



ONTARIO ENERGY BOARD

OEB STAFF SUBMISSION

UNION GAS LIMITED

APPLICATION FOR CLEARANCE OF 2014 DEMAND SIDE MANAGEMENT DEFERRAL AND VARIANCE ACCOUNTS

EB-2015-0276

May 13, 2016

Background

Union Gas Limited (Union) filed an application on December 9, 2015, with the Ontario Energy Board (OEB) seeking approval of the final balances in certain 2014 Demand Side Management (DSM) deferral and variance accounts. Union is also seeking the disposition of the balances in these accounts, and inclusion into rates, within the next available Quarterly Rate Adjustment Mechanism. On March 11, 2016, Union filed an update to its application which contained updated redactions to one of the verification reports.¹

The accounts for which Union seeks approval and disposition in this application are related primarily to its 2014 DSM activities. The 2014 DSM activities were the activities for the final year of Union's 2012-2014 multi-year DSM plan (EB-2011-0327) and for the final year of Union's 2013-2014 DSM plan for large volume customers (EB-2012-0337).

The accounts which are the subject of the application and the balances recorded are as follows:

Account	Balance
Demand Side Management Incentive Deferral Account	\$8,988,000
Lost Revenue Adjustment Mechanism Variance Account	\$848,000
Demand Side Management Variance Account	\$1,664,000
Total	\$11,500,000

The net balance of \$11,500,000 of these DSM accounts is to be collected from ratepayers.

The 2012-2014 DSM Guidelines (EB-2008-0346) and Union's approved 2012-2014 DSM plan outlined the process Union should undertake with respect to stakeholder consultation, monitoring and evaluation for each year of its 2012-2014 DSM plan.

¹ 2014 Verification of Large Customer Projects - Diamond Engineering Company (Exhibit B, Tab 1 , Appendix N)

Summary of OEB Staff Submission

OEB staff has outlined some issues with the manner in which Union has addressed two topics: Free Ridership; and, Union's documentation of the base case of a customer prior to an efficiency upgrade. The deficiencies in these areas are discussed further below and are intended to assist the OEB in providing a complete understanding of the evaluation process undertaken by Union.

OEB staff supports the approval of Union's DSM Incentive Deferral Account in the amount of \$8,988,000. Although Union does not have the results from the boiler baseline study, the results will have little to no impact on Union's shareholder incentive amount as savings from boiler only represents 1.1% of overall savings.

OEB staff supports the approval of Union's DSM Variance Account in the amount of \$1,664,000. These amounts were used in accordance with the methodology approved by the OEB as part of Union's 2012-2014 DSM plan (EB-2011-0327). The DSM Variance Account amounts were incurred after Union had achieved its overall weighted scorecard target on a pre-audited basis for its Resource Acquisition and Low-Income programs.

OEB staff does not support Union receiving approval for its entire Lost Revenue Adjustment Mechanism Variance Account (LRAMVA) of \$848,000. OEB staff submits that due to a higher free ridership rate related to Union's Large Volume program, the LRAMVA amount is overstated and should be adjusted. OEB staff submits that Union should have to re-calculate its LRAMVA amount with its Large Volume program results being reduced by an additional 30% to the 54% reduction already used in the calculation of net savings in this program in order to more accurately reflect the number of free riders who participated in the program.

Boiler Baseline Study Results

As part of the OEB's Decision and Order on Union's application for clearance of its 2013 DSM accounts application (EB-2014-0273), the OEB stated that it was supportive of the proposed boiler baseline study being completed in 2015 in cooperation with Enbridge Gas Distribution Inc., with the findings being incorporated in the evaluation of the 2014 results.² In its application, Union indicated that the study results are anticipated in 2016 and, in agreement with the Technical Evaluation Committee, the study results will apply to future savings.³ As there is no updated boiler baseline efficiency information to rely on, Union has used seasonal efficiencies based on a study in 2012. A total of 85 boiler

² EB-2014-0273, Decision and Order, June 4, 2015

³ Exhibit A, Tab 2, p. 11

units in its results rely on this boiler base case efficiency.⁴ In response to OEB staff interrogatory #1, Union indicated that the total amount of savings attributable to boilers represents 1.1% of overall savings.⁵

Although the results of the boiler baseline study were to be completed in 2015 and applied to Union's 2014 DSM results, OEB staff notes that even if the results of the boiler baseline study were available, the results would have virtually no impact on the total shareholder incentive. OEB staff submits that the amounts included within Union's deferral and variance accounts related to its Commercial and Industrial prescriptive program are reasonable.

Free Ridership

OEB staff continues to have a concern with the extremely short (e.g., one year or less) and extremely long (e.g., approximately 50 years) payback periods for many of Union's commercial and industrial custom projects and large volume projects. OEB staff questions the extent to which many of these projects were influenced by the DSM program's financial incentive. OEB staff is concerned that the overall gas savings included within Union's 2014 DSM results are inflated as a result of including projects that have either very short or very long payback periods. OEB staff has reviewed Union's Commercial & Industrial Custom Program and Large Volume Program results below. Based on the evidence for large volume custom projects in particular, the existing 54% free ridership assumption used to net out free riders is no longer sufficient. OEB staff recommends the OEB to increase the free ridership rate for large volume custom programs by an additional 30%.

OEB Staff Analysis

Free Ridership - Commercial/Industrial Custom Program

Table 1 below was provided by Union in response to OEB staff interrogatory #11. It includes a random sample of 24 custom commercial projects audited by Bryon Landry retained by Union. The information has been sorted by OEB staff to show the projects with the shortest payback period first.

⁴ Exhibit C.Staff.1

⁵ Exhibit C.Staff.1

Table 1: Union's 2014 Commercial/Industrial Custom Projects

Project ID	Audited m3 Annual Gas Savings (m3/Yr) a.	Audited Annual Electrical Savings (kWh/Yr) b.	Audited Annual Water Savings (Liters/Yr) c.	Total Annual Cost Savings d.	Audited Incremental Cost (\$) e.	Incentive (\$) f.	Simple Payback* (years) g.
2014-IND-0172	604,538	-	-	\$105,030	\$15,500	\$7,750	0.1
2014-IND-0112	174,392	-	3,158,710	\$30,307	\$5,040	\$2,520	0.2
2014-IND-0056	366,540	-	4,727,608	\$63,695	\$15,615	\$7,808	0.2
2014-COM-0079	140,884	-	2,917,443	\$28,727	\$4,600	\$2,300	0.2
2014-IND-0178	842,234	-	20,032,448	\$181,992	\$80,283	\$40,000	0.4
2014-COM-0345	117,183	-	-	\$23,887	\$12,480	\$14,948	0.5
2014-IND-0570	718,537	-	-	\$120,323	\$106,000	\$40,000	0.9
2014-IND-0115	50,315	-	1,056,563	\$9,394	\$9,392	\$4,696	1.0
2014-IND-0166	265,793	-	-	\$46,178	\$49,680	\$26,579	1.1
2014-COM-0087	13,974	-	-	\$2,879	\$4,000	\$1,296	1.4
2014-COM-0320	538,335	-	-	\$109,735	\$151,448	\$40,000	1.4
2014-IND-0333	434,687	-	-	\$72,791	\$115,003	\$40,000	1.6
2014-IND-0210	158,754	-	-	\$29,631	\$50,000	\$12,357	1.7
2014-IND-0183	47,291	-	-	\$8,827	\$19,800	\$7,309	2.2
2014-COM-0051	514,195	-	-	\$104,814	\$314,830	\$31,954	3.0
2014-IND-0021	2,727,061	-	-	\$508,995	\$1,647,500	\$70,200	3.2
2014-IND-0114	1,160,603	-	-	\$201,638	\$655,675	\$59,800	3.3
2014-IND-0022	1,970,483	-	-	\$367,783	\$1,405,750	\$61,400	3.8
2014-IND-0025	1,676,703	-	-	\$312,950	\$1,290,000	\$62,140	4.1
2014-IND-0024	1,158,947	-	-	\$201,350	\$849,847	\$56,200	4.2
2014-IND-0261	21,221	-	-	\$3,687	\$51,191	\$1,728	13.9
2014-COM-0240	747,828	3,623,938	-	\$530,202	\$13,000,000	\$40,000	24.5
2014-COM-0239	45,299	-	-	\$9,333	\$445,000	\$3,336	47.7
2014-IND-0569	2,754,000	12,911,000	289,000	\$1,801,208	\$89,598,370	\$120,000	49.7

*Simple Payback has been provided for illustrative purposes only and includes all audited project savings.

OEB staff found that 8 projects (or 33% of the total projects) had a payback period of one year or less, with half of these projects having a payback of just a few months. These projects with a payback of less than three months accounted for 7% of the gross savings from the commercial/industrial custom projects. In addition, there were two projects representing 16% of savings with payback periods close to 50 years. For these projects with an extremely long payback period, the financial incentive provided by Union was around 0.1% of the incremental cost of the projects. OEB staff is doubtful that the customer incentives provided by Union influenced the decision for these projects. Most likely these projects were undertaken for other reasons not related to energy savings.

Currently, Union assumes a 54% free ridership rate when it calculates the net savings associated with the commercial/industrial custom program. Based on OEB staff's analysis, more than 49% of the commercial/industrial custom project savings would have happened on their own without the utility's financial incentive. In order to avoid double counting free riders, OEB staff does not propose any further adjustment to the savings associated with this program as it appears the free ridership rate used by Union (i.e., 54%) appears appropriately addresses the free riders in the commercial and industrial custom program.

However the fundamental question for the OEB staff remains. Why should rate payers continue financing Union's program if such a large percentage of savings come from projects that would have happened anyway? If Union cannot provide evidence indicating that the financial incentive it provided actually influenced the customer's decision to participate in the program, all projects with a payback of one year or less, and those with extremely long paybacks of almost 50 years, should be considered free riders.

Free Ridership - Large Volume Program

Table 2 below was provided by Union in response to OEB staff interrogatory #12. It includes a random sample of 22 industrial custom projects audited by Diamond Engineering retained by Union. The information has been sorted by OEB staff to show the projects with the shortest payback period first.

Table 2: Union's 2014 Large Volume Projects

Project ID	Audited m3 Annual Gas Savings (m3/Yr) a.	Audited Annual Electrical Savings (kWh/Yr) b.	Audited Annual Water Savings (Liters/Yr) c.	Total Annual Cost Savings d.	Audited Incremental Cost (\$) e.	Incentive (\$) f.	Simple Payback* (years) g.
2014-IND-0371	172,800	-	-	\$28,738	\$920	\$460	0.03
2014-IND-0649	977,000	-	204,300,000	\$163,081	\$15,890	\$7,945	0.10
2014-IND-0622	2,569,000	-	-	\$548,599	\$62,300	\$20,000	0.11
2014-IND-0675	615,200	-	6,514,000	\$102,331	\$16,000	\$8,000	0.16
2014-IND-0612	7,259,000	-	221,000,000	\$1,550,775	\$362,465	\$55,975	0.23
2014-IND-0664	154,750	-	3,837,000	\$33,057	\$8,019	\$4,009	0.24
2014-IND-0356	587,000	-	-	\$97,622	\$25,149	\$12,574	0.26
2014-IND-0667	36,693	-	60,160,000	\$992,784	\$367,734	\$21,546	0.37
2014-IND-0615	3,980,000	-	-	\$849,912	\$348,212	\$50,000	0.41
2014-IND-0632	1,631,000	-	16,330,000	\$269,154	\$109,244	\$10,000	0.41
2014-IND-0620	2,943,000	-	-	\$628,465	\$264,391	\$20,000	0.42
2014-IND-0630	4,908,000	-	45,940,000	\$809,928	\$337,691	\$10,000	0.42
2014-IND-0543	2,315,000	-	51,300,000	\$382,113	\$205,467	\$20,000	0.54
2014-IND-0608	1,931,000	-	-	\$412,357	\$261,272	\$80,000	0.63
2014-IND-0522	1,676,500	-	34,490,000	\$276,714	\$218,337	\$20,000	0.79
2014-IND-0609	3,989,000	-	-	\$658,163	\$956,000	\$100,000	1.45
2014-IND-0452	1,612,000	-	16,550,000	\$268,135	\$1,352,455	\$65,000	5.04
2014-IND-0287	152,000	-	-	\$25,279	\$134,657	\$10,319	5.33
2014-IND-0670	488,000	-	10,450,000	\$80,548	\$526,227	\$20,000	6.53
2014-IND-0487	427,600	-	8,672,000	\$70,577	\$530,045	\$20,000	7.51
2014-IND-0431	36,870	-	-	\$6,132	\$300,000	\$50,000	48.93
2014-IND-0299	92,830	-	-	\$15,438	\$800,000	\$24,870	51.82

*Simple Payback has been provided for illustrative purposes only and includes all audited project savings.

Based on the sample results, 68% (15 projects) of the large volume projects audited (or 82% of the savings) had a payback of one year or less with some projects identified in the sample above having payback periods as short as just a few months. In addition, there are two projects with payback periods around 50 years which could also be considered free riders.

If all the projects with a short payback period of one year or less and those with an extremely long payback of about 50 years are considered free riders, then 83% of the large volume savings could have happened on their own without the utility's financial incentive. Based on this assessment, the 54% free ridership adjustment used by Union does not sufficiently adjust the gross savings amounts to appropriately reflect the free ridership level of the large volume program.

OEB staff submits that Union should increase its free ridership adjustment factor by about 30% (i.e., from 54% to 83%) and reduce the savings from its large volume gas customers accordingly. This additional adjustment to the free ridership rate is incremental to the current free ridership rate applied by Union (i.e., 54%) and is necessary in order to address the additional projects OEB staff has identified as not being influenced by the customer incentive provided by Union.

Although OEB staff understands that further reductions to the savings from the large volume program does not have an impact on Union's shareholder incentive (Union failed to meet the minimum requirement of 75% of its target), there will be an impact on LRAM volumes that should not be ignored.

Other Issues Related to Union's C/I Custom and Large Volume Programs

Union acknowledged the consideration of payback periods in response to the Auditor's 2014 recommendations #6 and #8 who noted that steam leaks, steam trap repairs and condensate leaks often resulted in paybacks of less than one year.⁶ Based on the Audit Committee's response to this recommendation, the Audit Committee believes that such a policy should be established. Union confirmed that no such policy was established for 2015 projects.⁷

OEB staff is of the view that projects with extremely short payback periods often are the types of projects that do not require utility financing. This was part of the evidence provided by the OEB's consultant and expert witness Mr. Chris Neme in the 2015-2020 DSM plan proceeding and Union's 2014 Auditor.⁸ OEB staff is also of the view that projects with very long payback periods (e.g. a payback of almost 50 years) that are beyond the life of the measure may indicate the customer may have undertaken the project for other reasons and may have been free riding on the incentive.

OEB staff notes that Union claimed to have incented legitimate projects that were not free riders, but a 20% reduction in savings was applied for "safety reasons" for multiple types of large volume projects including steam leak repairs, pipe insulation and kiln

⁶ Exhibit B, Tab 3, pp. 5-6

⁷ Exhibit C.Staff.4(b)

⁸ Exhibit C.Staff.4

insulation replacements. Union clarified that the “20% safety factor” referred to “the percentage of steam and process piping that could be touched or where a steam leak could injure a worker” based on two customer interviews.⁹ Considering that Union’s 2013 gas leak projects were deemed ineligible as it required immediate repair for safety reasons, any projects with known safety issues should not have been incented. This is concerning to OEB staff as Union confirmed that the customer has written protocol to repair steam leaks on a regular and emergency basis¹⁰, but these projects were not detected in Union’s 2014 project screening process. It appears that Union’s project screening criterion is inadequate on the basis of the reduction in project savings that were considered to be free riders.

OEB staff submits, consistent with the OEB’s findings in the 2015-2020 DSM plans Decision and Order,¹¹ that Union should improve its design of commercial and industrial custom programs to target the proper customer in order to screen out free riders at the outset, rather than later in the process, after investing considerable utility time and effort. OEB staff submits that although there is potential for significant natural gas savings from these customers, the amount of financial incentives required to do so needs to be critically reviewed to ensure that available program funds are not used in projects where the potential for free ridership is high. This is relevant as O&M projects will continue in 2015 and in the 2016 to 2020 period. OEB staff recommends, as a step in meeting the OEB’s direction outlined in the 2015-2020 DSM plans Decision and Order, that Union improve the design of its commercial and industrial custom and large volume programs starting in the 2017 program year in order to screen out potential free riders at the outset.

Base Case

Union’s documentation of the base case has improved since 2013, with approximately 20% of total audited projects (or 10 out of 46 projects audited) related to steam leak repairs and steam traps replacements that had inadequate base case documentation.¹² The Audit Committee accepted the Auditor’s recommendation to apply a 50% reduction to 10 projects that lacked the documentation to substantiate project savings.¹³ Since the 50% reduction was based on the Auditor’s professional judgment¹⁴, OEB staff is of the view that the reductions should have been based on evidence, where feasible and practical, rather than being done arbitrarily. In the future, OEB staff is of the view that savings should not be claimed for projects with insufficient baseline documentation,

⁹ Exhibit C.Staff.14

¹⁰ Exhibit C.SEC.17(b) - SUPPLEMENTAL

¹¹ EB-2015-0029/EB-2015-0049, Decision and Order, January 20, 2016, p. 21

¹² Exhibit C.Staff.8

¹³ Union’s Independent Audit of 2014 DSM Program Results: Exhibit B, Tab 3, Audit Committee Response to Recommendation #13 and #14, p. 8

¹⁴ Exhibit C.Staff.7

which is consistent with the Audit Committee's response to the 2014 Auditor's recommendation #13.

OEB staff submits that Union continues to document base case for all custom projects to ensure the greatest level of accuracy in its final results.

Summary of OEB Staff Recommendations

OEB staff supports the approval of Union's DSM Incentive Deferral Account in the amount of \$8,988,000.

OEB staff supports the approval of Union's DSM Variance Account in the amount of \$1,664,000.

OEB staff does not support Union receiving approval for its entire LRAMVA of \$848,000. OEB staff submits that due to a higher free ridership rate related to Union's Large Volume program, the LRAMVA amount is overstated and should be adjusted by increasing the free ridership adjustment factor by 30%.

OEB staff recommends, as a step in meeting the OEB's direction outlined in the 2015-2020 DSM plans Decision and Order, Union improve the design of its commercial and industrial custom programs and large volume programs starting in the 2017 program year in order to screen out potential free riders at the outset. Finally, OEB staff submits that Union be required to enhance its base case documentation process to ensure the greatest level of accuracy in its final results.

All of which is respectfully submitted.