

ENBRIDGE GAS DISTRIBUTION INC. RESPONSE TO
BOARD STAFF INTERROGATORY #15

INTERROGATORY

Issue: A-3

Are the costs of the facilities and the rate impacts to customers appropriate?

REF: EB-2012-0451, Exhibit E, Tab 1, Schedule 1, Page 6 of 9, par. 19

Preamble

This section speaks specifically to Enbridge's Exhibit E concerning Project Benefits and Economics. In paragraph 19, Enbridge states that the GTA project will permit approximately 14,000 new residential customers each year.

Questions

- a) How many residential customer additions on average have been added in the last 10 years in the GTA area?
- b) Will the GTA Project permit additional gas customers in other delivery areas such as Ottawa and Niagara? Please provide details.
- c) How does the GTA Project take account of expected franchise growth in areas outside of the GTA influence area?

RESPONSE

Given the breadth and depth of many of the interrogatories filed in the GTA Project Leave to Construct Application, Enbridge would like to provide an explanation of its data gathering and forecasting processes, particularly as it relates to natural gas demand forecasting. Enbridge hopes that this explanation will assist the Board and interveners in understanding some of the interrogatory responses. There are several interrogatories for which data are not available, limited data is available or the Company, in the interest of assisting interveners and the Board, has provided information that are "derived". It is important for the Board and interveners to understand why, as laid out below

Witnesses: F. Ahmad
M. Giridhar
M. Suarez

Enbridge utilizes forecasting processes which can be grouped into two main categories:

- 1) Forecasting processes utilized to derive information required for the setting of rates; and
- 2) Forecasting processes utilized for distribution system planning.

Both processes utilize methodologies that have been approved by the Board in past rate case and leave to construct applications. Due to the nature of each process the Company has developed processes which meet the requirements of each.

Forecasting Process for Rate Setting:

For the rate setting process, the Company has developed accurate and comprehensive methodologies for determining forecasts of natural gas demand. The Company utilizes a top down approach and regression analysis to determine the forecast of natural gas demand for its general service customers. Due to the variable nature of weather in each of the three weather zones comprising the Company's franchise areas and different demand profiles within customer segments the Company produces annual forecasts of average use by weather zone, by area, by rate class, by revenue class and sector. These forecasts are utilized to determine the forecast of general service average use and subsequently total general service demand by rate class.

The forecast of large volume natural gas demand for rate setting purposes utilizes a comprehensive bottom up approach whereby the Company's account executives consult with large volume customers in order to determine expected natural gas demand. Large volume natural gas demand forecasts by customer are then aggregated to determine the total annual demand forecast for all large volume customers by rate class.

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The forecasting methodologies developed for rate setting purposes recognize that there are different drivers for natural gas demand across all customer types within the Enbridge franchise areas. This is necessary in order to develop an accurate forecast of natural gas demand. However, the Company charges postage stamp rates meaning that irrespective of geographic location each customer within a particular rate class pays exactly the same rate. Consequently, it is the aggregate annual demand of all customers that, in part, determines the rates charged by Enbridge.

As a consequence of the methodologies developed for forecasting annual natural gas demand, the Company has developed databases which support this forecasting process. These databases do not break out information based on individual customers (for a vast majority of customers) but rather contain aggregate information related to different customer classes, types and geographic regions. The information for these databases and forecasts derived therefrom are based on information contained in the Company's Customer Information System ("CIS").

The Enbridge CIS contains data related to monthly billed consumption along with information on customer type, location, number of customers and other information required for billing purposes. It is important to note that the CIS provides data related to billed consumption based on monthly meter reads or estimated reads for the vast majority of the Company's customers.

Forecasting for Distribution System Planning:

In addition to tracking metered consumption, the Company also tracks and monitors the amount of natural gas flowing into the distribution system through each gate station connected to the TransCanada and Union Gas transmission systems. This information is tracked on a much more frequent basis, hourly and daily, for the purpose of determining upstream natural gas supply flows from upstream suppliers, flows into the distribution system and flows to/from storage.

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Gas control is particularly concerned with hourly and daily flows in order to balance supply and demand throughout a particular day, to ensure the Company is in compliance with all of its upstream contracts and can manage any operational constraints to ensure the safe and reliable distribution of natural gas.

For the purpose of gas supply planning, Enbridge utilizes the demand forecasts which underpin the rate setting process and develops a gas supply plan to meet this demand. In terms of developing a gas supply plan, the Company is concerned with projected daily demand within each of the toll regions or delivery points defined by the Upstream suppliers. The Company does not develop its gas supply plans by the hour nor for each, street, town, city, municipality or gate station within its distribution franchise, nor is the gas supply plan developed to meet the demand of specific customer types or rate classes. Rather, the gas supply plan is developed to meet aggregate demand on peak day and throughout the year within the geographic regions comprising the Enbridge CDA and Enbridge EDA.

The aforementioned gate station throughput data cannot be attributed to any one particular customer (for the vast majority of customers). Once natural gas is dispatched into the distribution system and consumed, it cannot be tracked back to a particular gate station for each individual customer (for a majority of customers), particularly in the Greater Toronto area which is supplied by several gate stations and is partially interconnected downstream of the gate stations by a vast distribution network.

The databases, forecasting methodologies and forecasts utilized by the Company for the purpose of distribution system planning are not those utilized to develop the annual volumetric forecast or the gas supply plan for the purpose of setting rates. Rather these forecasts are focused on providing natural gas demand information related to specific

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geographic areas within the natural gas distribution system. Unlike annual demand forecasts, for the purpose of setting rates, these forecasts are concerned with peak hour loads only.

For the purposes of network modeling, a very detailed understanding of distribution system demand is required. Demand information on a customer by customer basis is required such that specific geographic areas (which do not necessarily coincide with the geographic areas utilized for annual volumetric forecasting for rate setting purposes) can be examined. For system planning, actual customer consumption volumes and corresponding temperature readings are used to determine demand for each customer. Given that customer meter reads or estimates are monthly, peak hourly loads are derived for each customer for design day conditions. This load is applied to the hydraulic model at the pipe level. This system model is used to analyze the system for the upcoming heating season to ensure the reliable supply of gas to the Company's customers and to manage the system on a day to day basis. This load information is also used for future distribution system requirements such as reinforcements or expansions.

Summary:

It is clear that there is no one all-encompassing database or forecasting methodology utilized by the Company. Different databases and forecasting methodologies have been developed as a result of regulatory process requirements, data availability, the nature of natural gas flows into/throughout the distribution system, and forecasting requirements.

As a consequence of the foregoing, the Company has been as responsive and informative as it can when providing responses to the numerous data requests contained in the interrogatories received. Where possible, the Company has provided

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available information on a reasonable efforts basis. In cases where information is not provided, the Company has explained the reasons for why this is the case. Where possible, the Company has provided derived information on a reasonable efforts basis with the understanding that this information is based on numerous assumptions. In these instances, the Company has provided the rationale for why the information is derived and the assumptions underpinning said derivations. Finally, where interrogatories, either from the same intervener or across several interveners, request the same information, the Company has attempted to combine responses in order to prevent duplication.

- a) Approximately 14,179 residential customer additions have been added annually over the period from 2004-2012 on average in the GTA Project Influence Area.
- b) The GTA Project permits the addition of gas customers directly in the GTA Project Influence Area through reinforcement of distribution infrastructure. As described in evidence, the GTA Project also provides economic access to short haul supply from Dawn and Marcellus, in conjunction with additional infrastructure downstream of Albion, for customers residing outside the GTA Project Influence Area. As such, the GTA Project could be leveraged to permit the economic addition of customers elsewhere in its franchise and in Ontario and Quebec.
- c) The Bram West to Albion Pipeline will create up to 1,600,000 GJ/d or 2,000,000 GJ/d of capacity depending on whether the pipeline is sized at NPS 36 or NPS 42, respectively. Enbridge plans to retain 800,000 GJ/d for the benefit of the distribution customers in the GTA Project Influence Area. Enbridge has made this determination based on projected growth over the next ten years in the project influence area and the ability to increase reliability and reduce costs associated with discretionary supply serving the Enbridge Central Distribution Area.

Under the terms of the MOU, TransCanada may utilize the remaining capacity to meet its system requirements, including elimination of 500,000 GJ/d of short haul capacity that is currently served by utilizing back haul services on the Great Lakes system and use of long haul on the TCPL Mainline as described in

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I.D5.EGD.STAFF.48 TransCanada may also use capacity to meet shipper requests for additional short haul services from Dawn and Marcellus. Depending on the ultimate sizing of the Bram West to Albion Pipeline, the remaining capacity will suffice to meet the growth needs of the Enbridge franchise from short haul supply and permit some level of displacement of long haul supply with short haul supply for the remainder of Enbridge's market and those of Union, Gaz Metro and others.

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