



2012 DSM AUDIT SUMMARY REPORT

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ENBRIDGE GAS DISTRIBUTION

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Enbridge Gas Distribution 2012 DSM Audit Committee Audit Summary Report

1.0 Introduction

In accordance with Ontario Energy Board (the Board) requirements, an independent audit was conducted on Enbridge Gas Distribution 2012 DSM program results as reported in the Company's 2012 DSM Draft Evaluation Report.

This Audit Summary Report provides a summary of:

- the process followed to audit the 2012 DSM Draft Evaluation Report of April 15, 2013;
- impact of Audit results on the 2012 DSM savings, associated Demand Side Management Variance Account (DSMVA), Demand Side Management Incentive (DSMIDA), and Lost Revenue Adjustment (LRAM) claims;
- Enbridge Gas Distribution Inc.'s (Enbridge) responses to the Auditor's recommendations;
- Enbridge's and the Audit Committee's (AC's) responses to the Auditor's recommendations.

The AC has endorsed the 2012 Audit and Enbridge's post-audit DSMIDA, LRAM, and DSMVA claims as presented in this report.

As outlined by the Ontario Energy Board in the DSM Guidelines for Natural Gas Utilities (EB-2008-0346):

"The third party Auditor, although hired by the natural gas utilities, should be independent and ultimately serve to protect the interests of ratepayers.

At a minimum the independent third party Auditor should be asked to:

- provide an audit opinion on the DSMVA, LRAM and incentive amounts proposed by the natural gas utilities and any amendment thereto;
- verify the financial results in the Draft Evaluation Report to the extent necessary to express an audit opinion;
- review the reasonableness of any input assumptions material to the provision of that audit opinion; and
- recommend any forward-looking evaluation work to be considered.

The independent third party Auditor is expected to take such actions by way of investigation, verification or otherwise as are necessary for the Auditor to form its opinion. Custom projects should be audited using the same principles as any other programs. The independent third party Auditor's work will culminate in its final audit report."

2.0 Audit Process

2.1 Selection of 2012 Audit Committee

The 2012 Audit Committee (AC) was comprised of three representatives elected from the DSM Consultative and one representative from the utility. The 2012 AC representatives are:

- Chris Neme – Energy Futures Group consultant to Green Energy Coalition (GEC)
- Judy Simon – consultant to Low Income Energy Network (LIEN)
- Vince DeRose – consultant to Canadian Manufacturers & Exporters (CME)
- Ravi Sigurdson – Enbridge Gas Distribution

2.2 Terms of Reference and Selection of Auditor

Through a consensus process, Enbridge and the AC developed the 2012 Audit Terms of Reference, conducted the competitive bidding process and selected Energy Resource Solutions Inc. (ERS) as the Auditor of the 2012 Draft Evaluation Report.

The 2012 Audit Terms of Reference described the overall objective of the audit as well as required tasks and deliverables. A copy of the Terms of Reference can be found in Appendix A.

2.3 Project Start up and Work plan

The 2012 Draft Evaluation Report was circulated to the 2012 AC and ERS on April 15, 2013 and the Consultative Members on April 17, 2013. All members of the AC provided comments on the 2012 Draft Evaluation Report.

The Auditors' Final Work Plan is attached in this report in Appendix B.

2.4 Information Exchange

Due to the Auditor being hired in January 2013, dialogue between the AC and the Auditor occurred earlier in the Audit process than in previous years. This was especially beneficial during the independent third party review of custom project savings estimates. Enbridge also continued with its open Audit process for information sharing with the AC which included the option of attending weekly meetings with the Auditor.

During audit conference calls, at least one non-utility member of the AC was required to participate in order for the meeting to proceed.

At the outset of the audit, Enbridge provided the Auditor with background materials related to the 2012 DSM activities. In addition, Enbridge arranged for the Auditor to make a site visit to the Enbridge offices in order to meet with Enbridge program managers and key technical evaluation support staff. In addition, teleconference meetings were arranged with the contractors responsible for the independent third party engineering review of custom projects. Enbridge also provided additional materials to the Auditor throughout the course of the audit including those listed below.

- Custom commercial and industrial program reports
 - o 2012 Commercial Custom Projects Savings Verification Study Reports
 - o 2012 Industrial Custom Projects Savings Verification Study Reports
 - o 2012 Sampling workbooks completed to select projects for the program review
 - o 2012 Sampling methodology guidance documents
 - o 2012 Deep Savings guidance documents
- Other Research Reports
 - o 2012 TAPS Verification Research Report
 - o 2012 ESK Verification Research Report
 - o 2012 Low Income Multi Residential Showerhead Verification
- CCM documents, records, screening tools, and calculations
 - o 2012 CCM Results Workbook
 - o DSMIDA calculations workbook
 - o LRAM calculations workbook
 - o DSMVA calculations workbook
- Enbridge's 2012 DSM Draft Evaluation Report, including comments of the AC and other stakeholders
- OEB orders and approved technical reference manuals and Enbridge filed plans
 - o OEB 2008-0346: Demand Side Management Guidelines for Natural Gas Utilities
 - o OEB Decision Framework
 - o OEB 2006-0021: DSM Handbook
 - o Enbridge DSM Plan
 - o Enbridge Updated DSM Measures List (savings basis)
- Prior audit reports and recommendations
 - o 2011 Audit Report
- Data tracking records and documents such as completed prescriptive forms and back-up documentation.
- Financial documents.

2.5 2012 Audit Scope of Work and Approach to Audit

The primary objective of the 2012 audit was to review the Enbridge claims for DSMIDA, LRAM, and DSMVA for the calendar year ending December 31, 2012, and to express an independent opinion on these amounts. When the Enbridge reported amounts differed from what the Auditor believed to be correct, the Auditor calculated alternative values. The audit had the secondary objective of recommending methodological changes to the program administration, input assumptions, verification, and audit processes for the future.

This year's audit process began earlier than it did in previous years. Drafting of the work plan for the 2012 audit began immediately after the kick-off meeting and was distributed to Enbridge and the Audit Committee on February 8, 2013. The first key element of the work plan was a review of the large commercial and industrial (C/I) custom project savings verification (CPSV) process. The CPSV process involves independent firms reviewing savings estimates for a sample of commercial and industrial custom projects that were selected through a prescribed sampling methodology.¹ The sampled projects were broken into two Waves. Wave 1 included projects that were completed between January and September 2012; Wave 2 included projects that were completed throughout the 2012 program year. The Auditor conducted a review of a subsample of the CPSV projects, providing feedback on adjustments to savings assumptions and other issues raised by the CPSV firms in both waves, recommending changes in the CPSV firms' approaches to Wave 2 projects and providing opinions on the reasonableness of the total savings realization rate adjustments recommended by the CPSV firms in their final reports. Regularly scheduled conference calls provided the opportunity to review the CPSV firm's progress and approach in real time. Two check-ins with the AC during the Auditor's work on the CPSV reviews also provided useful insights to the AC that had not been possible through the process in previous years.

Beyond its involvement in the CPSV reviews, the Auditor's review process included detailed walk-throughs of other Enbridge programs with an emphasis on program changes from 2011. Examination of Enbridge's DSM analysis, reporting, and tracking system (DARTS) was not in scope. The Auditor also participated in a conference call with the AC as part of the audit kickoff. Additional supporting documentation, including the Draft Evaluation Report, CCM and LRAM spreadsheets, TAPS verification study, ESK verification study, and Multi-Residential Low-Income Showerhead verification study were received through the months of April and May 2013. The Auditor reviewed all of these reports for validity and comprehensiveness of analysis to ensure that they reflected OEB guidance and incorporated the most recent recommendations. There was no auditing of the DSM measures list, DARTS, or E-Tools formulae. Although the Auditor was expected to review all aspects of Enbridge's savings estimates and flag any savings assumption that it considered potentially inaccurate or problematic, it did not conduct a detailed review of all deemed measure savings assumptions.

¹ A Sampling Methodology for Custom C&I Programs, Navigant Consulting, Inc., November 12, 2012

Auditing of the market transformation program included a review of the administrative process, the associated participant paperwork documenting achievement of scorecard metrics, and the scorecard.

After reviewing the 2012 individual components for accuracy and compliance with Board-approved protocols, assumptions, and deemed savings values, the Auditor reviewed the CCM spreadsheet for correct inputs and calculations and the three sets of calculations required to compute the DSMIDA, the LRAM, and reconciliation of the DSMVA. These results were compared to the values in Enbridge's Draft Evaluation Report to confirm the proper representation of results.

Lastly, methodological recommendations were considered for individual verification activities, for administrative procedures, and in consideration of any recommended future evaluation efforts.

2.6 2012 Audit Reports

A first draft of the ERS 2012 Draft Audit Report was circulated to the AC on June 7, 2013, with a second draft on June 14, 2013 and a third on June 21, 2013. The Final Audit Report was circulated to the AC on June 27, 2013 and filed with the Board pursuant to the Regulatory Reporting Requirements on June 28, 2013.

3.0 Results Audit

3.1 Results Summary: 2012 Recommended CCM, DSMIDA, LRAM and DSMVA

Table 1. is a summary of the figures reported by Enbridge in the 2012 DSM Draft Evaluation Report, compared to the amounts recommended by the Auditor in the Final Audit Report and finally the amounts as agreed upon by the Audit Committee.

The AC accepted the Auditor's recommended adjustments without any further modifications. However, during the documentation review process, it was identified that the Final Audit Report, filed with the board on June 28th, 2013, did not accurately update the CCM savings for an AC and Auditor approved revision. Specifically, the revised measure life for two advancement boiler projects was not incorporated into the CCM Spreadsheet. The impact was an increase of 613,643 m³ to the CCM and \$27,612 to the DSMIDA.

Table 1. CCM, DSMIDA, LRAM and DSMVA Recommendations

	2012 DSM Draft Evaluation Report²	Final Audit Report³	Post Audit Recommended Results
CCM Savings	1,099,083,644 m ³	1,068,358,487 m ³	1,068,976,932 m3
DSMIDA Amount Recoverable	\$9,403,559	\$8,789,917	\$8,817,529
LRAM Amount Recoverable (Reimbursable to Ratepayers)	\$38,358 (to be paid to the ratepayers)	\$40,652 (to be paid to the ratepayers)	\$40,652 (to be paid to the ratepayers)
DSMVA Amount Recoverable (Reimbursable to Ratepayers)	\$303,490 (to be paid to the ratepayers)	\$303,490 (to be paid to the ratepayers)	\$303,490 (to be paid to the ratepayers)

/c

The AC supports the foregoing calculations.

² All values from 2012 Demand Side Management Draft Evaluation Report, Enbridge Gas Distribution Inc., April 15, 2013

³ All values from Independent Audit of 2012 DSM Program Results Final Report, ERS, June 26, 2013

/c

3.2 CCM Results & DSMIDA Calculations

The following Table 2. from the Final Audit Report⁴ is a summary of the adjustments recommended by the Auditor.

Table 2. summarizes the individual changes made that affected the calculated net annual m³ of gas savings and the CCM. Table 3. summarizes the impact of these changes on the resource acquisition, market transformation, and low-income programs.

Table 2. Summary of Adjustments by Program Type in Final Audit Report

Description of Adjustment	Original Value	Audit Value	CCM Adjustment for DSMIDA (\$)	Audit Report Ref. Page(s)
Audit Adjustments to Results of Custom Commercial, Industrial, and Multi-Residential Resource Acquisition Programs				
TAPs reduction factor % for non-installs and removals adjusted to be consistent with verification report	TAPS Showerhead 2.0 - 2.5 = 61%	TAPS Showerhead 2.0 - 2.5 = 59.3%	1,718,874	30
	TAPS Showerhead 2.6+ = 61%	TAPS Showerhead 2.6+ = 59.3%		
	TAPS - Bathroom Aerators = 78%	TAPS - Bathroom Aerators = 77.5%		
	TAPS - Kitchen Aerator = 69%	TAPS - Kitchen Aerator = 66.8%		
	80,324 participants	82,325 participants		
Industrial program adjustment factor	-1.9%	-1.87%	101,636	22

⁴ Independent Audit of 2012 DSM Program Results Final Report, ERS, June 26, 2013.

Description of Adjustment	Original Value	Audit Value	CCM Adjustment for DSMIDA (\$)	Audit Report Ref. Page(s)
Commercial and multi-residential program adjustment factor impact on commercial and multi-residential programs	+1.4%	-4.41%	-34,325,008	22
Updates to CCM calculation spreadsheet to remove hardcoding of results for sampled projects and apply adjustment factor calculated with sample weights to all projects in sample frame	995,052,197	998,758,970	3,706,773	23
Community Energy Retrofit	5,296,300	5,296,300	None	29
Commercial and Industrial deep energy savings (% of custom projects that achieved 25% savings or greater)	25%	25%	None	29
Residential deep energy savings (participants)	209	209	None	10
Resource acquisition program totals			-28,797,726	
Audit Adjustments to Results of Low-Income Resource Acquisition Programs				
Commercial and multi-residential program adjustment factor change impact on low-income multi-residential programs	+1.4%	-4.41%	-1,927,431	32
Low-income resource acquisition program totals			-1,927,431	
Audit Adjustments to Market Transformation Programs				
None	None	None	None	None
Totals, all adjustments	-	-	-30,725,157	

Table 3. Summary of Adjustments to CCM and DSMIDA Recommended by the Auditor

Affected Program	CCM Adjustment (m³) Recommended by Auditor	DSMIDA Adjustment (\$) Recommended by Auditor
2012 Resource Acquisition Programs	-28,797,726	-\$499,201
2012 Market Transformation Programs	N/A	\$0
2012 Low Income Programs	-1,927,431	-\$114,441
Totals	-30,725,157	-\$613,643

Table 4. below presents a detailed comparison of the CCM values reported in the Draft Evaluation Report with those provided in the Audit Report and lastly, the Final AC Adjusted values, following review of the Final Audit Report.

Table 4. Detailed Summary of CCM Values from Draft Evaluation Report, Final Audit Report and 2012 Final AC Adjusted Values

CCM (m³) by Program Area	2012 Draft Evaluation Report	Final Audit Report	2012 Final AC Adjusted Values	Change from Final Audit Report
ESK	2,278,932	2,278,932	2,278,932	0
TAPS	26,814,583	28,533,456	28,533,456	0
Residential Community Energy	5,296,300	5,296,300	5,296,300	0
Total Residential	34,389,815	36,108,689	36,108,689	0
Commercial Prescriptive	47,373,803	47,373,803	47,373,803	0
Large Commercial Custom	267,146,908	251,714,332	251,714,332	0
Multi Residential	236,511,341	224,606,507	224,823,144	+216,637
Large New Construction	142,482,698	134,925,548	134,925,548	0

CCM (m ³) by Program Area	2012 Draft Evaluation Report	Final Audit Report	2012 Final AC Adjusted Values	Change from Final Audit Report
Industrial	301,537,447	305,915,406	305,915,406	0
Total Business Markets	995,052,197	964,535,597	964,752,233	+216,637
Total Resource Acquisition Programs	1,029,442,012	1,000,644,286	1,000,860,922	+216,637
Residential Part 9	24,708,220	24,708,220	24,708,220	0
Commercial Part 3	44,933,412	43,005,980	43,407,789	+401,809
Total Low-Income	69,641,632	67,714,201	43,407,789	+401,809
Total All Programs	1,099,083,644	1,068,358,487	1,068,976,931	+618,444

AC Response:

The AC supports the foregoing CCM calculations.

Table 5. DSMIDA Adjustment from Draft Evaluation Report to Final Audit Report to Final AC Adjusted Values

	DSMIDA results			
	Draft Evaluation Report	Final Audit Report	2012 AC Adjusted Value	Change from Final Audit Report
2012 Resource Acquisition DSMIDA	\$5,760,631	\$5,261,430	\$5,265,185	\$3,755
2012 Market Transformation Scorecard DSMIDA	\$1,323,855	\$1,323,855	\$1,323,855	\$0
2012 Low Income Scorecard DSMIDA	\$2,319,073	\$2,204,632	\$2,228,489	\$23,857
Total	\$9,403,559	\$8,789,917	\$8,817,529	\$27,612

AC Response:

The AC supports the foregoing DSMIDA calculations.

As seen in Table 3 above, the Auditor's Final Audit Report states that the Audit results produce a total DSMIDA reduction of \$613,643 from the original DSMIDA amount found in the Enbridge Draft Evaluation Report.

3.3 LRAM Results

In preparing rates for a given year the forecast DSM volumes are taken into account. The Lost Revenue Adjustment Mechanism (LRAM) was established to account for the revenue impact of any variance between the forecast DSM volumes and post audit DSM volumes for the program year. LRAM only addresses the variance in DSM volumes.

In calculating the Lost Revenue Adjustment Mechanism (LRAM) for 2012, Enbridge calculated \$38,258 as the amount to be returned to ratepayers. The Auditor recommended \$40,652 for the 2012 LRAM as the amount to be returned to ratepayers as outlined in the Final Audit Report. The AC post-audit 2012 LRAM amount remains at (\$40,652).

Table 7. below illustrates the LRAM by rate class and the variance that will need to be returned to (negative number) or collected from (positive number) ratepayers. In total (\$40,652) needs to be returned to ratepayers.

Table 6. LRAM Reported in Enbridge's 2012 Draft Evaluation Report

LRAM	Budget Net Partially Effective (m ³ /yr)	Actual Net Partially Effective (m ³ /yr)	Volume Variance (m ³ /yr)	Distribution Margin (Cents/m ³ /yr)	2012 LRAM (\$)
Rate 110	1,656,894	1,578,099	-78,795	1.54	-\$1,217
Rate 115	1,054,387	1,913,358	858,971	0.86	\$7,363
Rate 135	0	109,885	109,885	1.32	\$1,446
Rate 145	1,868,324	272,566	-1,595,759	1.79	-\$28,533
Rate 170	3,898,784	550,223	-3,348,560	0.52	-\$17,317
2012 LRAM	8,478,388	4,424,131	-4,054,258		-\$38,258

Table 7. LRAM Calculated in Final Audit Report

LRAM	Budget Net Partially Effective (m3/yr)	Actual Net Partially Effective (m3/yr)	Volume Variance (m3/yr)	Distribution Margin (Cents/m3/yr)	2012 LRAM (\$)
Rate 110	1,656,894	1,453,630	-174,219	1.54	-\$2,691
Rate 115	1,054,387	1,809,441	794,350	0.86	\$6,809
Rate 135	0	108,382	109,479	1.32	\$1,441
Rate 145	1,868,324	241,965	-1,608,087	1.79	-\$28,753
Rate 170	3,898,784	488,942	-3,375,684	0.52	-\$17,457
2012 LRAM	8,478,388	4,102,360	-4,254,161	-	-\$40,652

Rate 1 and Rate 6 are not included in the LRAM amount for clearance above as these rate classes are covered under AUTUVA, Average Use True-Up Variance Account.

AUTUVA

DSM is one of several factors contributing to declining average use in Rate 1 and Rate 6. The purpose of the 2012 AUTUVA is to record (“true-up”) the revenue impact, exclusive of gas costs, of the difference between the forecast of average use per customer, for general service rate classes (Rate 1 and Rate 6), embedded in the volume forecast that underpins Rates 1 and 6 and the actual weather normalized average use experienced during the year. The calculation of the volume variance between forecast average use and actual normalized average use will exclude the volumetric impact of Demand Side Management programs in that year.

The Company’s rates for Rate 1 and Rate 6 are based on budgeted average volumes per customer. At the end of each year the actual average volumes are calculated from the total metered usage which includes the impact of any DSM activities. During year-end if either the audited DSM volume information or an updated estimate is not available, the budget DSM volume information, which is the best available estimate of the actual DSM volume information, will be utilized in the AUTUVA calculation. If it turns out that the current year actual audited DSM volumes are different from the budget when this information is not available for current year AUTUVA calculation, the LRAM calculation is only required for other rate classes.

AC Response:

The AC supports the foregoing LRAM calculations.

4.0 Findings & Recommendations

4.1 Auditor Recommendations with Enbridge and AC responses

Resource Acquisition:

1. Recommendation:

Further refine the custom verification protocols to include more intensive investigation of projects, including post-retrofit equipment performance measurement over time (on-site metering). This year's terms of reference (TOR) for CPSV contractors did include language suggesting additional on-site data collection, but more stringent language and direction on M&V activities within the TOR is needed to further improve the CPSV process.

- a. Disallow Enbridge's E-Tools software as a CPSV tool. Do not permit the CPSV firms to use E-Tools as a primary evaluation method. The issue is not E-Tools itself, but the lack of alternate methodology when revised E-Tools runs are used to verify as-built savings. If a particular project presents a compelling reason for the CPSV firm to use E-Tools in their evaluation, then at a minimum, the results of the E-Tools run should be cross-checked by the CPSV firm with an alternate methodology.
- b. Request that the CPSV firms report their own savings values, even when they closely align with Enbridge's results. Though the impact to savings may be negligible, reporting the evaluator-generated savings figures lends transparency and credibility to the CPSV process.

Enbridge Response:

- a. The CPSV firms will be instructed to come up with their own independent way of estimating savings. E-Tools should only be used as a last resort and then only if justification is provided and the CPSV firm states that it has assessed the reasonableness of the underlying formulae in E-Tools.
- b. Enbridge will bring forward the recommendation pertaining to the CPSV Terms of Reference to the TEC for review and discussion. Cost and timing are factors that must be considered in the level of post retrofit M&V required.

Audit Committee Response:

The AC endorses this response.

2. Recommendation:

Consider a separate evaluation process for large commercial new construction projects. As identified in last years' audit, the commercial new construction project savings are based on energy models generated and reviewed by third parties. This methodology is appropriate for estimating savings during the review process. Historically, the evaluation effort has been limited to a cursory review of model inputs and a site visit to verify that the proposed equipment is installed as per the design. This evaluation methodology lacks rigor as it essentially verifies the model assumptions, but does not refine the analysis and savings to take actual performance into account. Alternate methodologies such as in-situ metering or post-install modeling reconciled to utility consumption data will provide more confidence in the evaluated and audited savings for this sector. An extended evaluation and audit cycle for these projects will need to be considered if these alternate methods are adopted, as they require the building be occupied for some period (a minimum of 6 months; ideally 18 months) so reasonable, accurate data can be collected. This may take the form of a verification independent of the normal cycle, with a one-year lag. The more intensive verification would increase the CPSV cost but should be considered in future program framework.

Enbridge Response:

With the exception of legacy projects, all 2013 Commercial New Construction projects will be claimed via the Savings By Design Market Transformation program. It is anticipated that 2013 CCM results for legacy projects (Resource Acquisition - RA) will be substantially lower than 2012. For this reason, resources would be better utilized elsewhere than on a new evaluation approach for RA New Construction projects. However, if this should change in the future, this recommendation will be revisited.

Audit Committee Response:

The AC endorses this response.

3. Recommendation:

Consider research on Ontario commercial new construction standard practices for use in baseline energy use estimation. Multiple CPSV-verified projects claimed savings reductions in excess of 75% of the baseline with relatively conventional technologies. The CPSV firm verified and the Auditors affirmed that baseline assumptions generally reflected the Ontario Building Code requirements likely in effect at the time of the construction permit application. Even so, in ERS's judgment the standards represent a low standard. Comparing the new construction sample project application baseline EUIs with average existing new building EUI data from 2010 showed less than 15% improvement, reinforcing this perception. While using code as baseline is typical practice in jurisdictions throughout North America, the low code requirements compared to likely standard practice in Ontario suggests that either Enbridge should

conduct research to determine if code is a reasonable baseline representing standard practice or the program should use a net-to-gross factor that specifically accounts for the likely high free ridership compared to a code baseline.

Enbridge Response:

See response to #2

Audit Committee Response:

The AC endorses this response.

4. Recommendation:

Establish a policy and analysis procedure for fuel-switching projects to account for the province-level impact on net fuel use and emissions reductions. Starting in 2012, Enbridge's performance metrics are based solely on gas savings. CCM does not inherently account for the electric penalty associated with a fuel switching measure; it just measures the gross measure gas savings

Enbridge Response:

This Audit Recommendation will be directed to the Technical Evaluation Committee (TEC).

Audit Committee Response:

The AC endorses this response.

5. Recommendation:

Provide additional clarification on the savings target increase mechanism linked to the Run *it* Right program as detailed in the Settlement Agreement. The document notes that savings targets will be revised upward if funds are "shifted" from the Run *it* Right program. There is no formal procedure through which funds are shifted; therefore, it is difficult to identify this trigger when some programs/portfolios are overspent and others are underspent.

Enbridge Response:

The following two requirements are necessary for funds to be considered "shifted" from the RIR budget to the RA budget and the target increase trigger to occur: 1) the RIR budget is underspent; and 2) the Resource Acquisition budget (less the RIR budget) is exceeded.

Audit Committee Response:

The AC endorses this response.

6. Recommendation:

Establish a future Run *it* Right verification process. Once the Run it Right program begins to generate savings, it will need to be evaluated. As the program is based on pre- and post-install utility bill analysis, the typical CPSV process may not be appropriate. The Auditors recommend that the verification include a review of Enbridge's savings methodology and a desk review of a sample of projects to assess compliance with the methodology.

Enbridge Response:

Enbridge will direct the Auditor to conduct a desk review of a random sample of RIR projects to verify the reasonableness of the claimed savings and to ensure a yet to be agreed upon methodology (with the AC) has been followed.

Audit Committee Response:

The AC endorses this response.

7. Recommendation:

Review the administrative process associated with the Community Energy Retrofit program. Enbridge indicated that they do not collect post-retrofit measure level information on the submitted projects, but the 2012 DSM plan states that this data is to be collected on a monthly basis. Enbridge states that they are working with NRCan to provide the details required to capture individual measure savings post-retrofit.

Enbridge Response:

Enbridge and the AC agree to the following: "Enbridge will continue to work with NRCan and its energy advisors to obtain individual measure savings data post-retrofit solely for the purpose of informing program design for 2015 and beyond (not to affect 2014 results – see Recommendation #8)."

Audit Committee Response:

The AC endorses this response.

8. Recommendation:

Review the measure lives associated with the Community Energy Retrofit program. As discussed in Section 2.2.1, there was some discrepancy in the nature of the program between Enbridge and the Audit Committee. It must be determined if the projects are to be treated holistically with a single blended or aggregated measure life, or if each measure is to be assessed on its own, each with a unique measure

life. In either case the measure life or lives should be reviewed and documented within the DSM plan.

Enbridge Response:

The AC accepts that Enbridge will continue to utilize a 20 year holistic measure life for the CER program in 2013, as it did in 2012. For the purpose of determining whether performance metrics have been achieved in 2014, Enbridge and the AC members agree that Enbridge will use a deemed 15 year life for all home retrofits that include furnace replacements and a deemed 25 year life for all home retrofits that do not include a furnace replacement.

Audit Committee Response:

The AC endorses this response.

General:

1. Recommendation:

Define what project milestone is used to determine a complete project and its completion date. Revise administrative procedures to support this new definition. Specifically, consider commissioning as it relates to project completion.

Enbridge Response:

Enbridge will consider a custom retrofit project complete when the equipment is purchased, installed, and turned-on by end of year and fully commissioned as intended within the next 60 days. If a project is identified as not fully commissioned during the audit process, the opportunity for resolution will be afforded until the audit is complete. Legacy new construction projects will be considered complete if Enbridge can demonstrate that efficiency measures were installed by the end of the year and the building is occupied and in use by April 30 of the following year. Legacy new construction projects not deemed completed in 2013 can be claimed in 2014 without penalty (provided they meet the definition of completion for that year).

Audit Committee Response:

The AC endorses this response.

2. Recommendation:

Correct the post-verification weighting procedure to exclude the unverified “very small” stratum from the denominator of the realization rate calculation.

Enbridge Response:

Enbridge will use the post-verification weighting procedure excluding the unverified “very small” stratum from the denominator of the realization rate calculation.

Audit Committee Response:

The AC endorses this response.

3. Recommendation:

Use the sample design contractor’s sample- and energy-weighted average realization rate results in the Draft Evaluation Report and related calculations instead of the CPSV reports’ energy-weighted average realization rates.

Enbridge Response:

Enbridge will use the sample design contractor’s sample- and energy-weighted average realization rate results in the Draft Evaluation Report and related calculations instead of the CPSV reports’ energy-weighted average realization rates. This may require that additional time be built into the CPSV process to allow for the transfer and recalculation of data.

Audit Committee Response:

The AC endorses this response.

4. Recommendation:

Require documented pre-approval for all large and/or custom incentives prior to project completion. In the course of reviewing completion dates and related paperwork of custom projects to affirm eligibility for savings, Auditors learned that some custom projects do not receive pre-approval before project completion when ESC’s are working closely with established participants. This was found to be the case in one of the sampled custom commercial projects. In our experience such applicants are more likely to be free riders than those that apply for incentives before or at least closer to the time of decision-making. While this particular project may just be a case of lagging paperwork, requiring pre-approval of administrative burden but has proven to be a good mechanism to reduce this type of free ridership.

Enbridge Response:

Enbridge will provide the required documentation to substantiate the Company's involvement for each project prior to project completion.

Audit Committee Response:

The AC endorses this response.

5. Recommendation:

As discussed with Enbridge and the Audit Committee, it is ERS's opinion that a TEC subsection is not necessary in the Final Annual Report as the conversations and activities of the TEC will not impact the CCM or financial mechanisms reported on in this Audit Report.

Enbridge Response:

Enbridge will accept ERS's opinion that a TEC subsection is not necessary in the Final Annual Report as the conversations and activities of the TEC will not impact the CCM or financial mechanisms reported on in this Audit Report.

Audit Committee Response:

The AC endorses this response.

Appendix “A”

Enbridge/Union Terms of Reference:

Independent Audit of 2012 DSM Program Results

BACKGROUND

Enbridge Gas Distribution Inc (EGD) and Union Gas Ltd (UGL) have been delivering demand side management (DSM) initiatives to their broad customer bases since 1995 and 1997 respectively. DSM activities include planning, developing, implementing and evaluating energy efficiency initiatives for residential, commercial, industrial and low income markets. The utilities' DSM activities are regulated by the Ontario Energy Board (OEB) and adhere to the requirements as laid out in the newly implemented EB-2008-0346 DSM Guidelines for Natural Gas Utilities. In response to the new guidelines, the utilities worked with intervenor stakeholder groups to develop a “Joint Terms of Reference on Stakeholder Engagement for DSM Activities by Enbridge Gas Distribution Inc and Union Gas Limited” (hereto referred to as ToR) for the new 2012-2014 Plan period. 2012 represents the first year of the new three year DSM plan period.

The OEB DSM Guidelines include three financial mechanisms: the Demand Side Management Variance Account (DSMVA), the Lost Revenue Adjustment Mechanism (LRAM), and the Shared Savings Mechanism/Performance Incentive (SSM).

Once the DSM budget has been set, the DSMVA is “...used to track the variance between actual DSM spending by rate class versus the budgeted amount included in rates by rate class. A natural gas utility may record in the DSMVA in any one year, a variance amount of no more than 15% above its DSM budget for that year. The natural gas utility should apply annually for disposition of the balance in its DSMVA, together with carrying charges, after the completion of the annual third party audit.

The actual amount of the variance versus budget targeted to each customer class will be allocated to that customer class for rate recovery purposes. If spending is less than what was built into rates, ratepayers will be reimbursed for the full amount. If more is spent than was built into rates, the natural gas utility may be reimbursed up to a maximum of 15% above its DSM budget for the year. All additional funding beyond the annual DSM budget must be utilized on incremental program expenses only (i.e. cannot be used for additional utility overheads).”⁵

LRAM is “...used to track, at the rate class level, the actual impact of DSM activities undertaken by the natural gas utility from the forecasted impact included in distribution rates. A natural gas utility may only record an LRAM amount in relation to DSM activities undertaken within its franchise area by itself and/or delivered for the natural gas utility by a third party under contract.

⁵ Demand Side Management Guidelines for Natural Gas Utilities EB-2008-0346, June 30, 2011, page 34, section 13.2

The natural gas utilities should calculate the full year impact of DSM programs on a monthly basis, based on the volumetric impact of the measures implemented in that month, multiplied by the distribution rate for each of the rate classes in which the volumetric variance occurred. LRAM amounts are only accruable and thus only recorded in the variance account until such time as the Board sets distribution rates for the utility based on a new load forecast.

The LRAM amount is recovered in rates on the same basis as the variances in distribution revenues were experienced at the rate class level. The LRAM therefore results in a true-up rate class by rate class. The natural gas utilities should apply annually for disposition of the balance in their LRAMVA, together with carrying charges, after the completion of the annual third party audit...”⁶

The Guidelines also state that “...an incentive payment should be available to the natural gas utilities to encourage them to aggressively pursue DSM savings and recognize exemplary performance.”⁷ The Guidelines establish an annual cap for the 2012 incentive at \$9.45M to be escalated for inflation in subsequent years. This cap was later increased by the Board to \$10.45M to reflect the increased budget for the utilities’ Low Income programs.

Union and Enbridge maintain systems to monitor and track DSM results. In addition, the utilities commission independent evaluations of selected DSM programs. Both utilities present detailed DSM annual reports which document program results, evaluation research and calculation of the DSMVA, LRAM, and SSM amounts. The annual reports are then subject to a third party audit. In accordance with the ToR filed with the OEB, each utility will have an Audit Committee (AC). Comprised of three intervenor representatives and a Company representative, the goal of the AC is to ensure that there is, each year, an effective and thorough audit of the utility’s DSM results.

As described in the Stakeholder Engagement Terms of Reference:

- “The auditor will receive guidance and direction from the AC (e.g., on the scope of work, draft work plans, and draft work products). However, the Auditor’s report and effort will be independent of utility or intervenor control or influence.”⁸
- “The AC will endeavour to reach consensus on recommendations concerning the utility’s claims regarding DSM annual results. Where consensus is not reached, the Committee will outline areas of disagreement in the AC’s Report to the Board.”⁹

The Terms of Reference also outline the process for auditor selection as follows:

“Utilities and intervenors will seek consensus on auditor selection

⁶ Demand Side Management Guidelines for Natural Gas Utilities EB-2008-0346, June 30, 2011, page 35

⁷ Ibid, page 31

⁸ Joint Terms of Reference on Stakeholder Engagement for DSM Activities by Enbridge Gas Distribution Inc. and Union Gas Limited, November 4, 2012, page 15 of 21.

⁹ Ibid, page 15 of 21.

- Where consensus on an audit firm selection from the proposals submitted is not achieved, the intervenors will decide the firm from among the proposals submitted by pre-approved bidders.
- Disputes arising from a non-consensus firm selected as the auditor will be given to the Board for consideration when the audit report is filed following completion of the audit.¹⁰

OBJECTIVE

The objective of the audit is to provide an independent opinion as to the reasonableness of the Company's claims regarding DSMVA, LRAM & SSM. The utilities use the audit report as evidence in their application to the Board to clear the relevant DSM accounts.

The auditor should include in their final report or subsequent memo an independent professional opinion in the following form, with or without qualifications:

We have audited the Annual Report, Performance Incentive (SSM), Lost Revenue Adjustment Mechanism (LRAM) and Demand Side Management Variance Account (DSMVA) of Enbridge Gas Distribution/Union Gas for the calendar year ended December 31, 2012. The Annual Report and the calculations of SSM, LRAM, and DSMVA are the responsibility of the company's management. Our responsibility is to express an opinion on these amounts based on our audit.

We conducted our audit in accordance with the rules and principles set down by the Ontario Energy Board in the DSM Guidelines for Natural Gas Utilities (EB-2008-0346). Details of the steps taken in this audit process are set forth in the Audit Report that follows, and this opinion is subject to the details and explanations therein described.

In our opinion, and subject to the qualifications set forth above, the following figures are calculated correctly using reasonable assumptions, based on data that has been gathered and recorded using reasonable methods and accurate in all material respects, and following the rules and principles set down by the Ontario Energy Board that are applicable to the 2012 DSM programs of Enbridge Gas Distribution/Union Gas:

SSM Amount Recoverable	-	\$x,xxx,xxx
LRAM Amount Recoverable	-	\$x,xxx,xxx
DSMVA Amount Recoverable	-	\$xxx,xxx

REPORTING STRUCTURE

The Auditor will be under contract with the Utilities. Pursuant to the requirements established by the Board, a group of stakeholder representatives have been elected by the DSM Consultative Group, a multi-stakeholder body, which meets from time to time to discuss and review the Company's DSM activities. These stakeholders

¹⁰ Ibid, page 14 and 15 of 21.

representatives are called the Audit Committee “AC”, the AC consists of a Company representative and three stakeholders.

2012 Enbridge Gas Distribution AC members are: Chris Neme from Energy Futures Group representing Green Energy Coalition, Vince DeRose from Borden Ladner Gervais representing CME (Canadian Manufacturers and Exporters and Judy Simon from Elenchus representing Low Income Energy Network, Judith Ramsay, Enbridge Gas Distribution.

2012 Union Gas AC members are: Julie Girvan representing the Consumers’ Council of Canada, Kai Millyard from Green Communities representing the Green Energy Coalition, and Jay Shepherd from Jay Shepherd Professional Corporation representing the School Energy Coalition.

The goal of the AC is to ensure that there is, each year, an effective and thorough audit of the utility’s DSM results.

As described in the Audit Committee Terms of Reference:

- “The AC will establish, as part of the 2012 audit, the standard scope of the annual audit for the term 2012 to 2014 (“goals” versus “tasks”).
- The standard scope will be used for the 2012 to 2014 term as part of the RFP and the AC may alter the scope annually based on consensus. The AC will provide the auditor with input and guidance (such as scope of work, review work plan/draft report and provide advice and direction).
- The AC will make recommendations based on the Audit Report regarding the utility’s claims regarding DSM results and DSMVA, LRAM, utility incentives and any target adjustments through the AC Report submitted to the Board.”¹¹

The AC will also help to ensure that the process enables the Company to file the Final Auditor’s Report and recommended DSMVA, LRAM and SSM claims by June 30th as required by the Board’s Directive and in keeping with the Guidelines

As stated in the Audit Committee Terms of Reference: “The utility will administer the audit contract and hold the accountable to the terms of the contract.”¹²

The start-up meeting with the Auditor will be held with all members of the AC to ensure a consistent understanding among all parties of the scope and expectations of the independent audit. Additional meetings between all Committee members and the Auditor will be arranged for group discussion and progress reporting. Meetings will be held at Company offices or through conference calls as appropriate.

¹¹ Joint Terms of Reference on Stakeholder Engagement for DSM Activities by Enbridge Gas Distribution Inc. and Union Gas Limited, November 4, 2012, page 13 of 21.

¹² Ibid, page 15 of 21.

SCOPE AND REQUIREMENTS

As stated in the Joint Terms of reference on Stakeholder Engagement for DSM Activities by Enbridge Gas Distribution and Union Gas Limited:

“The Auditors shall, at a minimum:

- provide an audit opinion on the DSMVA, LRAM and utility performance incentive amounts proposed by the natural gas utility and any amendment thereto;
- confirm any target adjustments have been correctly calculated and applied;
- identify any input assumptions that either warrant further research or that should be updated with new best available information;
- review the reasonableness of any verification work that has been undertaken to inform utility results; and
- recommend any forward-looking evaluation work to be considered.”¹³

The Auditor selected for this task will be expected to exercise his/her expert judgment to determine the elements of the audit, and to set the approach and process that will be followed in the audit in order to meet the regulatory requirements as stated above.

The deliverable will be written reports outlining the principles of the audit, the methodology followed, and the findings and recommendations of the audit, including an opinion in the form set forth above.

The following list of audit activities is suggested. It represents the minimum set of tasks the auditor will be expected to carry out. The Auditor is encouraged to propose other tasks that it believes would be helpful in reaching the ultimate goal of assessing the accuracy of Enbridge’s/Union’s DSMVA, LRAM, and SSM calculations.

Audit Activities

- Consider and respond to stakeholder comments on Enbridge’s/Union’s Annual DSM Report for 2012, including those of the Audit Committee (AC).
- Review Enbridge’s/Union’s 2012 procedures for tracking program participants and determine whether they lead to accurate counts, particularly for programs that do not provide customer rebates.
- Determine whether Enbridge’s/Union’s reported values for participation, measure lives and gas savings are appropriate for calculation of LRAM and SSM. This shall include assessing: (1) whether values are adequately documented by program records, evaluation studies and other relevant data; (2) where applicable, whether assumptions regarding measure lives and gas savings are in line with Board/TEC (Technical Audit Committee) approved values for calculation of the SSM; and (3) the reasonableness of measure

¹³ Ibid, page 17 of 21.

lives and savings for the calculation of LRAM and SSM.

- Review measures that are considered advancements rather than replacements to ensure measure lives and gas savings are treated appropriately. As part of such consideration of advancement measures the auditor shall assess both whether gas savings and measures lives are estimated in line with models developed in the last 2 years and whether such models are reasonable.
- Review and verify the accuracy of all calculations leading up to the proposed DSMVA, LRAM, and SSM amounts and verify that the calculations are consistent with the Board-approved prescribed methodology.
- Verify that the methodology and assumptions used to calculate the “actual” LRAM volume savings are consistent with the methodology and assumptions used to calculate the LRAM budget volume savings and identify and quantify any inconsistencies.
- Verify the calculation of the Market Transformation incentive. As part of such efforts, the auditor should provide an opinion on the accuracy of EGD’s /Union’s reporting of performance against program metrics and the reasonableness of EGD’s/Union’s interpretation of program metric results. The auditor shall also provide an opinion as to the usefulness of Enbridge’s market transformation metrics as indicators of success in market transformation and, where applicable, propose alternatives that may be better indicators to use in the future.
- In accordance with OEB direction, Enbridge/Union, in consultation with their respective Audit Committees have retained independent third party engineering consultants to undertake a detailed review of the savings estimates for Industrial and Commercial custom projects. To ensure that the auditor may rely on the reports of the third party engineering firms in giving the auditor’s opinion on the reasonableness of the utility’s claims re: DSMVA, LRAM and SSM, the Audit Committees have made provision for the auditor to work with the selected firm to ensure reliance on the draft and final reports by discussing individual projects, any findings and adjustment factors recommended throughout the firm’s review. The auditor will also give their opinion as to the quality of their review and the consultant’s adherence to the terms of reference and the reliability and reasonableness of the error ratio (and/or realization rate) when applied to a larger population of custom projects..
- The auditor will also review other studies conducted in support of the DSM Annual Report.
- Identify any assumptions underlying Enbridge’s/Union’s DSM program design that should be modified prospectively, based on the auditor’s experience, the results of the audit, and knowledge of other studies or data.
- Identify future evaluation work opportunities to enhance the assumptions used to calculate the SSM and LRAM.
- Work with the AC and Enbridge/Union to resolve any relevant issues prior to completion of the audit.

- Any other matters considered by the auditor to be relevant to an assessment of Enbridge's DSMVA, LRAM and SSM claims.

Audit Resources

To assist the Auditor in conducting the audit, all relevant Company documentation will be made available to the Auditor for review. The Company is committed to providing the necessary data and tools the Auditor deems reasonably necessary in order to meet the ultimate goal of the audit. The list below provides examples of the resources that can be made available to the Auditor, but the list should not be considered as necessarily complete or exhaustive:

- Access to the Company's program tracking system and documentation of program participants;
- Access to the Company's cost-effectiveness screening spreadsheet tool;
- Access to all regulatory decisions and agreements which outline the requirements for DSM evaluation and the independent audit;
- Access to all regulatory decisions and guidelines that outline the DSMVA, LRAM and SSM calculations and procedures;
- Access to comments provided by DSM Consultative members on the 2012 DSM Annual Report;
- Access to all relevant evaluation and market research conducted by the Company relating to or informing the results for 2012 including a third party engineering review of a sample of custom projects in business markets, and including any research carried out after 2012, whether final or in draft form;
- Access to all previous audit reports;
- Enbridge's/Union's DSM and Program Evaluation department staff time; and
- Communication as required by the Auditor with the AC.

SCHEDULE

Following the Board Directive of December 2004, the independent audit of DSM results is to be completed and a recommendation filed with the Board by the last day of the sixth month after the financial year end.

Due to the importance to meet these Board imposed deadlines, the Auditor will be contractually bound to meet the deadlines outlined in their proposal. If due to the Auditor's negligence, the Auditor has not provided Enbridge with the deliverables, Enbridge may, in its sole discretion and after consulting with the EAC, deduct 10% of the amount payable to the Auditor for each week beyond the deliverable dates specified herein that the Auditor has not provided Enbridge with the deliverables. The schedule below meets this requirement.

Audit Schedule	
Activity	Due
RFP Dissemination	December 3, 2012
Questions of Clarification	December 7, 2012
Proposals Due	December 17, 2012 – 4:00 PM E.S.T.
Contract Awarded	January 7, 2013
Auditor Work Plan	Week of January 21, 2013
Launch Meeting	Week of January 21, 2013
Wave 1 CPSV Draft Reports	Week of January 7, 2013
Wave 2 CPSV Draft Reports	Week of March 18, 2013
CPSV Final Reports	Week of April 1, 2013
DSM Annual Report sent to Auditor	April 12, 2013
AC & Consultative Comments on Annual Report	April 24, 2013
Draft Audit Report	On or before June 7, 2013
Response from AC	On or before June 14, 2013
Final Draft Audit Report	On or before June 19, 2013
Final Audit Report	On or before June 24, 2013

CRITERIA

Proposals will be evaluated on the following criteria:

- Experience and qualifications of the firm: direct experience in evaluation or audit of utility DSM programs,
- Methodology proposed,
- Demonstrated understanding of Enbridge / Union rules and requirements,
- Proposed schedule and ability to meet timelines, and
- Price proposal.

PROPOSAL REQUIREMENTS

Please disclose any potential conflicts of interest.

The proposal should include the following elements:

- A description of the methodology and approach to be used in the audit,
- A list of proposed tasks,
- Suitable information for Enbridge/Union to determine the qualifications of individuals and their roles in the project,

- Confirmation that the proponent will be able to meet the Enbridge/Union contractor insurance and WSIB requirements as described in the attachment, and
- Confirmation of ability to meet timelines or specific reasons why a deviation from the schedule is required.

The cost proposal should include:

- Breakout of costs by task and roles,
- Assumptions regarding the number of meetings at the Enbridge/Union offices and the associated costs, and
- Hourly rates for additional related work such as appearing as an expert witness at the OEB.

Proposals are due no later than 4:00 pm on December 17, 2012. Proposals may be submitted in hard copy or via email.

Questions of clarification should be directed to Rodney Idenouye at the coordinates indicated below. Responses to questions of clarification will be circulated to all respondents.

All correspondence should be sent to the attention of:

Rodney Idenouye, DSM Research and Evaluation
Phone: 416-495-6603 Email: rodney.idenouye@enbridge.com

Enbridge contract requirements regarding Insurance and WSIB

Insurance

Save and except where Enbridge specifies otherwise in writing, the Consultant shall at its own expense maintain and keep in full force and effect during the Term hereof and for a period of two (2) years following the expiry of the Term or other termination of this Agreement:

- (a) worker's compensation insurance as required under applicable laws;
- (b) commercial general liability insurance having a minimum inclusive coverage limit, including personal injury and property damage, of at least Two Million Dollars (\$2,000,000). Enbridge must be added as an additional named insured in the insurance policy, which should be extended to cover contractual liability, products/completed operations liability, owners'/ contractors' protective liability and must also contain a cross liability clause;

- (c) automobile liability insurance on all vehicles used in connection with this Agreement and such insurance shall have a limit of at least Two Million Dollars (\$2,000,000) in respect of bodily injury (including passenger hazard) and property damage inclusive of any one accident;
- (d) non-owned automobile liability insurance and such insurance shall have a limit of at least Two Million Dollars (\$2,000,000) in respect of bodily injury (including passenger hazard) and property damage, inclusive in any one accident;
- (e) professional liability or errors and omissions insurance and such insurance shall have a limit of at least Two Million Dollars (\$2,000,000); and
- (f) such other insurance as Enbridge may in its discretion determine to be necessary.

WSIB

The Consultant agrees to comply with the Occupational Health and Safety Act (Ontario) and the Workplace Safety and Insurance Act (Ontario) and with all other prevailing federal, provincial and municipal laws and regulations or any other laws or regulations in force in any jurisdiction where the consulting services are performed (the "Laws") and which are applicable to the Consultant, its subcontractors and the consulting services provided hereunder, and the Consultant shall familiarize itself and procure all required permits and licenses and pay all charges and fees necessary or incidental to the due and lawful prosecution of this Agreement and shall indemnify and save harmless Enbridge, its directors, officers, agents and employees thereof against any claim or liability from or based on the violation of any Laws, whether by the Consultant, its officers, employees, subcontractors, representatives or agents

APPENDIX B
Audit Final Work Plan

Independent Audit of
Enbridge Gas Distribution
2012 DSM Program Results
Final Work Plan



energy & resource
solutions

120 Water Street, Suite 350
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January 29, 2013

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INTRODUCTION AND OBJECTIVES

Enbridge Gas Distribution (Enbridge) operates a series of demand side management (DSM) programs to encourage customers to use less natural gas and, in some cases, less electricity and water. The company receives a combination of direct cost recovery and performance-based payments associated with program delivery. The Ontario Energy Board (OEB) and the consultative group's Audit Committee (AC) require independent third-party review of Enbridge's annual report and supporting calculations to ensure that savings claims and performance-based payment calculations are correct.

The primary objective of this audit is to review the Enbridge Gas Distribution calculations for Cumulative Cubic Meters (CCM) savings, the Demand Site Management Incentive Deferral Account (DSMIDA), the Lost Revenue Adjustment Mechanism Variance Account (LRAMVA), and the Demand Side Management Variance Account (DSMVA) for the calendar year ended December 31, 2012, and to express an independent opinion on these amounts. Enbridge has contracted with Energy & Resource Solutions (ERS) to be the auditor. If the Enbridge-reported amounts differ from what ERS believes to be correct, ERS will present alternative values. As noted in the OEB DSM Framework, the auditor has a secondary role to recommend any forward-looking evaluation work for consideration.

This audit will be conducted in accordance with the rules and principles set down by the Ontario Energy Board in its Decision with Reasons dated June 30, 2011, in EB-2008-0346 and as described in the *Joint Terms of Reference on Stakeholder Engagement for DSM Activities*, by Enbridge Gas Distribution, Inc., and Union Gas Limited, November 4, 2011, as filed with the Enbridge DSM Plan, Exhibit B Tab 2 Schedule 9, 2011-11-04, EB-2011-0295.

ERS will perform the audit according to the tasks described in this work plan.

TASK 1: PLANNING AND MEETINGS

ERS will gather information during Task 1.4 – Launch Meeting and will continue to assemble documentation throughout the first month of the audit as part of Task 2. ERS already has received the following material:

- Year-end custom commercial and industrial program reports
 - 2012 Custom Commercial Verification Wave I Draft Report
 - 2012 Custom Commercial Verification Wave II Report and Final Report (Final Report includes Wave 1 and Wave 2)
 - 2012 Custom Industrial Verification Wave I Draft Report
 - 2012 Custom Industrial Verification Wave II Report and Final Report(Final Report includes Wave 1 and Wave 2)
 - 2012 Custom Commercial and Industrial sample project files
 - 2012 sampling workbooks completed to select projects for the Wave I and Wave II custom verification reviews

- 2012 sampling methodology guidance documents
- 2012 Year-end residential program reports and information
 - 2012 TAPS program verification study
 - 2012 ESK program verification study
 - 2012 Low Income Weatherization Program. Project level reconciliation spreadsheet.
 - 2012 Community Energy Retrofit Program narrative
- 2012 Low-Income Year-End Program
 - 2012 Multi-Residential Low Income Showerhead program verification study
 - Spreadsheet calculations and supporting documentation to substantiate the per unit savings values
- 2012 Market Transformation Programs
 - 2012 Commercial Savings by Design, all commitment forms, Charette agenda, and Charette Summary Reports
 - 2012 Residential Savings by Design, all commitment forms, Charette agenda, and Charette Summary Reports
 - 2012 Residential Home Labeling Program, a sample of realtor commitment
 - 2012 Drain Water Heat Recovery Program, a sample of participant enrollment and tracking paperwork
 - A narrative detailing the participant review and approval process for Market Transformation programs
- CCM documents, records, screening tools, and calculations
 - 2012 CCM Results DSMIDA Workbook(s)
 - 2012 CCM plan
 - LRAMVA calculations workbook
- Enbridge's DSM Annual Report for 2012, including comments of the AC and other stakeholders
- OEB orders and approved technical reference manuals and Enbridge-filed plans
 - OEB 2008-0346: Demand Side Management Guidelines for Natural Gas Utilities
 - OEB Decision Framework
 - EGDI DSM Plan for 2012–2014
 - EGDI Low-Income DSM Plan
 - EGDI Updated DSM Measures List (savings basis)

Task 1.1 is primarily a survey and data collection exercise. ERS will review the orders and plans for policy purposes. An in-depth review of the 2012 program and research reports is part of Task 2.

Weekly Meetings

ERS will attend, via teleconference, weekly or bi-weekly meetings to discuss progress and issues and to request additional information as necessary. This will also allow ERS a forum to share preliminary findings early in the audit cycle. This will give the AC, Enbridge, and the program administrators the opportunity to provide more data, clarify issues, or correct auditor perceptions, which will in general result in the most accurate and useful recommendations at project end.

ERS will recommend agenda items as they pertain to the audit and will issue meeting notes or action items following each meeting.

Work Plan

ERS will prepare draft and final work plans to guide efforts during the project. The work plan will be based primarily on three sources: (1) the proposal, (2) last year's work plan, and (3) information collected during the first 2 weeks of meetings and file receipt.

Launch Meeting

ERS and Enbridge held a launch meeting at Enbridge's office January 23–24, 2013. During the meeting, ERS met with Enbridge staff and the custom commercial and industrial evaluation firms, and had a conference call with the AC. The purpose of these meetings was to review information and materials collected to date, solicit additional input, identify key issues, review internal Enbridge processes, provide feedback on the Wave I commercial and industrial custom program savings verification (CPSV) reports, and discuss any uncertainties that may affect the audit. Following the launch meeting, ERS prepared and issued a request for documentation and action items from the commercial and industrial CPSV meetings.

TASK 2: RESEARCH

In Task 2, ERS will conduct the majority of research and analysis associated with this year's audit effort. The research and analysis will include the review of tracking systems, annual reports and verification studies, DSM Shareholder Incentive data and calculations, and CPSV evaluation efforts.

Consider Stakeholder Comments to Annual Report

ERS will review and respond to stakeholder comments on Enbridge Gas Distribution's Annual DSM Report for 2012, including those of the AC. Work associated with this task is likely to be concentrated in the second half of the audit period, as the annual report will be issued in the spring, and then comments will follow, and auditor consideration must then follow that. The deliverable associated with this activity will be a memorandum.

Review Tracking Systems

ERS reviewed Enbridge's key program-specific tracking systems in person with Enbridge managers in conjunction with the launch meeting. We will review tracking procedures to determine if the DARTS results that are the basis of the scorecards are being properly entered into Enbridge's management information systems, the CCM, and the DSMIDA calculation workbook. ERS will audit the flow of information through the system. ERS will modify the flowchart created for last year's audit report, which illustrates the process.

ERS will test the aggregating system to determine whether the stored data is accurate. Our data system review will include the following activities on a significant sample of project records:

- Validation of data inputs
- Verification of storage and back-up protocols
- Review of quality assurance and quality control protocols
- Review of exception-handling mechanisms
- Review of user documentation

Audit of DARTS is not in the scope.

Determine Verity of Inputs for LRAM and DSM Shareholder Incentive Calculations

Enbridge's CCM workbook review will provide the information necessary to audit the annual report savings and the DSMVA calculation. Enbridge performs LRAM and DSMVA incentive calculations separately. ERS will audit both sets of calculations to determine if Enbridge:

- Adequately documents values
- Uses assumptions regarding savings and life in line with board/Technical Evaluation Committee (TEC) approved values
- Uses reasonable and correct savings calculations for the LRAM and DSM Shareholder Incentive

ERS generally will audit for compliance with TEC-adopted prescriptive savings assumptions unless exceptional material problems require adjustments to give an opinion.

Review Advancement Measures

In this task ERS will review measures that are considered advancements rather than replacements to ensure that measure lives and gas savings are treated appropriately. As part of such consideration of advancement measures the Auditor shall assess whether gas savings and measures' lives are estimated in line with models developed in the last 2 years and whether such models are reasonable.

Review DSMVA, LRAM, and DSMIDA Calculations

ERS shall review and verify that all calculations associated with the DSMVA, LRAM, and DSM Shareholder Incentive amounts are consistent with the board-approved prescribed methodology.

Review and Provide an Opinion on Custom Project Quality and Adherence to Terms of Reference

We will perform comprehensive reviews of independent third-party engineering savings estimates of industrial and commercial customer projects and provide documented findings regarding quality and accuracy.

The earlier start to the 2013 audit of 2012 performance will enable ERS to work with the third-party engineering firms and discuss individual projects with them concurrently rather than just audit them ex post. The review will include consideration of the verification firms' aggregate findings and adjustment factors and the draft and final reports. In addition to working directly with the engineering firm(s), our overall conclusions regarding the reliability of the reported project performances will be built upon the following:

File review – Our team will perform a thorough review of the project files and third-party reviews for the custom projects. For this review we will utilize a checklist, allowing us to systematically determine whether key project elements have been reported and are well documented. Any data, assumptions, or calculations considered less than reliable will be recorded for follow-up.

Advancement/replacement and other baseline characterization – For this audit, we will rely on our collective experience to validate Enbridge's claimed custom project savings. Following this review, our staff will be in a position to discern whether tracked custom project savings were either over- or under-stated. Should we discover any deviations from OEB-approved or industry-accepted methodologies, we will recommend appropriate revisions and recalculate the DSMIDA based on adjusted CCM metric values. Also, we will make any relevant recommendation to Enbridge's processes so that future DSMIDA adjustments will be unnecessary. We will also provide assistance for future evaluations by recommending methodologies that can improve the net benefits of custom projects.

Reported data revision – Our experience with project review informs us that there will be times when a common understanding of project performance will not be met. When this occurs, we will include a recommendation for revised project assumptions or calculations, comparing this with what were originally reported, and we will provide reasons for the recommended changes.

Other document review – All other relevant information related to industrial and commercial custom projects that have been completed in support of the Enbridge DSM Annual Report will be reviewed and utilized in making final recommendations.

At the conclusion of our custom projects examination, our team will report findings, issue opinions, and make recommendations regarding Enbridge's custom program initiatives.

Review Verification Studies

ERS will review the verification studies that are associated with the DSM Annual Report. This review will verify that the conclusions of the verification studies are sound and that the results have been properly incorporated into the calculation of the DSM Shareholder Incentive.

TASK 3: FINDINGS AND REPORTING

In Task 3, ERS will identify the findings of the audit effort and prepare the final report for distribution to Enbridge and the AC.

Identify DSM Program Design Assumptions to Modify Prospectively

ERS will identify any assumptions underlying Enbridge's DSM program design that should be modified prospectively, based on the auditor's experience, the results of the audit, and knowledge of other studies or data.

Identify Future Evaluation Research Opportunities

ERS will identify future evaluation research opportunities to enhance the assumptions used to calculate the DSMIDA and LRAM.

Provide Opinion on Usefulness of Market Transformation Metrics as Indicators of Success

ERS will provide an opinion as to the usefulness of Enbridge's market transformation (MT) metrics as indicators of success in market transformation and, where applicable, propose alternatives that may be better indicators to use in the future.

Resolve Issues Prior to Audit Completion

Through the weekly meetings and regular updates, ERS will work with AC members to resolve any relevant issues prior to audit completion.

Identify other Matters Relevant to Assessment Claims

As stated in the RFP, ERS will identify any other matters considered to be relevant to an assessment of Enbridge's DSMVA, LRAM, and DSMIDA.

Final Report

Upon completion of the above tasks, ERS will be able either to render the independent opinion that the CCM, DSMIDA, LRAMVA, and DSMVA calculations and results are correct and reasonable as submitted in Enbridge's annual report, or to provide independently developed alternative calculations of the same. The final report will include the following statements:

We have audited the Annual Report, Cumulative Cubic Meters (CCM) savings, DSM Incentive Deferral Account (DSMIDA), Lost Revenue Adjustment Mechanism Variance Account (LRAMVA), and Demand Side Management Variance Account (DSMVA) of Enbridge Gas Distribution for the calendar year ended December 31, 2012. The Annual Report and the calculations of CCM, DSMIDA, LRAMVA, and DSMVA are the responsibility of the company's management. Our responsibility is to express an opinion on these amounts based on our audit.

We conducted our audit in accordance with the rules and principles set down by the Ontario Energy Board in its Decision with Reasons dated June 30, 2011, in EB-2008-0346. Details of the steps taken in this audit process are set forth in the Audit Report that follows, and this opinion is subject to the details and explanations therein described.

In our opinion, and subject to the qualifications set forth above, the following figures are calculated correctly using reasonable assumptions, based on data that has been gathered and recorded using reasonable methods and is accurate in all material respects, and following the rules and principles set down by the Ontario Energy Board that are applicable to the 2012 DSM programs of Enbridge Gas Distribution:

- CCM Savings - \$xxx,xxx,xxx
- DSMIDA Amount Recoverable - \$x,xxx,xxx
- LRAMVA Amount Recoverable - \$x,xxx,xxx
- DSMVA Amount Recoverable - \$xxx,xxx

In the course of conducting the activities necessary to make the audit statement, reviewers are likely to find opportunities for Enbridge to change procedures or calculations to improve the program estimation of savings, and possibly to enhance program delivery. The final report will include a list of such recommendations.

Draft reports of our findings, opinions, and recommendations will be circulated to stakeholders for consideration and comment on June 7, 2013. Subsequent to review meetings and the issuance of a second draft, ERS will issue a final report by June 24, 2013, incorporating the input of the AC.

SCHEDULE

Key tasks and proposed completion dates are provided in Table 1-1.

Table 1-1. Key Task Schedule

Tasks	Jan	Feb	March	April	May	June
Notice of Contract Award	1/7					
Wave 1 CPSV draft reports	w/o 1/7					
Launch meeting	w/o 1/21					
Auditor work plan, draft		w/o 2/4				
Receipt of requested supporting documentation		w/o 2/11				
Wave 2 CPSV draft reports			w/o 3/18			
CPSV final reports				w/o 4/1		
DSM annual report sent to auditor				4/12		
AC & consultative comments on annual report				4/24		
Memorandum on comments to annual report*					5/10	
Complete information system tests*					5/20	
Early review of findings, opinions, recommendations*					5/22	
Draft audit report #1						6/7
Response from AC						6/14
Review meeting w/ AC						6/17
Draft audit report #2						6/19
Review meeting w/ AC						6/21
Final report submitted						6/24