ENBRIDGE GAS DISTRIBUTION INC. (ENBRIDGE)
RESPONSES TO INTERROGATORIES OF OSEA

INTERROGATORY #1

Reference: Issue 4 d), Page 7 of 36

Preamble: Enbridge refers to several benefits associated with new community expansion for natural gas, including economic growth, employment opportunities and fuel cost savings for new customers.

a) Has Enbridge analyzed these types of benefits with respect to conversion to renewable energy sources (e.g. ground source heat pumps)? If so, please provide the results of the analysis.

RESPONSE

No, please see the Company's response to OSEA Interrogatory #4(b) at Exhibit S3.EGDI.OSEA.4.

ENBRIDGE GAS DISTRIBUTION INC. (ENBRIDGE)
RESPONSES TO INTERROGATORIES OF OSEA

INTERROGATORY #2

Reference: Issue 10, Page 11 of 36

Preamble: "*Conservation has been shown to be the most cost effective way to reduce per-customer consumption, which simultaneously reduces emissions and customer bills. Customers saved $2.43 for every $1 spent by Enbridge on DSM."*

a. Is Enbridge intending to apply its conservation programs to potential customers in new communities to reduce the consumption of natural gas in advance of conversion?

b. Has Enbridge completed its analysis of the costs and benefits of community expansion using "average consumption per customer", pre-conservation consumption or post-conservation consumption?

RESPONSE

a. At this time and in the context of the current EB-2014-0134 DSM Framework Guidelines, Enbridge will not be offering DSM programs to potential customers in new communities in advance of conversion. Enbridge requires that customers participating in utility DSM offers have a valid natural gas account.

However, as with all other franchise-wide existing Enbridge customers, once a new community has been converted to natural gas, those residential, commercial and industrial customers who have converted to natural gas, and have a valid gas account, would be eligible to participate and benefit from the available DSM programs being offered through the Company, where applicable.

To the degree that new construction plans exist within newly connected communities for additional residential or commercial building, Enbridge could also engage builders in its Savings by Design offers which focus on the construction of buildings that are more efficient than required by the Ontario Building Code.

b. The analysis presented by Enbridge in its evidence in this proceeding is based on Enbridge's average annual consumption per residential customer of 2,400 m^3.

ENBRIDGE GAS DISTRIBUTION INC. (ENBRIDGE)
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INTERROGATORY #3

Reference: Issue 10, Page 12 of 36

Preamble: "*Enbridge has and will continue to work cooperatively with the Province to help lower CO2 emissions. There are a number of initiatives that Enbridge is pursuing that will help the Province achieve its carbon reduction goals. Some of these will result in reduced gas consumption in some market sectors while others will increase gas usage.*

In the case of heating oil, diesel fuel for vehicles and propane natural gas provides a carbon reduction benefit. With respect to electricity the natural gas carbon advantage is clear when comparing the carbon footprint of natural gas to electricity for specific applications. Although counterintuitive, when natural gas is considered as the marginal fuel supporting electricity generation converting heating and water heating loads from electricity to natural gas will lead to reductions in the Province's CO2 emissions."

a) Has Enbridge completed an analysis of the environmental benefits of converting heating and water loads from alternative fuels to renewable energy sources (e.g. the use of ground source heat pumps)? If so, please provide the results of the analysis.

b) Please describe the specific applications where natural gas provides a lower carbon footprint than electricity. Please provide supporting calculations and analysis.

RESPONSE

a) No, Enbridge has not completed an analysis of the environmental benefits of converting heating and water loads from alternative fuels to renewable energy sources (e.g. the use of ground source heat pumps).

b) Comparing the carbon footprint of electricity to natural gas applications requires the identification of the source energy for the generation of electricity. In Ontario marginal electricity is produced using natural gas fired power generation plants. The evidence indicates that typical water heating and space heating natural gas

appliances will create less CO_2 emissions than typical electric power resistance space heating and domestic hot water heating where the electric power is created from a natural gas fired generation plant. The assumptions and results of the analysis can be found in response to FRPO Interrogatory #6 at Exhibit S3.EGD.FRPO.6.

ENBRIDGE GAS DISTRIBUTION INC. (ENBRIDGE)
RESPONSES TO INTERROGATORIES OF OSEA

INTERROGATORY #4

Reference: Issue 11, Page 13 of 36

Preamble: "*Based on the figures provided in Table 1 and the expected impacts of the pending cap and trade program as articulated by the Province, it is expected that the annual energy cost saving for the average residential customer converting their heating load from electricity to natural gas would fall from $2,165 per year to $2081 per year. The Company does not believe that this change will have any significant impact in the rate of customer conversion from existing fuel types to natural gas."*

a. Has Enbridge considered how the anticipated increase in natural gas prices under a cap and trade program will compare to the costs for renewable energy? If so, please provide the results of the analysis.

b. Please provide calculations for renewable energy sources, such as geothermal, in Table 1.

c. Has Enbridge assessed how the increase in natural gas prices will impact conversion rates to renewable energy sources (e.g. will customers be more likely to switch from existing energy sources directly to renewable energy sources without converting to natural gas)? If so, please provide the results of the analysis.

RESPONSE

a) No.

b) Exhibit S3.EGDI.OGA.7 shows a calculation of converting an older electric ground source heat pump system (COP 3.0) to a typical natural gas system.

c) No.