridge Gas advise whether the monthly customer charge is properly applied and, if necessary, to adjust the calculations, showing the formulas."[38]

Within ED's June 14, 2023 correspondence regarding this issue, ED stated: "Enbridge argues that 'the monthly customer charge is included as displayed at Attachment 6 to the response.' This is misleading and does not resolve the main issue that Environmental Defence wishes to explore – namely that the Guidehouse cost comparison does not appear to account for the monthly gas customer charges (worth approximately $5,973.85 over 15 years). The Guidehouse spreadsheet simply lists the monthly charge but does not actually incorporate it into the formulas of its model. We have confirmed this with the 'Trace Dependents' command in Excel (see Attachment 1 to this letter)".

Enbridge Gas's Response

ED has ignored the information provided by Enbridge Gas and has unnecessarily confused matters. Enbridge Gas reiterates that the monthly customer charge is included in the Company's analysis and is explicitly shown at Attachment 6 of the response to Exhibit I.ED.16 and described in further detail below.[39]

ED references the Guidehouse deliverables while ignoring the Company's analysis. The fact that the working version of the model and the Guidehouse report/memo (Attachments 2 and 3 of the response to Exhibit I.ED.16) do not include the monthly customer charge is irrelevant to the lifetime cost-effectiveness results provided in the Company's analysis (Attachments 6 and 7 of

[38] Procedural Orders, p. 4

[39] Enbridge Gas correspondence (June 13, 2023), p. 3

the response to Exhibit I.ED.16) which incorporated the monthly customer charge. As described above, Enbridge Gas engaged Guidehouse to develop a working model so that analysis could be run using customizable input assumptions. The analysis/conclusions provided by Enbridge Gas within the response to Exhibit I.ED.16 do not rely on the information provided by Guidehouse within its report/memo.[40] Rather, Enbridge Gas used the model in conjunction with additional and more precise input assumptions to establish the Company's analysis/conclusions.

As described in Enbridge Gas's response to Exhibit I.ED.16 and the Company's June 13, 2023 correspondence, the Company included the monthly customer charge in its analysis and displayed the assumptions used at Attachment 6 of the response (i.e., "Monthly Customer Charge" line item: $287.76). More specifically, the monthly customer charge input assumption can be found in row 3 of the Excel version of Attachment 6 of the response to Exhibit I.ED.16. This attachment is a live Excel document with formulae intact which allows parties to verify how the monthly customer charge is included in the total cost figures (i.e., row 24 of the live Excel document).

Enbridge Gas did not state that the monthly customer charge assumptions could be found in the working version of the model (Attachment 3 of the response to Exhibit I.ED.16). ED confuses matters by providing a screenshot of the working version of the model. More specifically, Enbridge Gas did not state that the monthly customer charge could be found in the "Monthly Fee ($)" cell (which ED highlights in Attachment 1 of its June 14, 2023 correspondence) and as such, ED's finding that the cell is not active is irrelevant.

[40] The Guidehouse report/memo provides model outputs based on one set of inputs at one point in time. ED's focus on the Guidehouse report/memo and a working version of the model, while ignoring the Company's more comprehensive analysis which included the monthly customer charge, Federal carbon charge escalating to $170/tCO2e by 2030, and SES, is inappropriate.

Rather, Enbridge Gas entered the total cost figures from Attachment 6 of the response to Exhibit I.ED.16 (for example, 90.10 cents/m^3 for 2023, which includes the monthly customer charge)[41] into the "Price ($/m3)" cell of the model.

This approach does not require the use of the "Monthly Fee ($)" cell referenced by ED because the monthly customer charge is already included in the total cost figure. Importantly, whether the total cost including the monthly customer charge is entered in to the "Price ($/m3)" cell of the model, or the monthly customer charge is disaggregated and entered into "Monthly Fee ($)" cell referenced by ED, the outcome is identical.

To confirm that the monthly customer charge was included in Enbridge Gas's analysis, ED could have simply ran the model with the total cost figures used by the Company (provided at Attachment 6 of the response to Exhibit I.ED.16, which includes the monthly customer charge) in the "Price ($/m3)" cell to verify the model outputs used in the Company's analysis, rather than referencing a cell in the model that the Company never stated was used.

(c) Issue #4: "Increases in the Federal carbon charge are not included in the Guidehouse formula. It is not clear whether the increases in the Federal carbon charge are included as part of Enbridge Gas's calculations because the formula is not shown. Environmental Defence requested that the analysis by Guidehouse and Enbridge Gas be redone to incorporate carbon charge increases."[42]

Within ED's June 14, 2023 correspondence regarding this issue, ED stated: "Enbridge argues that 'increases to the Federal carbon charge to $170/tCO2e by 2030 is included as displayed at Attachment 7.' This is misleading and does not resolve the main issue that Environmental Defence wishes to explore – namely that the Guidehouse cost comparison does not appear to account for the increases

[41] Attachment 6 of the response to Exhibit I.ED.16 was provided as a live Excel document with formulae intact. As such, parties can identify and verify that the $287.76 monthly customer charge assumption is included in the total cost figures used in Enbridge Gas's analysis.

[42] Procedural Orders, p. 5

in its formula. As with the monthly customer charge, no formula actually depend on future carbon prices."

Enbridge Gas's Response

ED has ignored the information provided by Enbridge Gas and has unnecessarily confused matters. Enbridge Gas reiterates that the Federal carbon charge escalating to $170/tCO2e by 2030 is included in the Company's analysis and is explicitly shown at Attachment 6 of the response to Exhibit I.ED.16 and described in further detail below.[43]

As described above, Enbridge Gas engaged Guidehouse to develop a working model so that analysis could be run using customizable input assumptions. Similar to the monthly customer charge issue above, the fact that the working version of the model and the Guidehouse report/memo (Attachments 2 and 3 of the response to Exhibit I.ED.16) do not include the Federal carbon charge escalating to $170/tCO2e by 2030 is irrelevant to the lifetime cost-effectiveness results provided within the Company's analysis (Attachments 6 and 7 of the response to Exhibit I.ED.16) which incorporated the Federal carbon charge escalating to $170/tCO2e by 2030.

More specifically, the Federal carbon charge escalating to $170/tCO2e by 2030 input assumption can be found in row 19 of the Excel version of Attachment 6 of the response to Exhibit I.ED.16 (i.e., starting at 12.39 cents/m^3 in 2023 and increasing to 32.40 cents/m^3 in 2030). This attachment is a live Excel document with formulae intact which allows parties to verify how the Federal carbon charge is included in the total cost figures (i.e., row 24 of the live Excel document).

To confirm that the Federal carbon charge escalating to $170/tCO2e by 2030 was included in Enbridge Gas's analysis, ED could have simply ran the model with the total cost figures used by the Company (provided at Attachment 6 of the response to Exhibit I.ED.16, which includes the Federal carbon charge escalating

[43] Enbridge Gas correspondence (June 13, 2023), p. 3

to $170/tCO2e by 2030) to verify the model outputs used in the Company's analysis.

(d) Issue #5: "Enbridge Gas stated that it included the System Expansion Surcharge (SES) in the calculations. Environmental Defence stated that this is not verifiable as the formula is not shown and the numbers are 'static.' Environmental Defence noted that none of Guidehouse's formulas include SES as an input. Environmental Defence asked that the formulas showing that the SES was included be provided by Enbridge Gas, and confirmation that Guidehouse did not account for SES in its analysis."[44]

Enbridge Gas's Response

ED has ignored the information provided by Enbridge Gas and has unnecessarily confused matters. Enbridge Gas reiterates that the SES is included in the Company's analysis and is explicitly shown at Attachment 6 of the response to Exhibit I.ED.16 and described in further detail below.[45]

As described above, Enbridge Gas engaged Guidehouse to develop a working model so that analysis could be run using customizable input assumptions. Similar to the monthly customer charge and Federal carbon charge issues above, the fact that the working version of the model and the Guidehouse report/memo (Attachments 2 and 3 of the response to Exhibit I.ED.16) do not include the SES is irrelevant to the lifetime cost-effectiveness results provided within the Company's analysis (Attachments 6 and 7 of the response to Exhibit I.ED.16) which incorporated the SES.

More specifically, the SES input assumption can be found in row 21 of the Excel version of Attachment 6 of the response to Exhibit I.ED.16 (i.e., 23 cents/m^3). This attachment is a live Excel document with formulae intact which allows

[44] Procedural Orders, p. 5

[45] Enbridge Gas correspondence (June 13, 2023), p. 3

parties to verify how the SES is included in the total cost figures (i.e., row 24 of the live Excel document).

To confirm that the SES was included in Enbridge Gas's analysis, ED could have simply ran the model with the total cost figures used by the Company (provided at Attachment 6 of the response to Exhibit I.ED.16, which includes the SES) to verify the model outputs used in the Company's analysis.

(e) Issue #6: "Annual cooling costs are not included in either Enbridge Gas's or Guidehouse's models. Environmental Defence maintained that the cooling costs saving are relevant and should be incorporated into the analysis provided by Guidehouse and Enbridge Gas to provide for meaningful cost comparison."[46]

Within ED's June 14, 2023 correspondence regarding this issue, ED stated: "Enbridge argues that the inclusion of cooling savings that accrue to customers who switch to heat pumps instead of gas are too complex to analyze. However, both Dr. McDiarmid and the Energy Futures Group have done so in recent OEB proceedings."

Enbridge Gas's Response

ED appears to have ignored Enbridge Gas's June 13, 2023 correspondence which stated "the inclusion of electric summer cooling to the cost-effectiveness analysis is complex as it would not only require a technical assessment of the performance efficiencies of electric summer cooling equipment types **but also an assessment of the impact that electric heat pumps have on consumer energy bills for those consumers who would not opt for traditional electric summer cooling equipment with a natural gas furnace**".

The analysis referenced by ED from other OEB proceedings appears to be oversimplified and incomplete as it does not, at minimum, address the issue identified by the Company above – i.e., the potential increase to consumer energy

[46] Procedural Orders, p. 5

bills (specifically summer cooling costs) for consumers who would have summer cooling capabilities with an electric heat pump but would not otherwise have an electric air conditioner with a natural gas furnace. As such, the analysis referenced by ED is unhelpful in the assessment of the lifetime cost-effectiveness of electric heat pumps. The Company reiterates that it does not have information regarding summer cooling costs for electric heat pumps.[47]

(f) Issue #8: "Federal rebates are not included in the Guidehouse model. It is not clear to Environmental Defence which rebates were included in Enbridge Gas's analyses. Environmental Defence asked that the analysis of Guidehouse and Enbridge Gas should be updated to account for Federal rebates. Environmental Defence is looking for Enbridge Gas to confirm which Federal rebates it included or excluded from its analysis and to provide justification for why any rebates were excluded."[48]

Enbridge Gas's Response

ED has misunderstood the information provided by Enbridge Gas. Regarding which grants were included in Enbridge Gas's analysis, the Company's response to Exhibit I.ED.16, part e), explicitly states that the $5,000 grant was included in the low-end upfront cost scenario and not the high-end upfront cost scenario.[49]

Regarding the reason why the grant amount was included in the low-end upfront cost scenario and not the high-end upfront cost scenario, Enbridge Gas's response to Exhibit I.ED.16 explicitly states that not all electric heat pump applications are eligible for the $5,000 grant.[50] By definition, the high-end up-front cost scenario reflects the high-end upfront cost customers may potentially incur to convert their home to electric cold climate heat pumps. As such, if not all electric heat pump applications are eligible for the grant, it would not be appropriate to include the grant

[47] Enbridge Gas correspondence (June 13, 2023), pp. 3–4
[48] Procedural Orders, p. 5
[49] Response to Hidden Valley (EB-2022-0249), Exhibit I.ED.16 (updated May 31, 2023), p. 4
[50] Ibid

in the potential high-end upfront cost scenario. ED has unnecessarily confused Enbridge Gas's simple and appropriate assumption for the inclusion of the grant into the upfront cost information.

(g) Issue #9: "Heat pump cost estimates (i.e. upfront heat pump costs) provided by Enbridge Gas are, in Environmental Defence's view, not reliable or accurate. Environmental Defence asked that Enbridge Gas revise its analysis 'based on reputable third-party cost figures'."[51]

Enbridge Gas's Response

ED's assertion that Enbridge Gas's upfront cost assumptions aren't reputable and/or based on third-party information is incorrect. As described in Enbridge Gas's response to Exhibit I.ED.16, the estimates were provided by third-party HVAC contractors and reflect May 2023 costs (less than 2 months ago). Enbridge Gas requested low-end and high-end upfront cost estimates from HVAC contractors for conversions to both high-efficiency electric cold climate air source heat pump configurations and natural gas furnace configurations.

The information from HVAC contractors shows that there is a wide range of potential upfront costs when converting a home to an electric heat pump configuration. Specifically, the low-end cost to convert a home to an electric heat pump configuration was found to be $2,510 more than the low-end cost to convert a home to a natural gas furnace configuration,[52] while the high-end cost to convert a home to an electric heat pump configuration was found to be $39,000 more than the high-end cost to convert a home to a natural gas furnace configuration.

[51] Procedural Orders, pp. 5-6

[52] The $2,510 figure includes a $5,000 grant from the federal government for qualifying electric air source heat pumps. Without the grant, the low-end cost to convert a home to an electric heat pump configuration was found to be $7,510 more than the low-end cost to convert a home to a natural gas furnace configuration.

Enbridge Gas submits that its upfront cost information is appropriate for the purpose of its response to Exhibit I.ED.16 and that the Company does not have more up-to-date information.

28. Within its Procedural Orders, the OEB also requested that parties respond to the following three questions:[53]

(a) "In light of section 36.2 of the OEB Act and O. Reg 24/19, what factors must the OEB consider in determining the public interest pursuant to section 96(1)?"

Enbridge Gas's Response

As indicated in the OEB's Decision on Intervenor Evidence and Confidentiality dated April 17, 2023, (the "April 17 Decision") "[e]ligibility for NGEP funding does not remove any requirement that projects receive all necessary approvals from the OEB, including leave to construct. All three projects that are the subject of these applications require leave to construct approval to proceed and to receive the NGEP funding." However, the legislation and regulations that enable the NGEP were established to further the public interest consistent with the OEB's objectives to facilitate the rational expansion of natural gas distribution systems. The decision of the Ministry of Energy to approve the Projects for funding on June 9, 2022 under the NGEP further supports that the Projects are in the public interest. As noted by the OEB in its April 17 Decision, "[t]he OEB in administrative and adjudicative decisions has accepted that the *Access to Natural Gas Act, 2018* and its proposed program implementation represents an important consideration in the determination of the public interest in providing the availability of natural gas service in unserved communities." In this regard, while the factors that the OEB considers in the ordinary course in determining the public interest under section 96(1) of the OEB Act remain intact, they should not be considered in isolation from the Minister's expression of the public interest.

[53] Procedural Orders, p. 6

(b) "What is the expected impact of take up of other forms of energy delivery to the customers that will be provided access to natural gas through the completion of the project?"

Enbridge Gas's Response

Enbridge Gas interprets the question as asking what the impact will be on those customers that access natural gas in the Project areas notwithstanding that other customers may convert to other forms of energy delivery. Enbridge Gas notes that it should not be assumed that other customers will adopt other forms of energy delivery. There are a number of factors that govern conversion to alternative forms of energy delivery, including the availability and cost of the equipment relative to the uniqueness of individual homes and whether a home would require electrical panel upgrades, exterior service upgrades by an electric utility, internal wiring upgrades, duct work improvements or baseboard alterations. There are a wide range of potential upfront costs depending on the existing configuration of the home itself.[54] The OEB should not adopt an oversimplification of conversion that would not necessarily be representative of actual choices customers would need to make or actual conversion costs for specific homes in the Project areas.

Enbridge Gas's natural gas attachment forecasts are based on the energy interests expressed by actual residents and business-owners within the Project areas, which inherently incorporate all factors including financial and non-financial considerations. There is no reason to believe that the attachment forecast is inaccurate.

In any event, even if other forms of energy delivery were chosen, during the rate stability period, customers who choose to access natural gas in the Project areas are indifferent from a rate perspective to other customers' choices. Consistent with the direction in the OEB's EB-2020-0094 Decision, upon placing the Project into service, Enbridge Gas will apply a 10-year rate stability period during which

[54] Hidden Valley (EB-2022-0249), Exhibit I.ED.16

the Company will bear the risk of the Project customer attachment and capital expenditure forecast vs. actuals.[55]

(c) "What is the appropriate treatment of the Project after the rate stability period has concluded? Please include treatment if a shortfall of expected Project revenue has occurred."

Enbridge Gas's Response

Enbridge Gas will file the actual costs and revenues of the Project with the OEB for consideration of inclusion in rates in the rebasing application following the conclusion of the rate stability period. The OEB has also determined that it will consider any questions about the treatment of any revenue surplus or shortfall beyond the RSP at that same time.[56] For these reasons, Enbridge respectfully submits that it is premature for the Company to make any further commitments at this time with regard to the cost recovery of specific projects after the rate stability period.

D. Project Cost and Economics

29. Based on the results of the E.B.O. 188 analysis and given the NGEP funding and the SES, Enbridge Gas submits that the Project is economically justified. The DCF analysis for each Project was prepared based on the Company's latest feasibility parameters (i.e., long-term debt rates, discount rates, tax rates, etc.), included SES and NGEP funding, over a 40-year time period consistent with E.B.O. 188 and a fixed 40-year SES term as approved in EB-2019-0095.

30. Total estimated cost of the proposed Hidden Valley Project is $3.3 million (including both pipeline and ancillary facilities).[57] Based on the forecast of costs and revenues before SES and NGEP funding, the Project had a PI of 0.30, which improves to 0.50 with the inclusion of the SES. The Company will require the NGEP funding to support the

[55] Hidden Valley (EB-2022-0249), Exhibit I.ED.12
[56] EB-2019-0188, Decision and Order, May 7, 2020: pp. 12-13
[57] Hidden Valley (EB-2022-0249), Updated May 8, 2023, Exhibit E-1-1, p. 1

economic feasibility of the Project. After SES and NGEP funding, the Project currently has a net present value ("NPV") of $6,000 and a PI of 1.0.[58]

31. The total cost for the MBQ Project is estimated to be $10.7 million (including both pipeline and ancillary facilities).[59] Based on the forecast of costs and revenues before SES and NGEP funding, the Project has a PI of 0.22, which improves to 0.35 with the inclusion of the SES. After both the SES and NGEP funding, the Project has a net present value ("NPV") of $3,000 and a PI of 1.0.[60]

32. The total cost for the proposed Selwyn Project is estimated to be $4.5 million (including both pipeline and ancillary facilities).[61] Based on the forecast of costs and revenues before SES and NGEP funding, the Project has a PI of 0.30, which improves to 0.68 with the inclusion of the SES. After both SES and NGEP funding, the Project has a net present value ("NPV") of $0 and a PI of 1.0.[62]

33. Consistent with the OEB's direction in the EB-2020-0094 Decision, upon placing each Project into service, Enbridge Gas will apply a 10-year Rate Stability Period ("RSP") during which the Company will bear the risk of the Project customer attachment and capital expenditure forecast.

34. The estimates of Project NPV and PI are subject to change as the Project progresses through the design and construction phase. Any variances from forecasted Project capital cost or revenues, including variances in the customer attachment forecast for the Project, will be managed by Enbridge Gas during the RSP. The final actual PI will be determined using actual information and will be communicated at the next rebasing application after the expiry of the RSP.

---

[58] Ibid, p. 4

[59] MBQ (EB-2022-0248), Exhibit E-1-1, p.1 and Exhibit I.STAFF.3 parts a) and b)

[60] MBQ (EB-2022-0248), Exhibit E-1-1, p.4

[61] Selwyn (EB-2022-0156), Exhibit E-1-1, p. 1

[62] Ibid, p. 4

E. Environmental

35. With respect to the Hidden Valley Project and the Selwyn Project, to select the Preferred Route ("PR") for each Project, Enbridge Gas retained Stantec Consulting Ltd. ("Stantec") and for the MBQ Project Enbridge Gas retained Dillon Consulting Ltd. ("Dillon") to undertake applicable route evaluations and environmental and socio-economic impact studies, which included cumulative effects assessments and Stage 1 Archaeological Assessments ("AA"). As part of the development of the studies, Enbridge Gas and the above environmental consultants implemented consultation programs to receive input from interested and potentially affected parties including Indigenous communities. This input was evaluated and integrated into the applicable studies. Mitigation measures designed to minimize environmental and community impacts resulting from construction and operation of the Projects were also developed as part of the applicable studies.

36. Using the mitigation measures and monitoring and contingency plans found within the applicable Environmental Reports, Environmental Protection Plans ("EPP") and additional mitigation measures provided by regulatory agencies through the permitting and approval process, construction of the Projects will have negligible impacts on the environment. No significant environmental or cumulative effects are anticipated from development of the proposed pipeline Projects. Enbridge Gas will complete the EPP prior to mobilization and construction of the Project.

F. Land Matters

37. The preferred route for each of the Projects follows the public road allowance for the majority of the Projects' route(s). Enbridge Gas has/will obtain all necessary consents to construct in road allowance prior to commencing construction.

38. Temporary working areas may be required along the preferred route where the road allowance is too narrow or confined to facilitate construction. These areas will be identified with the assistance of the contractor that will perform the construction. Agreements for temporary working rights will be negotiated where required.

G. Indigenous Consultation

39. Enbridge Gas is committed to creating processes that support meaningful engagement with potentially affected Indigenous groups (First Nations and Métis). Enbridge Gas has worked to build an understanding of project related interests, ensure regulatory requirements are met, mitigate or avoid Project-related impacts on Indigenous interests including rights, and provide mutually beneficial opportunities where possible.

40. Enbridge Gas received a Delegation Letter from the MOE for each of the Projects,[63] indicating that the MOE had delegated the procedural aspects of consultation to Enbridge Gas for the Projects.

41. An Indigenous Consultation Report was provided to the MOE on the date of filing each of the current Applications with the OEB. For the Hidden Valley and Selwyn Projects, the MOE will review Enbridge Gas's consultation with Indigenous groups potentially affected by the Projects and provide its decision as to whether Enbridge Gas's consultation has been sufficient. Upon receipt of the MOE's decision regarding the sufficiency of Indigenous consultation on the Projects, Enbridge Gas will file it with the OEB.

42. The MOE provided Enbridge Gas with a letter of opinion regarding the sufficiency of consultation regarding the MBQ Project on April 25, 2023. The MOE has determined that "… based on this review of material and our outreach to Indigenous communities, ENERGY is of the opinion that the procedural aspects of consultation undertaken by Enbridge to-date for the purposes of the Ontario Energy Board's Leave to Construct for the Project are satisfactory."[64]

43. With respect to the MBQ Project, since a portion of the Project will be located on MBQFN's reserve in the Tyendinaga Mohawk Territory, Certificate of Possession holders may be potentially affected by the MBQ Project. Enbridge Gas will engage with

[63] Exhibit H-1-1, Attachment 2 – Hidden Valley (EB-2022-0249); MBQ (EB-2022-0248); and Selwyn (EB-2022-0156)

[64] MBQ (EB-2022-0248), Exhibit I.STAFF.10 parts d) and e)

potentially affected Certificate of Possession holders as directed by MBQFN's Chief and Council.

H. Conclusion

44. Based on the foregoing, Enbridge Gas respectfully requests that the OEB issue an Order granting leave to construct for the Selwyn Project, the MBQ Project and the Hidden Valley Project pursuant to section 90 of the OEB Act and an order approving the forms of Temporary Land Use Agreement and Pipeline Easement as set out in Exhibit G, Tab 1, Schedule 1, Attachments 1 and 2 for each of the Projects.