

**SCHOOL ENERGY COALITION**

**CROSS-EXAMINATION  
MATERIALS**

**UNION/ENBRIDGE DSM PLANS**

**EB-2015-0029/49**

**SYNAPSE PANEL**

### ENBRIDGE INTERROGATORY #3

#### INTERROGATORY

Reference: Exhibit L.OEBStaff.1, general

Question:

Please provide a list of key documents provided to SEE in order to complete its review of the gas utilities' DSM Plans.

#### RESPONSE

Please refer to the References section of the report, found at L.OEBStaff.1, pages 132-137. Specifically with regard to Ontario Energy Board documents, Synapse reviewed the following in preparing its report:

- Report of the Board, Demand Side Management Framework for Natural Gas Distributors (2015-2020), EB-2014-0134, December 22, 2014.
- Filing Guidelines to the Demand Side Management Framework for Natural Gas Distributors (2015-2020), EB-2014-0134, December 22, 2014.
- Staff Discussion Paper, On Revised Draft Demand Side Management Guidelines for Natural Gas Utilities. EB-2008-0346, January 21, 2011.
- Demand Side Management Guidelines for Natural Gas Utilities, EB-2008-0346, June 30, 2011.
- Decision and Order, EB-2014-0273, June 4, 2015.
- Ontario Power Authority, Conservation First 2015-2020 Evaluation, Measurement and Verification Protocols and Requirements V2.0, 2015.

Witnesses: T. Woolf  
K. Takahashi  
E. Malone  
J. Kallay  
A. Napoleon

## UNDERTAKING JT4.6

### UNDERTAKING

August 18, 2015 Technical Conference Transcript, page 33.

To advise Synapse's awareness of the low-income working group and the discussions that were had within that group between stakeholders, intervenors, and the companies over the last two years when discussing DSM and the programming and low-income customer needs.

### RESPONSE

Synapse's awareness of low-income working group discussions was supplemented through OEB Staff clarifications and OEB Staff interrogatories regarding the utilities low-income program proposals.

Witnesses: T. Woolf  
K. Takahashi  
E. Malone  
J. Kallay  
A. Napoleon

## UNDERTAKING JT4.7

### UNDERTAKING

August 18, 2015 Technical Conference Transcript, page 34.

To advise whether Synapse requested any specific materials about low-income DSM before preparing its report and, if there was a request, to provide the information about the discussion or the terms of reference or whatever there may be.

### RESPONSE

Synapse's review of the utility filings and subsequent phone discussions with OEB Staff contributed to our understanding of low-income specific issues in Ontario.

Witnesses: T. Woolf  
K. Takahashi  
E. Malone  
J. Kallay  
A. Napoleon

## UNDERTAKING JT4.17

### UNDERTAKING

August 18, 2015 Technical Conference Transcript, page 82.

Synapse to provide its view on whether Union's targets are credible.

### RESPONSE

As stated in Synapse's report, the numbers provided in Union's plan indicate that the company's programs will result in substantial savings, with Union's 2016 annual saving at 0.47 percent of 2014 actual sales at a cost of \$0.05 per m3. (Exh. L.OEBStaff.1, page 3). While the plan overall will result in substantial savings, the savings goals are not aggressive and could be strengthened considerably. This is particularly true for the residential sector as the projected saving for this sector is about 0.2 percent of 2014 actual sector sales. For comparison, the Massachusetts gas program administrators achieved 1.35 percent of sales in 2014, and are currently expected to achieve 1.44 percent of sales annually from 2016 through 2018.<sup>2</sup>

Our report provides numerous recommendations that would improve Union's proposed program design and implementation, thereby increasing savings and participation rates. If Union were to adopt most of our recommendations, then it is likely their targets would be more reasonable and more credible.

---

<sup>2</sup> See Massachusetts Energy Efficiency Advisory Council, "Comments regarding the April 30<sup>th</sup> Draft 2016-2018 Energy Efficiency Plan, Resolution approved July 21, 2015," page 2, available at <http://ma-eeac.org/wordpress/wp-content/uploads/Final-EEAC-July-Resolution-7-21-15.pdf>

Witnesses: T. Woolf  
K. Takahashi  
E. Malone  
J. Kallay  
A. Napoleon

## UNION INTERROGATORY #16

### INTERROGATORY

Reference: L.OEBStaff.1, Page 119 and 122

Preamble:

At Section 9.2.3, Synapse states, “relevant literature consistently recommends that best practice with regard to regulatory reporting is to maintain the planned input assumptions, at least for the savings on which performance incentives are based.”

And,

At Section 9.2.5 Synapse states, “the precedent in Ontario is to apply updated evaluation results to shareholder incentives and the LRAM. It is important to maintain regulatory precedent on such matters, to provide consistency to the utilities developing and implementing the plan and to participating stakeholders.”

Question:

Would Synapse agree that the Board’s policy regarding the application of best available information to determining shareholder incentive is not in line with best practice? If so, please explain why maintaining consistency with this regulatory precedent is more important than adopting best practices. Is Synapse aware of other jurisdictions where regulatory policies on this issue have evolved?

### RESPONSE

Note that for this issue, while the literature may recommend a certain practice, jurisdictions regularly implement practices that differ from the literature recommendations. This is because it is a policy decision for regulators to decide the extent to which evaluation impacts should effect utility shareholder incentives and program results. Jurisdictions take different approaches on when and how to apply evaluation results.

In Ontario, the Board has previously visited this issue and established a policy for how to address updated input assumptions, and that decision was partially based on ensuring consistency with the electric CDM program policies. It is important to maintain regulatory precedent on such matters, to provide consistency to the utilities developing and implementing the plan and to participating stakeholders. Only extenuating circumstances should cause the Board to revisit this policy, and such conditions are not apparent in the current proceeding.

Witnesses: T. Woolf  
K. Takahashi  
E. Malone  
J. Kallay  
A. Napoleon

Regulatory policies have evolved on this issues in Massachusetts as summarized in the referenced section of the report (specifically pages 120 into 121). The Massachusetts D.P.U. 11-120 docket fully addresses the evolution of this issue in the state.

Witnesses: T. Woolf  
K. Takahashi  
E. Malone  
J. Kallay  
A. Napoleon

## ENERGY PROBE RESEARCH FOUNDATION INTERROGATORY #2

### INTERROGATORY

Reference: No Reference - Billing Analysis

Question:

- a. Please define the scope of a Billing Analysis as described in the Report.
- b. Please provide an example of a billing analysis for a Residential RA Program/Offer (Union/EGD preferred).
- c. Please provide billing analysis for a Residential MT Program/offer (EGDI/Union preferred)

### RESPONSE

- a. A billing analysis typically requires at least 9 to 12 months of both pre-retrofit and post-retrofit energy consumption data. It is recommended that a billing analysis use regression analysis to adjust the post-retrofit consumption data for all substantive explanatory (independent) variables that affect energy consumption such as weather, occupancy schedules, industrial throughput, control set points, and operating schedules. This approach is equivalent to the International Performance Measurement and Verification Protocol (IPMVP) Option C: Whole Facility Analysis. For more information, see SEE Action (2012). Energy Efficiency Program Impact Evaluation Guide, page 4-6, available at [https://www4.eere.energy.gov/seeaction/system/files/documents/emv\\_ee\\_program\\_impact\\_guide\\_0.pdf](https://www4.eere.energy.gov/seeaction/system/files/documents/emv_ee_program_impact_guide_0.pdf)
- b. A billing analysis for a residential single-family retrofit offering such as Enbridge's Home Energy Conservation offering and Union's Home Reno Rebate offering will require, as discussed in Exhibit M.Staff.EP.2, part a., 9 to 12 months of pre- and post-retrofit energy consumption data. Key independent variables for adjusting the baseline consumption data should include weather at a minimum.
- c. As discussed in Exhibit L.OEBStaff.1, page 35, a billing analysis is not useful for new construction projects as there is no pre-construction baseline data. In contrast, a large-scale consumption data billing analysis (as discussed in Exhibit L.OEBStaff.1, page 21) is often used for evaluating the impacts of residential behavior programs. In such an analysis, billing data for a treatment group and a control group are compared to each other.

Witnesses: T. Woolf  
K. Takahashi  
E. Malone  
J. Kallay  
A. Napoleon



## UNDERTAKING JT4.3

### UNDERTAKING

August 18, 2015 Technical Conference Transcript, page 26.

To review and comment on Exh. M.GEC.1.EP.5.

### RESPONSE

In Exh. M.GEC.1.EP.5, Mr. Neme states:

I disagree with Synapse's suggestion to drop the requirement that customers install at least two major measures to participate. I think the requirement promotes greater comprehensiveness and good retrofit practice. Frankly, Synapse's concern about leaving on the table savings from customers who may only want to replace a furnace is misplaced. Synapse may not have been aware that equipment standards in Ontario already mandate that all new furnaces be condensing, so there are limited additional savings possible in that market. Further, one should always perform air sealing (one of the eligible major measures) before installing insulation. To not do so not only "leaves savings on the table" that will rarely be captured later, it could also degrade the effectiveness of the insulation itself by allowing moisture to get trapped and absorbed by the insulation material.

In response, please refer to Exh. M.Staff.EP.3, part d, where Synapse states:

Our recommendation is simply that customers looking to install one measure should not be turned away from the program; our recommendation is not that the utilities should only focus on one measure per customer or should remove focus from installing two measures per customer.

We do not disagree with Mr. Neme that an offering that focuses on installing two measures promotes comprehensive and good retrofit practice. Further, we agree with Mr. Neme that some types of measures are complimentary, such as insulation and air sealing, and that they should be installed at the same time.

However, some customers may only be interested in or can afford to install stand-alone measures such as new windows or water heating systems at one time. For example, when a boiler or furnace breaks, there may be cases where installing just the new energy efficient boiler or furnace is the only cost-effective opportunity at that time. Further, there may be customers who treated windows or installed wall insulation a few years ago either on their own or through one of the gas or electric utilities' DSM programs. For such customers, there may not be additional efficiency opportunities when they replace

Witnesses: T. Woolf  
K. Takahashi  
E. Malone  
J. Kallay  
A. Napoleon

their old heating system. We believe energy efficiency programs should not turn away such customers from participating. It is overly restrictive to mandate that at least two measures are installed as a prerequisite to participation, and we do not think such a program requirement is necessary.

Witnesses: T. Woolf  
K. Takahashi  
E. Malone  
J. Kallay  
A. Napoleon

SEC INTERROGATORY #22

INTERROGATORY

Topic 5 - Program Types

Reference: Ex. B/2/1, p. 79-84

With respect to the School Energy Competition program:

- a. Please describe in detail Enbridge's plans to develop curriculum and other aspects of this program jointly with school boards and their educational specialists.
- b. Please advise how Enbridge plans to co-ordinate student contact aspects of this program with existing energy efficiency curriculum components, and existing rules and policies with respect to student contact activities.
- c. Please advise whether school boards that already have an energy monitoring system in place will be required to use the Enbridge EMIS, or will be disqualified from participation.

RESPONSE

- a. Enbridge plans to work with or via school board selected curriculum development staff to develop the curriculum for the School Energy Competition in line with the Ontario Curriculum Grades 1 to 8 Science and Technology as well as the Ontario Curriculum Grades 9 to 10 and 11 to 12 Science and Technological Education. Currently, Enbridge works closely with school boards on other offers, such as Run it Right and Energy Compass. However, this offer is intended to be geared specifically towards students. On that basis, Enbridge will work with school boards to ensure the development of a successful and collaborative partnership with clearly identified performance indicators.
- b. Enbridge will work with school boards to co-ordinate student contact aspects of the offer with existing energy efficiency curriculum components and existing rules and policies with respect to student contact activities. The development of a partnership agreement with the school boards will ensure that all communication strategies are clearly defined, and will align with all policies and procedures set out by the school board. As the program is developed, Enbridge will explore options - in collaboration with school board curriculum developers - such as: an online application for the

Witnesses: R. Kennedy  
M. Lister  
F. Oliver-Glasford

energy monitoring system (“EMIS”), texting results, media exchange, and interactive games. Since the offer is designed with the theory of ‘gamification’ and competition in mind, it is imperative that the students feel a sense of engagement in both competing in the competition but also reporting and measuring their successes.

- c. School boards that have an EMIS in place will not be disqualified from participating. While the EMIS system provided by Enbridge will be utilized to track energy consumption it will also be utilized for tracking points and participation within the program, and illustrate to schools how they are performing within the competition. Enbridge will look for opportunities to utilize current EMIS system where schools already have them in place.

Witnesses: R. Kennedy  
M. Lister  
F. Oliver-Glasford

## ENBRIDGE INTERROGATORY #13

### INTERROGATORY

Reference: Exhibit L.OEBStaff.1, page 30 and pages 112-115

Preamble:

On page 30 of the report, SEE recommends that “Both utilities should provide customers with zero or low interest financing to address lack of funding”.

Question:

- a. With the above recommendation in mind, please discuss the appropriateness of the Ontario gas utilities offering ratepayer-funded financing, when there are currently private-sector parties offering loans for home improvement activities, and when some of those parties allow the loan to be included as a third-party charge on the Enbridge bill (through the Open Bill program).
- b. Please also explain how Enbridge would be kept whole from the risk of a borrower defaulting on its loan and from the associated collection and enforcement costs.

### RESPONSE

- a. It may be appropriate for the Ontario gas utilities to offer ratepayer-funded financing. For example, utilities can offer financing to some customers who may not be eligible for private-sector financing. Further, the Ontario gas utilities could buy down interest rates from both private-sector loans and utility-offered loans.
- b. Experience to date suggests that default risks associated with energy efficiency programs are very low. Please see SEEACTION's 2014 Report entitled Financing Energy Improvements on Utility Bills: Market Updates and Key Program Design Considerations for Policymakers and Administrators, available at: [https://www4.eere.energy.gov/seeaction/system/files/documents/onbill\\_financing.pdf](https://www4.eere.energy.gov/seeaction/system/files/documents/onbill_financing.pdf). Table ES - 1 titled Summary Statistics for Surveyed On-Bill Programs on page xi summarizes the default rates.

Loan loss reserves can be established using public funds to keep the utility whole in the event of defaults. With regard to funding such a loan loss reserve, as noted at Exhibit L.OEBStaff.1, page 2 and in Exhibit M.Staff.EGDI.4, the utilities should consider and balance potential improvements on participation rates, energy savings, cost-effectiveness from improved financing opportunities with a potential increase or decrease in budgets, and determine how to proceed within their constraints.

Witnesses: T. Woolf  
K. Takahashi  
E. Malone  
J. Kallay  
A. Napoleon