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May 2, 2018

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319, 27th Floor
2300 Yonge Street
Toronto, ON M4P 1E4

Dear Ms. Walli:

**Re: EB-2017-0319
Enbridge Gas Distribution Inc. application for approval of the cost consequences of
the proposed Renewable Natural Gas Enabling Program and Geothermal Energy
Service Program (the Proceeding)**

We are counsel to Anwaatin Inc. (**Anwaatin**) in the above-mentioned Proceeding. Please find enclosed Anwaatin's written interrogatories to Enbridge Gas Distribution Inc., filed in accordance with Procedural Order No. 2.

Anwaatin wishes to note that it has reviewed and supports Board Staff's interrogatories dated April 26, 2018.

Yours very truly,

A handwritten signature in black ink, consisting of a stylized cursive 'L' followed by a long horizontal stroke that curves upwards at the end.

Lisa (Elisabeth) DeMarco

ONTARIO ENERGY BOARD

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

AND IN THE MATTER OF an application by Enbridge Gas Distribution Inc. for an order or orders related to its Renewable Natural Gas Enabling Program and Geothermal Energy Service Program;

AND IN THE MATTER OF an application by Enbridge Gas Distribution Inc. for an order or orders amending or varying the rates charged to customers for the sale, distribution, transmission, and storage of gas commencing as of January 1, 2018.

EB-2017-0319

**Interrogatories from
Anwaatin Inc. (Anwaatin)**

May 2, 2018

Question: 1

- Reference:
- Exhibit B / Tab 1 / Schedule 1 / pp. 7-8, #21 and 22
 - Issues 4.1 and 4.2

Preamble: Enbridge Gas Distribution Inc. (**Enbridge**) states that it is working with the Ontario Geothermal Association (**OGA**), the Ministry of Environment and Climate Change (**MOECC**), and the Ministry of Energy (**MOE**) to find solutions to overcome barriers to the adoption of ground source heat pump heating and cooling systems ("**geothermal systems**"), such as high initial costs and inconsistent deployment and installation practices.

- a) Please describe in general terms Enbridge's existing and planned consultation and engagement with Indigenous rights-holding communities in Ontario with respect to the proposed Geothermal Energy Service Program (**GES Program**).
- b) Please describe specifically Enbridge's existing and planned consultation and engagement with Indigenous rights-holding communities in Ontario on solutions to overcome barriers to the adoption of geothermal systems that may be unique to Indigenous communities, including high initial costs and inconsistent deployment and installation practices.
- c) Please describe any Ontario government (e.g., MOECC, MOE, Ontario Energy Board) Crown consultations with Indigenous rights-holding communities in Ontario with respect to Crown decisions for the GES Program.

Question: 2

- Reference:
- Exhibit B / Tab 1 / Schedule 1 / pp. 21-22, #61 and #62; p. 23, #65; and p. 70, #70
 - Issues 1.2, 4.1, and 4.2

Preamble: Enbridge states that it will see complementary investments between customers, Enbridge, and Green Ontario Fund (**GreenON**) funding. Enbridge will own and maintain the geothermal loops while customers will own and maintain the heat pump system that will receive

GreenON funding to offset some of that cost. GreenON's website provides a list of contractors for the procurement and installation of geothermal systems.¹

- a) Please explain how Indigenous rights-holding communities will be, or can be, involved in the procurement and installation of geothermal systems.
- b) Please explain how bona fide Indigenous contractors will be involved in the procurement and installation of geothermal systems.
- c) Please explain why selling and installing geothermal loops for households within First Nations should be considered part of Enbridge's regulated business (i.e., a core utility business).
- d) Please explain, given the investment framework, how Enbridge will accommodate geothermal loops serving multiple First Nation households and/or institutional buildings.

Question: 3

- Reference:
- Exhibit B / Tab 1 / Schedule 1 / pp. 21-23, #61-63, #66 and p. 25, #74
 - Issues 1.2, 2.4, 4.1 and 4.2

Preamble: Enbridge indicates that it plans to implement its GES Program in 2018 as a greenhouse gas (**GHG**) emission abatement program to offset natural gas usage. Enbridge also indicates that geothermal systems provide space heating, water heating and cooling, and are typically electrically powered. Enbridge states that it sees geothermal systems as a key way to abate GHG emissions. Deploying geothermal systems where natural gas would otherwise be consumed will offset natural gas usage. Many First Nation communities are not currently served by natural gas.²

¹ Green Ontario Fund, "Find a Contractor", available online: <https://www.greenon.ca/find-a-contractor>.

² See EB-2016-0004, Final Argument of Anwaatin Inc. (June 20, 2016).

- a) Please explain, with respect to First Nation communities in Ontario, whether the GES Program is intended to facilitate the installation of ground source heat pumps solely in homes currently heated with natural gas.
- b) Please confirm that the GES Program will not include installing ground source heat pumps in electrically- or wood-electric-heated First Nation homes and other buildings.
- c) Please confirm that the GES Program will not include installing ground source heat pumps in propane-heated First Nation homes and other buildings.
- d) Please outline Enbridge's analysis demonstrating that installing a geothermal system in a home on a First Nation reserve — currently heated with natural gas or heated through other means — will be cost-effective for a typical household customer (e.g., when a heat pump is installed in a natural gas-heated home, the net impact on the customer's electricity bill and the customer's natural gas bill would be reduced overall for years 1 to 10).
 - i) If Enbridge has not completed this analysis, please conduct this analysis and provide all supporting documentation including data, assumptions, and analysis for existing heating of typical First Nation reserve homes with (1) natural gas, (2) electricity, and (3) for typical wood-electric heating appliances.
 - ii) If Enbridge has completed this analysis, in addition to outlining the analysis, please provide all supporting documentation including data, assumptions, and analysis for existing heating of typical First Nation reserve homes with (1) natural gas, (2) electricity, and (3) for typical wood-electric heating appliances.
- e) Please explain Enbridge's intentions or plans to expand natural gas services to First Nation reserve communities throughout its current and future (Union Gas) service areas to ensure that the program is intentionally inclusive of First Nation reserve households as potential beneficiaries.

Question: 4

Reference:

- Exhibit B / Tab 1 / Schedule 1 / p. 6, #15 and pp. 23-24, #66-67
- Issues 4.1 and 4.2

Preamble: Ontario's Climate Change Action Plan promises future funding to promote the adoption of, among other things, air source heat pumps in the residential building sector.³ The 2017 Long-Term Energy Plan indicates that "natural gas will continue to play a role in space and water heating, but we must use it as efficiently as possible and supplement it with the next generation of clean energy technologies, such as ground-source and air-source heat pumps."⁴

- a) Please explain whether Enbridge intends to expand its GES Program to include natural gas air source heat pumps to First Nation reserve homes and other buildings.
- i) If yes, please explain the timing, resources, and costs and how such an expansion will be tied to an overall plan to expand natural gas services to First Nation reserve communities throughout Enbridge's current and future (Union Gas) service areas to ensure that the GES Program is intentionally inclusive of First Nation reserve households as potential beneficiaries.

Question: 5

- Reference:
- Exhibit B / Tab 1 / Schedule 1 / p. 24, #69 and p. 26, #76-77
 - Issues 4.1 and 4.2

Preamble: Enbridge indicates that it plans to offer the GES Program to the residential market. For customers that participate in the GES Program, Enbridge will supply and install separate geothermal loops for each home or building owner. Enbridge also states that the home or building owner will arrange for the installation of the ground source heat pump and other equipment necessary to complete the geothermal energy system. Enbridge will provide support to the customer to ensure that the appropriate equipment is procured and installed.

³ Ontario Climate Change Action Plan at 67.

⁴ 2017 Long-Term Energy Plan at 109 and 115.

- a) Please explain what Enbridge means by the "residential market"⁵ with respect to First Nation reserve communities in Ontario.
- b) Please explain what Enbridge means by the home owner "will arrange for the installation of the ground source heat pump and other equipment necessary to complete the geothermal system"⁶ with respect to First Nation reserve households, where the home is not "owned" by the occupants. For example, who would be responsible for: (1) procuring a geothermal energy system from a supplier, and (2) contracting for the installation of that system?
- i) What arrangements will Enbridge make to use bona fide First Nation contractors for installing the geothermal loops and installing the ground source heat pump systems? Please explain.
 - ii) Please explain in detail how Enbridge intends to provide support to First Nation customers to ensure that the appropriate equipment is procured, installed, and properly maintained for the life of the equipment.
 - iii) Please explain in detail how both ground source heat pump system maintenance costs and geothermal loop system maintenance costs will be covered, by whom, and what payment approaches will be available to cover these costs.

Question: 6

Reference:

- Exhibit B / Tab 1 / Schedule 1 / pp. 27-28, #79-81 and #83
- Issues 2.4, 4.1 and 4.2

Preamble: Enbridge states that it has built a discounted cash flow (**DCF**) model using a 10-year customer forecast and it expects about 170 customers in year 1 and, over a 10-year period, about 18,000 customers. This is based on expected demand, current capacity in the market, and ramp up capability of the market to meet demand. Enbridge also states that costs may depend on geographical and geological construction uncertainties.

- a) Please explain Enbridge's approach to First Nation reserve markets for the GES Program.

⁵ Exhibit B / Tab 1 / Schedule 1 / p. 24, #69.

⁶ Exhibit B / Tab 1 / Schedule 1 / p. 26, #76-77.

- b) Please provide estimates and assumptions for the number of First Nation customers to be served in years 1 through 10.
- c) Please provide details on geological uncertainties for each geographical area with respect to specific geological uncertainties for First Nation reserve communities.
- d) Please breakdown the forecast of 18,000 customers in year 10 by First Nation reserve community in Ontario, and discuss the geological construction uncertainties for each of the areas.
- e) Please explain what is the expected demand across Ontario First Nation reserve communities over the ten-year period? Please provide all supporting documentation including data, assumptions and analysis.

Question: 7

- Reference:
- Exhibit B / Tab 1 / Schedule 1 / p. 4, #11-12
 - Issues 4.1, and 4.2

Preamble: The RNG Enabling Program is intended to allow Enbridge to provide upgrading and injection services for RNG producers, in an effort to increase the supply and availability of low-carbon renewable natural gas in Ontario.

- a) Please describe in general terms Enbridge's existing and planned consultation and engagement with Indigenous rights-holding communities in Ontario with respect to the proposed RNG Enabling Program.
- b) Please describe specifically Enbridge's existing and planned consultation and engagement with Indigenous rights-holding communities in Ontario on solutions to overcome barriers Indigenous community and/or Indigenous business participation in renewable natural gas upgrading and injection services, including, for First Nations, both on-reserve services and services located on First Nation traditional territories.
- c) Please describe any Ontario government (e.g., MOECC, MOE, Ontario Energy Board) Crown consultations with Indigenous rights-holding communities in

Ontario with respect to Crown decisions for the proposed RNG Enabling Program.

ALL OF WHICH IS RESPECTFULLY
SUBMITTED THIS

2nd day of May, 2018



Lisa (Elisabeth) DeMarco
DeMarco Allan LLP
Counsel for Anwaatin