

**ENBRIDGE GAS DISTRIBUTION INC.  
CLEARANCE OF 2014 DSM VARIANCE AND DEFERRAL ACCOUNTS  
EB-2015-0267**

**OEB STAFF INTERROGATORIES**

**February 22, 2016**

**INTERROGATORY #1**

Ref: Exhibit A / Tab 1 / Schedule 3 / pp. 3-4

**Preamble:**

The OEB's Decision and Order on Enbridge's clearance of its 2013 DSM accounts application (EB-2014-0277) stated the OEB is supportive of the proposed boiler baseline study in 2015 to be with the findings being incorporated in the evaluation of the 2014 results. In its application, Enbridge stated that it raised the issue of incorporating the results of the study in the evaluation of 2014 results with Optimal Energy and the Audit Committee (AC). Enbridge noted that the AC acknowledged that the study could not be completed prior to June 2015 and therefore could not be incorporated in the evaluation of 2014 results. Enbridge further noted that work on this study has been underway through the Technical Evaluation Committee since April 2015 and, despite best efforts, it is likely that the results of the study will not be available until mid-2016.

**Questions:**

- a) Please provide the current status of the boiler baseline study.
- b) Please provide any documentation providing further insight into the delay in completing the baseline boiler study.
- c) Please explain Enbridge's position related to applying the results of the boiler baseline study on a prospective basis following the completion of the study (e.g., not applying the results of the study until 2017) in the context of the OEB's Decision and Order on Enbridge's clearance of its 2013 DSM accounts application (EB-2014-0277) and the OEB's combined Decision and Order on Union and Enbridge's DSM Plans (EB-2015-0029/EB-2015-0049). In your response, please reconcile not applying the results of the boiler baseline study to the program evaluation results of 2014, 2015 and 2016 with the need to ensure that the best and most accurate results are being used when determining lost revenues and shareholder incentive amounts.
- d) Please confirm how long the current boiler baseline efficiency figure of 80.5% has been used by Enbridge to evaluate and calculate final program results.
- e) Please provide the number of projects that rely on a boiler efficiency base case of 80.5%.

- f) Please provide the total amount of savings and the percentage of savings relative to all programs and to only commercial and industrial programs that were attributable to boilers with a thermal efficiency assumed to be 80.5%.
- g) Please quantify the shareholder incentive associated with the savings claimed from commercial boilers with 80.5% efficiency.
- h) Please compare the current boiler baseline efficiency figure used by Enbridge to those which are used in other leading jurisdictions.
- i) Please re-calculate the 2014 shareholder incentive amount using a boiler baseline efficiency standard of 85%.

## **INTERROGATORY #2**

Ref: Exhibit A / Tab 1 / Schedule 3 / pp. 5-8  
Exhibit B / Tab 1 / Schedule 1 / p. 107

### **Preamble:**

The Lost Revenue Adjustment Mechanism (LRAM) deferral account has a credit balance reimbursable to customers of \$0.065 million. Enbridge notes that the LRAM amount is recovered in rates on the same basis as the lost revenues were experienced so that the LRAM ends up being a full true-up by rate class (Guidelines ss. 13.3).

As part of Enbridge's 2014 DSM Annual Report, the LRAM calculations are shown. OEB staff would like to get a better understanding of these calculations.

### **Questions:**

- a) Please discuss, and provide the detailed calculations with live excel working files, of Enbridge's load forecast that was used to determine the 2014 LRAM balance of \$0.065 million. In particular, please discuss and clearly show the following:
  - i. How the load forecast was adjusted to account for DSM activity,
  - ii. What assumptions were used related to DSM savings estimates for different programs (and offerings) and how these estimated savings were allocated to the applicable rate classes,
  - iii. What level of historic DSM savings (those from previous years that are assumed to persist in the future) were built into the load forecast regression analysis;
  - iv. What level of new, estimated DSM savings for future year DSM programs (e.g., those included within the 2015-2020 DSM plan) were built into the load forecast through a manual adjustment, and

- v. Clearly show how Enbridge has applied its final DSM evaluation results to the reductions made to its load forecast in order to calculate the LRAMVA amount.
- b) Please discuss and clearly show the programs (and/or offerings) and the final net savings from these programs (and/or offerings) that contributed to the actual net partially effective savings figures for all rate classes outlined in Table 43: LRAM Statement in the 2014 Annual Report.
- c) Please discuss the process that Enbridge undertakes in updating its load forecast to account for DSM savings and the regularity of updates made to its forecast to account for new reductions in natural gas usage attributable to DSM programs (e.g., is this on an annual basis, at the time of Enbridge's cost of service, etc.).
- d) Please explain your approach to developing your load forecast and taking into account impacts of DSM activities in the context of Section 12 of the DSM Guidelines (EB-2008-0346) which states:

“Utilities recover their allowed distribution revenues through both a fixed and a variable distribution rate. These rates are based on forecast consumption levels for their respective franchise area that **take into account, among other things, the expected impact of naturally occurring energy conservation and the impact of planned DSM activities** [emphasis added]. If the actual impact of natural gas DSM activities undertaken by the natural gas utility in its franchise area results in greater (less) natural gas savings than what was incorporated into the forecast, the natural gas utility will earn less (more) distribution revenue than it otherwise would have, all other things being equal.

Further, the DSM Guidelines state:

“...the LRAM amount is a retrospective adjustment and may be an amount refundable to or receivable from the utility's customers, depending respectively on whether the actual natural gas savings resulting from the natural gas utility's DSM activities are less than or greater than what was included in the forecast for rate-setting purposes.”

### INTERROGATORY #3

Ref: Exhibit B / Tab 2 / Schedule 1 / pp. 20-21

#### Preamble:

The 2014 audit report stated that ASHRAE has yet to finalize guidelines for determining a boiler's seasonal efficiency. The ASHRAE Standard 155P would provide a test method to determine the seasonal efficiency of commercial space heating boiler systems. Given these constraints, the 2014 auditor concluded, and the AC accepted, that it was reasonable for the commercial Custom Project Savings Verification (CPSV) Technical Evaluators to rely on ETools to determine the boiler's seasonal efficiency.

Based on the 2014 audit, the CPSV applied the other boiler features or efficiency related controls that improved the seasonal efficiency of the boiler. The upgrade in base case produced savings that were lower than Enbridge's estimates using ETools. Specifically, the auditor states:

By raising the base case boiler for facilities that had controls and/or other efficiency features in the existing case, it brings the average base case boiler of the entire population of projects closer to the auditor's reasoned opinion that some of the facilities would have installed controls and/or other efficiency features even in the absence of program intervention. Thus, while it obviously would have been preferable to adjust assumptions based on data from a new boiler baseline study, Optimal believes that its adjustment to baseline assumptions are the most reasonable it could make in the absence of such a study.

**Questions:**

- a) What will be the impact of using the ASHRAE Standard 155P on the estimation of boiler-based savings?
- b) Please provide the average baseline efficiency assumption used by the CPSV for evaluating boiler replacement projects.
- c) Please provide the projects and the associated savings that were adjusted by a higher base case assumption than the 80.5% thermal efficiency baseline that Enbridge has assumed in its base case.
- d) Please provide estimates of savings under c) above using 80.5% as the thermal efficiency baseline.
- e) Please discuss the appropriateness of adjusting the 80.5% thermal efficiency baseline in ETools to the new baseline assumption suggested by the CPSV for an average boiler replacement project.

**INTERROGATORY #4**

Ref: Exhibit B / Tab 1 / Schedule 1 / p. 111

**Preamble:**

In response to the 2013 auditor's recommendation on conducting a third party review of the ETools software for consistency with acceptable engineering practice, Enbridge stated in its status update that it has engaged an independent third party contractor to review the boiler component of ETools.

**Questions:**

- a) Please provide the results of the third party review with respect to the boiler component of the ETools.
- b) Please indicate whether Enbridge's development of the methodology in ETools was informed by best practice or jurisdictional analysis. If yes, please document the sources used.
- c) Please clarify whether MMM Group's suggested functionalities to ETools (as noted in Exhibit B, Tab 5, Schedule 1, p. 184) were considered as part of the independent review of the ETools software.

**INTERROGATORY #5**

Ref: Exhibit B / Tab 2 / Schedule 1 / p. 31

**Preamble:**

The 2014 Auditor stated that upon a review of other retro-commissioning gas programs, the free ridership estimates ranged between 8% and 32% and spillover estimates range between 10% and 20%. As a result, when using average or median values of the free ridership or spillover rates, the average net-to-gross (NTG) calculation is 96%. Because the average NTG is close to 1, Optimal supports Enbridge's recommended free rider rate assumption of 0%. However, Optimal has continued to recommend since the 2013 audit that additional efforts be made to better estimate free rider and spillover rates for this offer.

**Questions:**

- a) Please indicate why no effort has been made to estimate free ridership and spillover effects associated with the retro-commissioning gas programs, given the recommendation by the auditor.
- b) Please provide evidence to substantiate the 0% free ridership given that this program has been in the market since 2012.

**INTERROGATORY #6**

Ref: Exhibit B / Tab 2 / Schedule 1 / p. 22

**Preamble:**

Optimal's review of prescriptive measures has included checking the input assumption and relevant factors from the largest fraction of total savings against the OEB approved values and industry standards. Based on this review, it appears that there were agreed upon reductions for non-installs or removals.

**Questions:**

- a) Please provide the list of prescriptive measures whose savings were reduced after the audit review. In doing so, please indicate by technology what the savings were before and after the reductions were made to the final claimed savings shown in Table 48 (Exhibit B, Tab 1, Schedule 1, p. 141).
- b) Please indicate the source(s) of the agreed upon reductions for non-installs or removals made to the prescriptive measures.
- c) Please indicate the extent to which the unit installations of prescriptive savings were confirmed and what the results were.

**INTERROGATORY #7**

Ref: Exhibit B / Tab 3 / Schedule 1 / p. 15

**Question:**

Please file a copy of the CSPV Glossary of Terms as noted in the 2014 Audit recommendation #6.

**INTERROGATORY #8**

Ref: Exhibit B / Tab 5 / Schedule 1 / p. 184

**Preamble:**

In MMM Group's discussion of the commercial/low-income custom projects, MMM Group recommended that additional supporting documentation for the existing case conditions be collected from customers to have more accurate information about the existing condition. Based on MMM Group's report, 41% of the commercial projects (11 of 27 projects audited) did not have enough information on the baseline for the verifier to validate the existing case. OEB staff identified the following projects that could not be validated based on MMM Group's project review:

Commercial/low-income custom project	Existing case validated
RA.MR.EX.001.14	No

RA.MR.EX.019.14	No
RA.MR.EX.035.14	No
RA.MR.EX.080.14	No
RA.REC.EX.002.14	No
RA.HC.EX.024.14	No
RA.MR.EX.026.14	No
RA.MR.EX.152.14	No
RA.PRO.EX.009.14	No
RA.SCH.EX.030.14	No
RA.SCH.EX.034.14	No

The MMM Group provided an example of the type of information (e.g. existing equipment nameplate information, BAS screenshots, and operating parameters of equipment) that could be collected from customers to drastically improve the confidence of the existing case development.

**Questions:**

- a) The issue of inadequate documentation of baseline for commercial/low-income custom projects was not discussed by the 2014 Auditor. Please explain why the Auditor did not address the inadequate base case documentation issues noted by the CPSV for commercial/low-income custom projects.
- b) Please provide any comments from the auditor related to the appropriateness of the savings claimed for the projects in the table above.
- c) Please indicate if there was a similar lack of baseline documentation in 2012 and/or 2013 for commercial custom projects.
- d) For any project where there was insufficient baseline documentation data in 2012 and/or 2013, please provide a list of all those projects where there was insufficient baseline documentation similar to that prepared by OEB staff in the preamble above.
- e) Please discuss whether or not Enbridge has developed an approach to solicit proper documentation of the baseline for the review of 2015 custom projects. If yes, please provide details on what base case documentation will be collected, and whether or not Enbridge plans to collaborate with Union to develop similar questions via a standard form to assess base line conditions.

**INTERROGATORY #9**

Ref: Exhibit B / Tab 5 / Schedules 1 and 2

**Questions:**

- a) In Enbridge's 2014 custom project reviews, please discuss how the verifiers assessed the potential for advancement.
- b) Please discuss the changes to Enbridge's audit process to incorporate annual free ridership assessments in the 2015 CPSV custom project review.
- c) Please discuss the issues, if any, in implementing free ridership assessment questions as part of the 2015 custom project review.

## **INTERROGATORY #10**

Ref: Exhibit B / Tab 5 / Schedule 1 / Tables 2-3 (Commercial Custom projects) / p. 6

### **Question:**

- a) Please provide a new table in Excel format that includes the following:
  - i. Annual gas savings for each project.
  - ii. Annual electricity, water and other savings for each project, if any.
  - iii. Total annual cost savings associated with a) and b) above.
  - iv. Incremental costs of the project.
  - v. Incentive amount provided to the customer.
  - vi. Simple payback based on the information above (before the incentive was provided).

## **INTERROGATORY #11**

Ref: Exhibit B / Tab 3 / Schedule 1 / p. 13

### **Preamble:**

The Auditor's recommendation #2 stated the following:

If pre and post billing regression analysis is to be used to independently calculate savings by the CPSV TEs, an agreed upon methodology should be established to ensure a consistent approach. The methodology needs to properly deal with post installation commissioning periods and also properly factor out any pre and post operational changes that could impact the validity of the savings calculation. As indicated in the 2014 Audit Summary Report, Enbridge agreed with this recommendation and intends to raise the recommendation to the Evaluation and Audit Committee (EAC).

### **Question:**



- a) Please discuss if and how Enbridge has accounted for post-installation commissioning and pre- and post- operational changes in its regression analysis to estimate the custom project savings.
- b) If Enbridge has not accounted for post installation commissioning and pre-and post- operational changes in its regression analysis, please discuss the decision not to do so.

## **INTERROGATORY #12**

Ref: Exhibit B / Tab 5 / Schedule 2

Enbridge's 2014 industrial project review included a verification of savings for 19 industrial custom projects based on the CPSV template. The CPSV contractor indicated that project specific calculations could be found in Appendix A.

### **Questions:**

- a) Please file a copy of Appendix A that contains the CPSV calculations for the 2014 industrial custom projects.
- b) Similar to OEB Staff IR#8, for those projects where there was insufficient base case documentation, please provide a table that lists all industrial custom projects whose base case documentation was not sufficient and indicate how the base case was established for the calculation of savings.
- c) Please indicate the studies that were done and financed by Enbridge as part of the industrial custom projects.
- d) For all industrial custom projects, please provide a new table in Excel format that includes the following:
  - i. Annual gas savings for each project.
  - ii. Annual electricity, water and other savings for each project, if any.
  - iii. Total annual cost savings associated with a) and b) above.
  - iv. Incremental costs of the project.
  - v. Incentive amount provided to the customer.
  - vi. Simple payback based on the information above (before the incentive was provided).