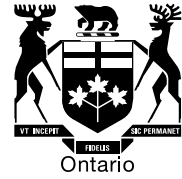


**Ontario Energy
Board**
P.O. Box 2319
27th. Floor
2300 Yonge Street
Toronto ON M4P 1E4
Telephone: 416- 481-1967
Facsimile: 416- 440-7656
Toll free: 1-888-632-6273

**Commission de l'Énergie
de l'Ontario**
C.P. 2319
27e étage
2300, rue Yonge
Toronto ON M4P 1E4
Téléphone; 416- 481-1967
Télécopieur: 416- 440-7656
Numéro sans frais: 1-888-632-6273



BY EMAIL

April 30, 2018

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

Dear Ms. Walli:

**Re: 2015 Demand Side Management Variance Accounts
OEB Staff Submission
Union Gas Limited – EB-2017-0323**

Please accept OEB staff's amended submission. OEB staff has corrected the following sentence that appears on page 3, Summary of OEB staff Submission, second paragraph:

"Further, the independent expert members of the EAC **mostly** support the findings of the EC.

The word "mostly" has been added to ensure that the EAC's support is properly qualified.

Sincerely,

Original Signed By

Josh Wasylyk
Project Advisor, Application Policy & Climate Change



ONTARIO ENERGY BOARD

OEB STAFF SUBMISSION April 27, 2018

2015 Demand Side Management Variance Accounts

**Union Gas Limited
EB-2017-0323**

Background

As outlined in Section 7 of the OEB's *Report of the Board – Demand Side Management (DSM) Framework for Natural Gas Distributors (2015-2020)* (the DSM Framework) issued on December 22, 2014, the OEB indicated that it will be taking a central role in the evaluation process of DSM program results. The OEB further indicated that DSM results will be evaluated on an annual basis, with results issued by the OEB to be used by the gas utilities when they file applications for recovery of amounts related to DSM activities.

On August 21, 2015, the OEB announced the formation of an Evaluation Advisory Committee (EAC) to provide input and advice as required throughout the DSM evaluation process. In OEB staff's role of leading the DSM evaluation process, OEB staff chairs all EAC meetings. The EAC is comprised of five independent experts, as well as representatives from Enbridge Gas Distribution Inc. (Enbridge), Union Gas Limited (Union), the Independent Electricity System Operator (IESO), Ministry of Energy and the Environmental Commissioner of Ontario.

On March 4, 2016, the OEB provided details on what evaluation work initiated prior to the OEB taking over the DSM evaluation function would transition from the gas utilities to the OEB. The areas of work that would be transitioned to the OEB included: the development of a Technical Reference Manual, the Net-to-Gross (NTG) Study, and a Persistence Study.

In April 2016, the OEB engaged the consulting firm DNV GL to conduct an expert, independent review and verification of both Enbridge and Union's DSM program results and complete a NTG study. DNV GL is the OEB's Evaluation Contractor (EC) and will be referred to as such throughout this submission. The EC would also seek input and advice from the EAC as required throughout the evaluation process.

On October 12, 2017, the OEB issued the final 2015 DSM program results report following the measurement, evaluation and verification (EM&V) study undertaken by the EC. The final 2015 DSM program results are summarized in two reports:

1. **The 2015 Natural Gas Demand Side Management Annual Verification Report** (the 2015 Annual Verification Report): This report summarizes all evaluation activities and includes an opinion by the EC on the gas utilities' final 2015 program results, including calculating final verified net savings, shareholder incentive amounts and lost revenue amounts. The 2015 Annual Verification

Report was subsequently updated on December 20, 2017.

2. **The 2015 Natural Gas Demand Side Management Custom Savings Verification and Free-ridership Evaluation Report** (the 2015 CPSV and NTG Report): The 2015 CPSV and NTG Report assessed and provided verified results related to Enbridge and Union Gas Limited's (Union) Low-Income Multi-Residential, Custom Commercial, Custom Industrial, Run-it-Right (Enbridge program only) and Large Volume (Union program only) programs. The 2015 CPSV and NTG Report also provided free-ridership rates for 2015 custom commercial, industrial, Run-it-Right (Enbridge-only) and large volume (Union-only) projects.

The final verified results provided by the EC within the 2015 Annual Verification Report are summarized in the table below.

Table 1 – Summary of Evaluation Contractor Findings – 2015 DSM Program Results

Item	Union	Enbridge
Demand Side Management Incentive Deferral Account ("DSMIDA")	\$7,039,894	\$6,207,339
Lost Revenue Adjustment Mechanism Variance Account ("LRAMVA")	\$154,368	\$16,405
Verified Net Cumulative Natural Gas Savings (m ³)	1,137,825,562	539,787,741
Total Spending (not reviewed by EC)	\$32,178,766	\$35,779,973
Cost Effectiveness (TRC-Plus)	2.9	2.2

On December 18, 2017 Union filed its application seeking approval and clearance of its 2015 DSM deferral and variance accounts. In its application, Union indicated that it relied on the final 2015 verified program results as presented in the 2015 Annual Verification Report with the exception of the NTG study findings.

Union has requested the OEB to approve the following amounts:

Table 2 – Union's Requested 2015 DSMVA Balances

Item	Union Request
Demand Side Management Incentive Deferral Account ("DSMIDA")	\$7,472,481
Lost Revenue Adjustment Mechanism Variance Account ("LRAMVA")	\$617,477
Demand Side Management Variance Account ("DSMVA") (Reimbursable to Ratepayers)	\$(195,234)
Total Amount Recoverable (*numbers may not add up due to rounding)	\$7,894,724

Summary of OEB Staff Submission

OEB staff submits that the EC's final 2015 DSM program results be approved as submitted in its two reports: the 2015 Annual Verification Report and the 2015 CPSV and NTG Report.

The final 2015 DSM program results and NTG findings have been rigorously reviewed, tested and verified by the EC, with input from the EAC. The EC, an independent expert, has relied on industry best practices and has incorporated input sought from members of the EAC when determining its findings. Further, the independent expert members of the EAC mostly support the findings of the EC. Altogether, the EC received input from five independent experts and other members of the EAC leading to the finalization of its 2015 DSM program results.

As a result, OEB staff submits that the governance underpinning the OEB-led process is rigorous and sufficiently robust. As such, any deviations from the OEB-led process ought to be persuasive as the OEB stated its expectations that the utilities would apply the results contained in the 2015 Annual Verification Report and the 2015 CPSV and NTG Report. OEB staff further submits that the arguments presented by Union regarding the methodology used to determine the NTG adjustment factors does not meet that standard. Therefore, OEB staff submits that the OEB should approve Union's DSMVA balances in the following totals, which are those determined by the EC in the final 2015 results reports:

Table 3 – Union's DSMVA Balances Supported by OEB Staff

Item	OEB staff supported amount
Demand Side Management Incentive Deferral Account ("DSMIDA")	\$7,039,894
Lost Revenue Adjustment Mechanism Variance Account ("LRAMVA")*	\$154,368
Demand Side Management Variance Account ("DSMVA")	\$(195,234)
Total Amount Recoverable (*numbers may not add up due to rounding)	\$6,999,028

Union has raised some concerns in two specific areas:

- 1) The timing for when NTG values are appropriately applied to the gas utilities' program results; and,
- 2) The methodology used to determine the NTG adjustment factors.

In response to the first concern, OEB staff submits that the OEB should reject Union's arguments that it is inappropriate to apply the findings of the NTG study retrospectively for custom programs. OEB staff submits that the OEB's 2015-2020 DSM Plan Decision

and Order (Decision and Order) is clear that the application of the NTG results for custom programs is retrospective. OEB staff submits that Union's suggestion to rely on free ridership figures that were developed approximately 10 years ago when better, actual information is known is grossly inappropriate. Doing so would also be underserved as the level of free ridership is understated (and probably has been for some time now), and unfair to ratepayers.

In response to the second concern, although Union has taken issue with a number of components of the NTG study and its findings, OEB staff submits that the study results should stand as filed. The NTG study is consistent with industry best practice, was conducted by an independent expert and involved extensive EAC consultation. OEB staff submits that the OEB should dismiss Union's arguments as they are inaccurate and misleading.

Finally, OEB staff submits that although Union has made critiques of the OEB's evaluation process and OEB staff's role within that process, these statements have not been tested and should therefore bear little or no weight in this proceeding.

OEB Staff Submission

Below are OEB staff's detailed submissions.

Topic 1 – Application of NTG Results

Union has stated that regardless of the results of the NTG study, the OEB should not apply the results to the 2015 DSM evaluation for custom programs. Union cited various reasons why they believe this would be inappropriate and/or unfair, including the following main arguments:

- Sections of the DSM Decision lead the utilities to believe that the OEB did not intend for the NTG results to apply to the 2015 program results
- 2015 was a rollover year in the new 6-year 2015-2020 DSM Framework
- Applying the NTG results retrospectively to the 2015 program results will be inconsistent with the manner in which its targets were developed

OEB staff will address each of these points below.

OEB DSM Guidelines and Decision

The OEB has been clear and consistent when providing the policy on how new information should be applied to custom programs. The OEB has stated, dating back to the 2012 DSM Guidelines¹ and re-iterated in the 2015-2020 DSM Guidelines², that the evaluation of the achieved results for the purpose of determining the lost revenue adjustment mechanism and shareholder incentive amounts should be based on the best available information...resulting from the evaluation and audit process of the same program year.³ There was no distinction for program type. The application of the best available information for both custom and prescriptive programs was to take place retrospectively. This was to ensure, to the best of the OEB's ability, that ratepayers were only required to fund the natural gas savings that the gas utilities actually achieved. If new information that helped inform the final program results was available, it was to be used for that same program year.

As part of its Decision and Order related to the gas utilities' 2015-2020 DSM Plans (Decision and Order), the OEB modified the treatment of input assumptions and NTG

¹ Demand Side Management Guidelines for Natural Gas Utilities, EB-2008-0346, Section 6.1.3, Use of Input Assumptions

² Filing Guidelines to the Demand Side Management Framework for Natural Gas Distributors (2015-2020), EB-2014-0134, Section 8.2, Input Assumptions

³ Filing Guidelines to the Demand Side Management Framework for Natural Gas Distributors (2015-2020), EB-2014-0134, Section 8.2, Input Assumptions, p.25

adjustment factors, effective in 2015, for prescriptive measures. Instead of the best available information being used retrospectively for custom programs, best available information for prescriptive programs would apply in the following year starting in 2015. The OEB findings stated that “input assumptions for **prescriptive measures** [emphasis added] should not be adjusted retrospectively based on the results of the annual evaluation process for the purpose of determining eligible shareholder incentive amounts.⁴

Section 9.5, page 74 of the Decision and Order which deals with input assumptions and NTG values stated the following:

“The OEB is modifying the treatment of input assumptions and net-to-gross adjustment factors effective 2015. The OEB has considered the evidence and submissions and agrees with expert witness, Mr. Neme, that input assumptions **for prescriptive measures** [emphasis added] should not be adjusted retroactively based on the results of the annual evaluation process for the purpose of determining eligible shareholder incentive amounts.

The OEB finds that any updates to existing input assumptions, or new input assumptions identified during a year, should be applied prospectively when evaluating savings from **prescriptive measures** [emphasis added].

The OEB does not expect the gas utilities to rely on predetermined net-to-gross adjustment factors when calculating savings for custom projects [emphasis added].”

Consistent with the OEB’s Decision and Order, OEB staff submits that although the treatment of updated information for ***prescriptive programs*** is to be applied on a prospective basis, best available information related to ***custom programs*** that are the result of the program evaluation of that program year are to be applied to the program results of the same year.

Union has relied on language from Section 5.2.6 of the DSM Decision and Order to argue that the custom program results should apply prospectively. This section of the Decision and Order addressed the gas utilities’ Commercial and Industrial Custom programs. On multiple occasions within this section, the OEB provides direction to the utilities with respect to improving the programs more broadly, with the main areas of

⁴ EB-2015-0029/0049, Decision and Order, January 20, 2016, Section 9.5, Input Assumptions and Net-to-Gross Changes

improvement being lowering free ridership. The OEB indicates that its main concern with the program is the existence of free riders. The OEB required the utilities to show how it has lowered the free ridership rates in these programs at the DSM Mid-Term Review.

Union highlights the following excerpt from Section 5.2.6 and argues that the OEB was clear that results from the NTG study should not apply to the 2015 DSM program results:

“The OEB does not expect the gas utilities to rely on a predetermined free ridership rate for the duration of the 2017 to 2020 term. In 2016, the free rider rates will be updated based on the results of the net-to-gross study and the annual evaluation process. Annually, the evaluation process will continue to inform the free rider rates for custom programs.”⁵

The reference relied on by Union relates to the Commercial and Industrial Custom programs specifically. All other programs within this section of the DSM Decision are discussed with a focus on the design of the program and how to make them more effective. OEB staff submits that this section of the Decision and Order provided direction on how the utilities can improve their custom programs. The OEB’s findings related to input assumptions and NTG values was provided in Section 9.5 of the Decision and Order.

Further, OEB staff notes that in the DSM Decision and Order, the OEB allowed the gas utilities to retain responsibility for the primary evaluation tool used by DSM program administrators to improve program performance, specifically process evaluations. As defined in the IESO’s Evaluation Protocols and Requirements, process evaluations are used to assess “the extent to which the process used to deliver the program was efficient and effective in accomplishing its intended purpose”.⁶ The results of process evaluations should be used to improve the performance of all aspects of an efficiency program that in-turn lead to lower levels of free ridership. Union noted it completed a process evaluation for its commercial and industrial custom program in June 2011⁷ but has not completed any recent process evaluations related to any of its programs.⁸ Given that the custom stream of Union’s commercial and industrial programs and its Large Volume program represent the most significant portion of total DSM portfolio

⁵ EB-2015-0029/0049, Decision and Order, January 20, 2016, Section 5.2.6, p. 21

⁶ IESO Evaluation, Measurement & Verification Protocols and Requirements, 2015-2020 Conservation First Framework, version 2.0, Task 6B: Process Evaluations

⁷ EB-2017-0323, Exhibit B.Staff.7(iv)

⁸ EB-2017-0323, Exhibit B.Staff.11

savings, and considering the OEB's stated expectation that utilities should take steps to lower free ridership, the absence of an investigation into the level of free ridership is a significant oversight. In OEB staff's view, Union should have known or ought to have known that the level of free riders for its custom programs has changed, potentially significantly as has been shown in the 2015 NTG study, since the last NTG study conducted back in 2008.

Union argues that they should be allowed to continue to use the predetermined NTG values from the 2008 study for custom projects. OEB staff submits that this inconsistent with the OEB's Decision and Order and unfair to ratepayers. Further, the OEB stated in the 2015-2020 DSM Guidelines that the preference to determine lost revenues and shareholder incentive amounts should be to use measured actual results, instead of input assumptions.⁹

OEB staff submits that using the EC's NTG analysis that includes measured actual results of 2015 program participants relative to the 2015 program savings is consistent with the OEB's long standing policy of using the best available information and provides the OEB with the most accurate and realistic estimation of program savings. Union takes the position that the alternative, to rely on assumed NTG values developed nearly 10 years ago, based on different program parameters and participants, is more appropriate. OEB staff submits this cannot be the case when measured actual data, relative to the 2015 program year is available.

Target Establishment

Union argues that it is unfair to allow for the final results to change but not to also adjust the targets in the same manner. OEB staff disagrees. The DSM Decision and Order states the following with respect to how targets should be updated:

“To calculate next year's targets, the OEB directs the utilities to use the new, updated input assumption and net-to-gross factors that are the result of the annual evaluation process. The OEB finds it appropriate to use the best available information to determine subsequent target for prescriptive programs.”¹⁰

OEB staff submits that it is clear that the OEB did not provide for targets to be adjusted retrospectively.

⁹ EB-2014-0134, Section 8.2

¹⁰ EB-2015-0029/0049, Decision and Order, January 20, 2016, Section 9.5, p. 75

Spillover

Union notes that the Scope of Work indicated that the NTG study was to include the determination of a spillover value. Union takes the position that the NTG study is incomplete as an Ontario-specific spillover value has not been developed therefore no findings from the NTG study should be applied at this time.

OEB staff notes that while the Scope of Work of the EC contemplated completion of a spillover study, the study was not completed in time for inclusion in the DSM final 2015 report. Because the 2015-2020 DSM Decision and Order and DSM Framework provided that NTG adjustment factors are expected to include spillover effects, the OEB applied as a proxy an assumed spillover rate based on similar programs in another jurisdiction. OEB staff notes that the EC has undertaken additional work related to developing an Ontario-specific spillover value for use in the future. The draft findings of the EC's updated Ontario-specific spillover results are significantly less than those included in the 2015 Final DSM Reports.¹¹ OEB staff submits that it was appropriate to provide some credit to the gas utilities in 2015 as it was apparent that their programs induced spillover, however an Ontario-specific spillover value could not be determined. The gas utilities have benefited from the inclusion of a proxy spillover value in 2015 and the Ontario-specific spillover value will be applied to future program results.

Topic 2 – NTG Study Results

Union also took issue with specific elements of the EC's NTG study. OEB staff submits that the EC has conducted a thorough, rigorous and objective evaluation of the gas utilities' 2015 DSM programs. The EC has followed industry best practice, consulted with the EAC throughout the process and maintained independence. While the EC will seek input from the EAC which includes the natural gas utilities, OEB staff submits that the EC is not required to incorporate any of the EAC members' requests or recommendations. It is imperative that the EC remain independent and maintain the ability to complete objective evaluations of the gas utilities' program results.

Union argued that the OEB should not have confidence in the NTG study results as they are inappropriate and flawed. Union provided arguments on the following elements of the NTG study:

¹¹ Data from the EC's draft Spillover Report indicates that Union-specific spillover values are: Custom Industrial 0.56%, Custom Commercial and Multi-Family 0.00%. Enbridge-specific spillover values are: Custom Industrial 1.10%, Custom Commercial 1.52%, Custom Multi-Residential 6.35%, Run-it-Right 0.00%. Note that the Custom Multi-Residential accounts for 11% of Enbridge's total program savings.

- Oversampling
- Exclusion of secondary attribution
- Time delay of the completion of the study
- Survey instrument used by the EC

Oversampling

Union noted some concerns in how the EC sampled projects to verify the 2015 custom program results. Union claims that the EC sampled too large a subset of the population and that this caused a burden to its customers which negatively impacted Union's relationships, led to delays in the process and added an unnecessary cost to customers. Union requested that the OEB direct the EC to follow a sampling methodology that was developed by the gas utilities and the former Technical Evaluation Committee.

OEB staff submits that the EC must maintain its independence in all areas of its evaluation work in order to ensure objective final results are achieved. Directing the EC to use a particular methodology for any evaluation area may affect the independence the OEB intends to uphold in the OEB-led evaluation process. OEB staff notes that the EC followed industry best practice in developing its sampling methodology. The sample design employed by the EC also targeted the same precision level as the previous samples that the gas utilities were familiar with (i.e., 90/10). The final sample ended up larger than initially expected due to there being no restrictions on the number of projects/measures the EC would review at a specific customer's site. This decision was made based on information received from Union which did not end up being accurate. The EC has updated its sampling methodology for its 2016 evaluation based on the lessons learned in 2015.¹² OEB staff submits that Union's request for the OEB to make any determinations related to how the EC undertakes its evaluation is inappropriate and unnecessary.

Exclusion of Secondary Attribution

Secondary attribution refers to the longer-term effect of the DSM program on participant decision making. It relates to the likelihood of an energy efficiency project or optimization, operational and maintenance projects being completed/continued without the utilities involvement, but because of all the utilities' assistance for all previous projects.¹³

¹² EB-2017-0323, Exhibit B.Staff.16(c)

¹³ 2015 DSM Custom Savings Verification Report, pK-1

OEB staff notes that the NTG study focus was on primary attribution, or the direct influence of the utilities' program in the year being evaluated. Very few jurisdictions account for something like secondary attribution. This is highlighted in a Navigant jurisdictional review which examined three leading jurisdictions and showed that only Massachusetts gives some credit to previous program influence whereas California and Illinois do not.¹⁴ Secondary attribution was included by the EC as a lower priority element that was to be calculated for information purposes only.

As a result, OEB staff submits that this comment should be given little or no weight.

Time Delay in Completing the NTG Study

Union argues that because the evaluation process took 22 months following the end of the 2015 program year, that there was a likely negative impact on its customer's ability to recall why they participated in a program leading to the free ridership results being exaggerated and not credible.

As demonstrated within Union's interrogatory responses,¹⁵ the EC began receiving the data required to initiate the evaluation process on August 17, 2016, nearly nine months following year-end. Once the initial set of data was provided, the process took approximately 13 months to complete.

In order to assess the appropriateness of timing, OEB staff has referenced the IESO's evaluation reports for similar programs to those assessed by the EC. As shown in the table below, the IESO required approximately 10-months to release its 2015 C&I reports which is highly comparable to the 13-months taken by the EC. Further, the IESO has a mature process which has been perfected over years of experience.

Table 4 – IESO Completion Date of 2015 CDM Results

Report Title	Submission Date	Months to Completion
Final Report: Evaluation of 2015 Business Incentive Programs	Oct 12, 2016	10.5 months
2015 Evaluation of Industrial Energy Efficiency Programs	Oct 7, 2016	10 months

OEB staff also note that the 10-year old study Union proposes using to inform NTG values also suffered from time delays. Section E.6 of the report, entitled "Limitations" indicates that the study, published in October 2008 was "conducted on custom projects

¹⁴ EB-2017-0324, Exhibit B, Tab 6, Schedule 1, Navigant Consulting, Inc. Net-to-Gross Policies: Cross Cutting Jurisdictional Review, Page 4

¹⁵ EB-2017-0323, Exhibit B, Staff.2, p. 2, Table 1

completed between the fourth quarter of 2006 and the third quarter of 2007” and that “some projects in the current study could have been incubating from as early as 2004.”¹⁶ At a minimum, this likely means that participants were surveyed no earlier than 6-months, and at a maximum, up to 1.5 years (or 18 months) following project completion.

Although there is always a chance of recall bias when conducting interviews and surveys with individuals, OEB staff submits that the process employed by the EC was thorough and considered the fact that the customer may need to be reminded in a non-leading way about the utilities’ program. To ensure it received as accurate responses as possible, the EC framed the conversation in a way that intends to put the customer in the same frame of mind as when they made the decision to install the energy efficient measure. The question script used by the EC was reviewed by all members of the EAC and largely supported.¹⁷ OEB staff submits that the EC followed industry best practice to ensure as accurate and unbiased of responses were received as possible.

Survey Instrument

Union argues that the EC’s survey instrument focused too closely on incentives received by the participants rather than on other services the utilities provide, such as feasibility studies, communications, education, and customer support. Further, Union argues that the unique nature of its Large Volume program makes it incompatible with the concept of a NTG study. Union admits that it has difficulties influencing Large Volume customers, but that ultimately, these customers prioritize project investments based on their own needs.

OEB staff submits that the EC developed the NTG survey instrument to ensure the findings were directly related to the gas utilities’ programs. Union’s statement that the survey instrument only focused on incentives is incorrect as the surveys also discussed services provided by the utilities.¹⁸ OEB staff submits that the EC’s survey was comprehensive and appropriate. Further, the survey instruments were reviewed and generally accepted by the EAC.

¹⁶ EB-2017-0323, Exhibit B, Staff.5, Attachment F, p.34

¹⁷ 2015 Natural Gas Demand Side Management Custom Savings Verification and Free-ridership Evaluation, October 12, 2017, Appendix C

¹⁸ 2015 Natural Gas Demand Side Management Custom Savings Verification and Free-ridership Evaluation, October 12, 2017, Appendix C

Lost Revenue Adjustment Mechanism Variance Account (LRAMVA)

Union has requested the OEB approve a total balance of \$617,477. The table below shows how Union has calculated the balance of the 2015 LRAMVA.

Table 5 – Union Proposed 2015 LRAMVA Balance

Item	Union Proposed Balance
2014 Lost Revenues	\$447,600
2015 Lost Revenues	\$169,877
Total 2015 LRAMVA Balance	\$617,477

As part of the EC's 2015 final report it provided a total 2015 LRAMVA balance of \$154,368. OEB staff is unable to discern why Union has included any 2014 lost revenues in its 2015 LRAMVA. It appears that the difference related to 2015-specific lost revenues can be accounted for due to Union not using the 2015 NTG study findings.

OEB staff requests that as part of its final submission Union fully address the appropriateness of including any 2014 lost revenues in its 2015 LRAMVA.

- All of which is respectfully submitted -