

2018 Demand Side Management Annual Report - EGD Rate Zone

—
Enbridge Gas Inc.
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Executive Summary

Enbridge Gas Inc. (“Enbridge Gas” or “the Company”) reports 807 million lifetime cubic meters of natural gas saved from its DSM activities in 2018 within the EGD rate zone.¹ These savings are a direct result of the Company’s ongoing efforts delivering resource acquisition programs to residential, commercial, and industrial customers. Results attributable to market transformation programs are not included in this total, as results for these programs are not measured by cubic meters of natural gas saved.

A summary of the Company’s 2018 DSM results, budgets, and spend for the EGD rate zone is provided in Table ES.1 below.

Table ES.1 2018 DSM Results, Budgets, and Spend Summary

ITEM	EGD RATE ZONE
Net Cumulative Natural Gas Savings	807,474,357 m ³
Budget	\$67,554,087
Actual Spend	\$66,154,466
Shareholder Incentive Achievement	\$3,982,872
LRAMVA amount payable to Ratepayers	-\$15,107

¹ Union rate zones results are provided in a separate report.



1. Introduction

Enbridge Gas has been designing and delivering DSM programs within OEB frameworks for nearly 25 years. Between 1995 and 2018, Enbridge Gas has saved its customers 27.6 billion lifetime cubic meters of natural gas and 51.7 million tonnes of greenhouse gas emissions, the equivalent of taking 11.2 million cars off the road for a year.²

As outlined in the OEB's Demand Side Management Framework for Natural Gas Distributors (2015-2020) (EB-2014-0134) ("DSM Framework"), the Board indicated it "is of the view that it is in the best position to coordinate the evaluation process throughout the DSM framework period"³. As such, the 2018 audit and evaluation process was completed concurrently with the 2017 audit and evaluation process, to leverage time and resource efficiencies. Due to the simultaneous nature of the 2017 and 2018 audits, the development of the Company's 2018 draft annual reports was not appropriate, as the previous year's evaluation and audit process had not concluded. Without the conclusion of the 2017 evaluation and audit process, certain 2018 results could not be reported even in pre-audit/draft format, as 2018 targets rely on final 2017 results.

With the conclusion of the 2017 and 2018 evaluation and audit processes on March 13, 2020, the Company developed final 2018 annual reports for the EGD rate zone and the Union rate zones, separately. While the 2018 reports are more concise than the Company's typical annual reports, they include all elements required by the OEB's DSM Guidelines.

This 2018 Annual Report provides a summary of Enbridge Gas' DSM results for the EGD rate zone during the 2018 program year, in the following format:

- OEB data reporting requirements (Section 2);
- Highlights of any major offering changes and lessons learned from the 2018 program year, and future changes for 2019 (Section 3);
- Results, including scorecard results, shareholder incentive achievement, lost distribution revenue calculations, cost-effectiveness results, budgets and spending (Section 4).

² Figures include results from the EGD rate zone and the Union rate zones.

³ DSM Framework, p. 30



2. OEB Data Reporting Requirements

Table 2.0 Annual and Long-Term DSM Budgets

OEB APPROVED ANNUAL AND LONG-TERM BUDGETS							
	2015	2016	2017	2018	2019	2020	TOTAL
Resource Acquisition (RA)							
Residential	\$1,872,720	\$13,024,688	\$16,705,000	\$20,175,000	\$20,578,500	\$20,990,070	\$93,345,978
Commercial / Industrial	\$12,571,070	\$16,278,937	\$17,679,381	\$17,737,977	\$16,355,713	\$16,685,480	\$97,308,558
RA Program Costs	\$14,443,790	\$29,303,625	\$34,384,381	\$37,912,977	\$36,934,213	\$37,675,550	\$190,654,536
RA Overheads	\$4,731,485	\$5,033,048	\$5,104,327	\$5,249,479	\$5,122,057	\$5,232,967	\$30,473,363
Total RA	\$19,175,275	\$34,336,673	\$39,488,708	\$43,162,456	\$42,056,270	\$42,908,517	\$221,127,899
Low Income (LI)							
LI Program Costs	\$6,864,090	\$10,201,788	\$10,908,121	\$11,690,496	\$11,923,306	\$12,160,772	\$63,748,573
LI Overheads	\$517,988	\$1,743,622	\$1,619,299	\$1,618,681	\$1,653,531	\$1,689,078	\$8,842,199
Total LI	\$7,382,078	\$11,945,410	\$12,527,420	\$13,309,177	\$13,576,837	\$13,849,850	\$72,590,772
Market Transformation & Energy Management (MT)							
MT Program Costs	\$4,890,900	\$5,614,683	\$5,849,381	\$6,045,400	\$6,174,079	\$6,305,335	\$34,879,778
MT Overheads	\$1,353,687	\$964,351	\$868,335	\$837,054	\$856,225	\$875,783	\$5,755,435
Total MT	\$6,244,587	\$6,579,034	\$6,717,716	\$6,882,454	\$7,030,304	\$7,181,118	\$40,635,213
Total Program Costs (without overheads)	\$26,198,780	\$45,120,096	\$51,141,883	\$55,648,873	\$55,031,598	\$56,141,657	\$289,282,887
Total Program Overheads	\$6,603,160	\$7,741,021	\$7,591,961	\$7,705,214	\$7,631,813	\$7,797,828	\$45,070,997
Total Program Costs (with overheads)	\$32,801,940	\$52,861,117	\$58,733,844	\$63,354,087	\$62,663,411	\$63,939,485	\$334,353,884
Portfolio Overheads							
EM&V	n/a	\$1,500,000	\$1,700,000	\$1,700,000	\$1,736,746	\$1,774,228	\$8,410,974
Collaboration & Innovation ^{1 2}	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,021,616	\$1,043,663	\$6,065,279
DSM IT ³	n/a	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$5,000,000
Energy Literacy	n/a	\$0	\$500,000	\$500,000	\$0	\$0	\$1,000,000
Total Portfolio Overheads ^{1 2 3}	n/a	\$3,500,000	\$4,200,000	\$4,200,000	\$3,758,362	\$3,817,891	\$19,476,253
2015 Incremental Budget ^{1 2}	\$4,920,291	n/a	n/a	n/a	n/a	n/a	n/a
Total Portfolio Budget	\$37,722,231	\$56,361,117	\$62,933,844	\$67,554,087	\$66,421,773	\$67,757,376	\$358,750,428

¹In 2015, the Collaboration & Innovation amount of \$1M was included in the incremental budget of \$4.92M.

²Total Collaboration & Innovation budget as approved by the Board is \$6M for 2015-2020.

³Total DSMIT budget as approved by the Board is \$5M for 2015-2020 with \$1M accrued per year between 2016-2020.



Table 2.1 Actual Annual Total DSM Costs*

RATE CLASS	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 ^{1,2}	2018 ^{2,3}
RATE 1	\$11,894,135	\$12,545,981	\$14,794,795	\$12,467,796	\$14,214,627	\$17,935,484	\$13,881,901	\$23,507,037	\$26,855,974	\$42,390,914	\$44,578,671	\$50,047,814
RATE 6	\$2,848,384	\$7,519,262	\$7,486,577	\$10,713,308	\$15,103,141	\$17,127,050	\$15,172,590	\$13,901,251	\$15,646,361	\$17,001,090	\$17,610,239	\$17,616,144
RATE 9	\$0	\$0	\$0	\$0	\$0	\$1,425	\$1,420	\$1,712	\$1,839	\$2,030	\$2,306	\$2,943
RATE 100	\$8,949,764	\$3,201,527	\$2,667,170	\$86,297	\$17,677	\$0	\$0	\$0	\$0	\$0	\$0	\$0
RATE 110	\$3,658,449	\$1,041,758	\$1,943,819	\$1,470,858	\$1,048,222	\$783,904	\$937,258	\$1,189,687	\$1,899,864	\$1,250,531	\$1,474,088	\$917,995
RATE 115	\$643,144	\$1,716,735	\$1,314,146	\$545,382	\$602,386	\$1,329,072	\$1,420,390	\$567,271	\$657,559	\$532,093	\$592,505	\$273,754
RATE 125	\$0	\$0	\$0	\$0	\$0	\$53,449	\$53,268	\$64,223	\$68,967	\$76,131	\$86,462	\$110,358
RATE 135	\$1,762	\$79,757	\$11,685	\$59,163	\$121,756	\$441,318	\$320,401	\$123,739	\$58,863	\$85,564	\$387,197	\$406,859
RATE 145	\$855,487	\$901,590	\$676,730	\$729,534	\$655,237	\$495,925	\$369,074	\$253,864	\$152,227	\$84,478	\$90,532	\$550,941
RATE 170	\$294,508	\$1,860,562	\$1,843,628	\$2,040,735	\$2,195,089	\$536,445	\$149,399	\$457,841	\$403,107	\$574,392	\$177,446	\$175,961
RATE 200	\$0	\$0	\$0	\$0	\$0	\$18,529	\$18,466	\$22,264	\$23,909	\$26,392	\$29,973	\$38,257
RATE 300	\$0	\$0	\$0	\$0	\$0	\$3,563	\$3,551	\$4,281	\$4,598	\$5,075	\$5,764	\$7,357
TOTAL	\$29,145,632	\$28,867,172	\$30,738,550	\$28,113,075	\$33,958,134	\$38,726,165	\$32,327,718	\$40,093,170	\$45,773,267	\$62,028,692	\$65,035,183	\$70,148,384

* Values include spend, shareholder incentive amounts and LRAM

¹2017 values are subject to Board approval.

²2017 & 2018 DSM Spending includes accrued incentive amounts.

³2018 values are subject to Board approval.

Table 2.2 Historic Annual Total DSM Spending (\$ million)

	2007	2008	2009	2010	2011	2012	2013	2014	2015 ²	2016	2017 ³	2018 ³
Total DSM Spending ¹	\$21.20	\$23.03	\$25.42	\$24.00	\$27.24	\$30.61	\$27.84	\$32.51	\$35.78	\$55.65	\$62.91	\$66.15

¹Total DSM Spending includes variable costs, fixed costs and DSMVA where applicable

²2015 DSM Spending includes incremental spending of \$559,378

³2017 & 2018 DSM Spending includes accrued incentive amounts



Table 2.3 DSM Spending as a Percent of Distribution Revenue

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total DSM Spending (\$ million) ¹	\$21.2	\$23.0	\$25.4	\$24.0	\$27.2	\$30.6	\$27.8	\$32.5	\$35.8	\$55.6	\$62.9	\$66.2
Total Distribution Revenue (\$ million) ^{2,3,4}	\$980.9	\$995.9	\$1,012.1	\$960.4	\$978.8	\$972.0	\$1,055.0	\$1,044.0	\$1,055.4	\$1,115.6	\$1,128.3	\$1,231.6
DSM Spending as % of Distribution Revenue	2.2%	2.3%	2.5%	2.5%	2.8%	3.1%	2.6%	3.1%	3.4%	5.0%	5.6%	5.4%

¹Total DSM Spending includes variable costs, fixed costs and DSMVA where applicable

²Distribution Revenue includes gas sales and transportation of gas less gas commodity cost

³Distribution Revenue excludes transmission, compression, and storage

⁴Distribution Revenue is based on data unnormalized for weather

Table 2.4 Historic Annual DSM Shareholder Incentive Amounts Available and Earned (\$ million)

	2007	2008	2009	2010	2011	2012 ¹	2013	2014	2015	2016	2017 ²	2018 ³
Total Shareholder Incentive Earned	\$8.25	\$5.80	\$5.36	\$4.16	\$6.77	\$8.16	\$4.54	\$7.65	\$10.08	\$6.37	\$2.12	\$3.98
Maximum Shareholder Incentive Available	\$9.00	\$9.22	\$9.24	\$9.40	\$10.16	\$10.45	\$10.66	\$10.87	\$11.09	\$10.45	\$10.45	\$10.45

¹2012 Shareholder Incentive includes reduction of -\$657,223 per Board's decision (EB-2013-0352)

²2017 Shareholder Incentive subject to Board approval

³2018 Shareholder Incentive subject to Board approval

Table 2.5 DSM Shareholder Incentive Earned as a Percent of DSM Spending

	2007	2008	2009	2010	2011	2012 ²	2013	2014	2015	2016	2017 ^{3,4}	2018 ⁵
Total Shareholder Incentive (\$ million)	\$8.25	\$5.80	\$5.36	\$4.16	\$6.77	\$8.16	\$4.54	\$7.65	\$10.08	\$6.37	\$2.12	\$3.98
Total DSM Spending (\$ million) ¹	\$21.20	\$23.03	\$25.42	\$24.00	\$27.24	\$30.61	\$27.84	\$32.51	\$35.78	\$55.65	\$62.91	\$66.15
Shareholder Incentive Earned as a % of DSM Spending	39%	25%	21%	17%	25%	27%	16%	24%	28%	11%	3%	6%

¹Total DSM Spending includes variable costs, fixed costs and DSMVA where applicable

²2012 Shareholder Incentive includes reduction of -\$657,223 per Board's decision (EB-2013-0352)

³2017 Shareholder Incentive subject to Board approval

⁴2017 & 2018 DSM Spending includes accrued incentive amounts

⁵2018 Shareholder Incentive subject to Board approval



Table 2.6 Annual and Long-Term Natural Gas Savings Targets (million m³)

SCORECARD	2015	2016	2017	2018	2019	2020
Resource Acquisition	1,011.9	631.1	806.5	805.5	Targets are formulaic based on past year's performance	
Low-Income	92.8	96.7	167.1	126.1		

Table 2.7 Total Annual and Cumulative Natural Gas Savings for 2018 (Gross and Net)

	2018 ANNUAL GAS SAVINGS ¹		2018 CUMULATIVE GAS SAVINGS ¹	
	GROSS	NET	GROSS	NET
Resource Acquisition	55,526,307	36,156,883	1,011,021,869	677,327,071
Low-Income	6,074,313	6,069,722	130,193,197	130,147,286
Total	61,600,620	42,226,605	1,141,215,066	807,474,357

¹2018 DSM results subject to Board approval



Table 2.8 Total Historic Annual Natural Gas Savings (Gross and Net) (million m³)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 ¹	2018 ²
Total <u>Net</u> Gas Savings	85.07	77.25	69.86	64.58	76.40	60.14	47.74	43.54	48.97	50.52	44.02	42.23
Total <u>Gross</u> Gas Savings	85.99	121.98	117.62	98.82	114.14	92.53	66.06	60.62	67.09	90.03	71.28	61.60

¹2017 DSM results subject to Board approval

²2018 DSM results subject to Board approval

Table 2.9 Total Historic Cumulative Natural Gas Savings (Gross and Net) (million m³)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 ¹	2018 ²
Total <u>Net</u> CCM	1,214.10	1,118.98	1,039.18	951.40	1,253.82	1,068.98	826.91	719.84	826.17	837.11	787.17	807.47
Total <u>Gross</u> CCM	1,233.54	1,809.65	1,801.77	1,455.74	1,811.35	1,593.05	1,148.12	993.62	1,114.13	1,479.09	1,215.44	1,141.22

¹2017 DSM results subject to Board approval

²2018 DSM results subject to Board approval

Table 2.10 Total Annual Natural Gas Savings as a Percent of Total Annual Natural Gas Sales (Gross and Net)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 ¹	2018 ²
<u>Net</u> Annual Gas Savings (million m ³)	85.1	77.3	69.9	64.6	76.4	60.1	47.7	43.5	49.0	50.5	44.0	42.2
<u>Net</u> Annual Gas Savings as % of Natural Gas Sales	0.7%	0.7%	0.6%	0.6%	0.7%	0.6%	0.4%	0.4%	0.4%	0.5%	0.4%	0.3%
<u>Gross</u> Annual Gas Savings (million m ³)	86.0	122.0	117.6	98.8	114.1	92.5	66.1	60.6	67.1	90.0	71.3	61.6
<u>Gross</u> Annual Gas Savings as % of Natural Gas Sales	0.7%	1.0%	1.1%	0.9%	1.0%	0.9%	0.6%	0.5%	0.6%	0.8%	0.6%	0.5%
Total Natural Gas Sales (million m ³) ³	11,862.9	11,686.5	11,114.9	10,742.3	11,303.2	10,304.4	11,338.3	12,434.3	11,728.3	10,736.2	11,172.6	12,361.6

¹2017 DSM results subject to Board approval

²2018 DSM results subject to Board approval

³Total Gas Sales include only rate classes that are eligible for DSM and subject to DSM costs



Table 2.11 Total Cumulative Natural Gas Savings as a Percent of Total Annual Gas Sales (Gross and Net)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 ¹	2018 ²
Net Cumulative Gas Savings (million m ³)	1,214.1	1,119.0	1,039.2	951.4	1,253.8	1,069.0	826.9	719.8	826.2	837.1	787.2	807.5
Net CCM Gas Savings as % of Natural Gas Sales	10.2%	9.6%	9.3%	8.9%	11.1%	10.4%	7.3%	5.8%	7.0%	7.8%	7.0%	6.5%
Gross Cumulative Gas Savings (million m ³)	1,233.5	1,809.7	1,801.8	1,455.7	1,811.3	1,593.0	1,148.1	993.6	1,114.1	1,479.1	1,215.4	1,141.2
Gross CCM Gas Savings as % of Natural Gas Sales	10.4%	15.5%	16.2%	13.6%	16.0%	15.5%	10.1%	8.0%	9.5%	13.8%	10.9%	9.2%
Total Natural Gas Sales (million m ³) ³	11,862.9	11,686.5	11,114.9	10,742.3	11,303.2	10,304.4	11,338.3	12,434.3	11,728.3	10,736.2	11,172.6	12,361.6

¹2017 DSM results subject to Board approval

²2018 DSM results subject to Board approval

³Total Gas Sales include only rate classes that are eligible for DSM and subject to DSM costs

Table 2.12 Actual Annual Gas Operating Revenue (\$ million)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total Operating Revenue ¹	\$3,095.0	\$3,233.8	\$2,952.3	\$2,394.1	\$2,393.6	\$2,240.9	\$2,613.4	\$2,861.3	\$2,892.1	\$2,588.7	\$2,788.1	\$2,863.5
Less Total Gas Cost ²	\$2,113.0	\$2,236.1	\$1,938.6	\$1,432.3	\$1,413.3	\$1,267.6	\$1,556.8	\$1,815.5	\$1,834.8	\$1,466.7	\$1,640.8	\$1,612.7
Total Distribution Revenue³	\$982.0	\$997.7	\$1,013.7	\$961.8	\$980.3	\$973.3	\$1,056.6	\$1,045.8	\$1,057.3	\$1,122.0	\$1,147.3	\$1,250.8

¹Operating Revenue includes gas sales and transportation, transmission, compression, and storage. All values are unnormalized for weather

²Gas Cost is based on data unnormalized for weather

³Distribution revenue is equal to the gas distribution margin and is the gas sales plus transportation less the cost of gas

Table 2.13 Total Natural Gas Sales (Volumes) (million m³)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total Natural Gas Sales ¹	11,862.90	11,686.50	11,114.90	10,742.30	11,303.20	10,304.40	11,338.30	12,434.30	11,728.30	10,736.20	11,172.60	12,361.60

¹Annual consumption volumes include rate classes that are subject to DSM costs only. Rates 9, 125, 200 and 300 are excluded as they do not participate in DSM



Table 2.14 Number of Customers by Customer Type

	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	TOTAL CUSTOMERS
Number of Customers (2018) ¹	2,017,128	162,158	5,880	2,185,166

¹Residential customers include Low Income, which cannot be differentiated

Table 2.15 Number of Customers by Rate Class

RATE CLASS	# OF CUSTOMERS 2018
General Service	
Rate 1	2,017,128
Rate 6	167,626
Rate 9	2
Total General Service	2,184,756
Contract Service	
Rate 100	3
Rate 110	273
Rate 115	25
Rate 125	4
Rate 135	43
Rate 145	32
Rate 170	27
Rate 200	1
Rate 300	1
Rate 315	1
Total Contract Service	410
Total	2,185,166



3. Programs and Offerings

This section provides highlights of any major offering changes and lessons learned from the 2018 program year, and future changes for 2019.

3.1 RESOURCE ACQUISITION PROGRAM

- Enbridge Gas' residential partnerships with the Government of Ontario and IESO, which began in 2016 and 2017 respectively, concluded during the 2018 program year. As a result of the conclusion of these partnerships, non-Enbridge Gas natural gas homes and homes heated by fuels other than natural gas were no longer eligible to enroll in the home retrofit and adaptive thermostat offerings. For 2019 offering details without the inclusion of these partnerships, refer for the Company's 2019 DSM Annual Report.
- As of January 1, 2019, Union Gas Ltd. and Enbridge Gas Distribution amalgamated to become Enbridge Gas Inc. From the customer's perspective, the residential home retrofit offerings of the legacy utilities will be harmonized in 2019 to facilitate clarity and consistency across Ontario.
- In light of internal market research, Enbridge Gas made some modifications to the residential adaptive thermostats offering. The first modification is in response to the declining price per unit of adaptive thermostats, which will result in a reduction of the incentive from \$100 to \$75 per unit effective January 1, 2019. Another change for 2019 will be the introduction of an 'instant rebate' option to increase uptake in Ontario. Participants will be able to receive an instant rebate at the point of sale across multiple retail channels. This enhancement will improve the customer experience and reduce dropout rates associated with downstream and manually-processed rebates.
- Due to declining results for the commercial/industrial prescriptive offering in recent years, Enbridge Gas anticipates growing and enhancing relationships with midstream partners, and investigating which downstream incentives can be moved to a midstream initiative.
- In addition to focusing on driving uptake of shipping air doors in 2018, the prescriptive direct install offering was expanded to include pedestrian air doors for small commercial customers and DCKV for food service, long term care, and the hospitality sectors. The pedestrian air curtain offer will be discontinued in 2019 due to a lack of customer interest in the offer.
- Limited time offer incentive campaigns were introduced to drive additional participation in the custom commercial offering earlier in the program year in response to previous lessons learned; that many businesses spend most of their capital budgets before Q4. Building on lessons from 2018, Enbridge Gas expects to expand the early year limited time incentive offer to include all technologies, which should relieve some customer confusion. Furthermore, to better support smaller customers and simplify the incentive process, Enbridge Gas will explore reducing the custom commercial incentive structure from three tiers to two tiers in 2019.
- In 2018, Enbridge Gas helped a newly identified energy leader to pilot a new technology, as part of the Energy Leaders Offering. Specifically, the pilot project tested the feasibility of switching from natural gas to two fuel sources, biomass (wood chips) and bio-oil made from wood by-products. Although it was determined that the bio-oil was not feasible, the team was able to install a new water heating plant that utilized a reliable supply of carbon neutral biomass. If this pilot is determined to be successful, it may pave the way for similar projects in the future.



- As in previous years, Enbridge Gas did not deliver the Small Commercial New Construction Offering in 2018. The 2018 budget was not used nor was it allocated to any other offerings, and was credited back to the Demand Side Management Variance Account.

3.2 LOW-INCOME PROGRAM

- From an internal program delivery standpoint, Enbridge Gas has been working with EnergyX to create a project tracking interface that provides real-time insight into project status and the savings associated with them. Not only will this tool reduce the administrative burden on the delivery agents, enabling them to focus more time on project implementation, it also creates a standardized reporting platform across all projects.
- In 2018, Enbridge Gas included the installation of adaptive thermostats to the low-income home retrofit offering.
- In 2018, Enbridge Gas reviewed its incentive structure for the low-income multi-family offering and made some adjustments with the intention of decreasing the cost barrier for boiler and custom projects. Additionally, Enbridge Gas added free building energy audits. As a result of the free energy audits, eligible multi-unit residential building (MURB) customers identified over 50 energy saving opportunities. Advanced building automation was introduced also in 2018 as a new energy efficiency measure. This technology represents significant gas savings potential moving forward.

3.3 MARKET TRANSFORMATION & ENERGY MANAGEMENT PROGRAM

- Enbridge Gas implemented two changes in 2018 that helped expand the reach of the Residential Savings by Design Offering. First, Enbridge Gas engaged in contracts with five additional service organizations (an increase from one service organization). In addition, Enbridge Gas designed a small builder education initiative to address the needs of small to mid-size builders.
- Enbridge Gas has had success in securing projects early in the design stage in 2018 for the Commercial Savings by Design Offering, by targeting architects and energy modelers. In addition, Enbridge Gas has found that municipalities have been supportive of Commercial Savings by Design Offering, both in municipal buildings and in the promotion of the offering among developers and builders.
- Enbridge Gas improved the application and communication processes in 2018 to make the School Energy Competition more efficient. These changes will reduce the delay associated with school enrolment and improve the project submission experience for schools.
- Multi-building college campuses were added to the eligible sectors for the Comprehensive Energy Management Offering. Prior to 2018, multi-building universities were eligible to participate in the offering, while multi-building colleges were not. The similarity in energy usage between multi-building college and university campuses provided an opportunity to expand the offering to include college campuses.



4. Results and Spend

4.1 SCORECARD RESULTS AND SHAREHOLDER INCENTIVE

Enbridge Gas is eligible to earn a shareholder incentive of up to \$10.45M for the EGD rate zone, for DSM results measured against the EGD rate zone's Resource Acquisition, Low-Income and Market Transformation & Energy Management scorecards. The DSM shareholder incentive is established by the OEB to "effectively motivate the gas utilities to both actively and efficiently pursue DSM savings and to recognize exemplary performance."⁴ The maximum incentive available is allocated to each scorecard based on the allocation of budget to each scorecard. For more information on the DSM shareholder incentive, refer to Section 5.0 of the DSM Framework and Section 5.0 of the DSM Guidelines.

In 2019, Enbridge Gas earned \$4.0M in DSM incentive for the EGD rate zone, as outlined in Table 4.0 below.

Table 4.0 2018 DSM Maximum Scorecard Incentive Allocation & Achievement by Scorecard

SCORECARD	MAXIMUM DSM INCENTIVE	DSM SHAREHOLDER INCENTIVE ACHIEVED
Resource Acquisition	\$7,119,472	\$2,955,435
Low Income	\$2,195,295	\$422,199
Market Transformation	\$1,135,233	\$605,238
Total	\$10,450,000	\$3,982,872

Detailed scorecard results for the EGD rate zone are provided in Table 4.1 to Table 4.3 below.

Table 4.1 2018 Resource Acquisition Scorecard Achievement & DSMI

METRICS	WEIGHT	METRIC TARGET LEVELS			2018 RESULT
		LOWER BAND	TARGET	UPPER BAND	
Large Volume Customers – Cumulative Savings (million m ³)	40%	381.3	508.5	762.7	377.79
Small Volume Customers – Cumulative Savings (million m ³)	40%	222.8	297.1	445.6	299.54
Deep Residential Savings Participants	20%	6,926	9,235	13,853	14,413
Total Weighted Scorecard Target Achieved					101.3%
Scorecard Incentive Achieved					\$2,955,435

⁴ Report of the Board: DSM Framework for Natural Gas Distributors (2015-2020), EB-2014-0134, p. 20.



Table 4.2 2018 Low-Income Scorecard Achievement & DSMI

METRICS	WEIGHT	METRIC TARGET LEVELS			2018 RESULT
		LOWER BAND	TARGET	UPPER BAND	
Single Family (Part 9) – Cumulative Savings (million m ³)	45%	21.4	28.5	42.8	15.98
Multi-Residential (Part 3) – Cumulative Savings (million m ³)	45%	73.2	97.5	146.3	114.17
New Construction – Participants	10%	11	14	21	13
Total Weighted Scorecard Target Achieved					87.0%
Scorecard Incentive Achieved					\$422,199

Table 4.3 2018 Market Transformation & Energy Management Scorecard Achievement & DSMI

METRICS	WEIGHT	METRIC TARGET LEVELS			2018 RESULT
		LOWER BAND	TARGET	UPPER BAND	
Residential Savings by Design – Builders	10%	15	20	30	35
Residential Savings by Design – Homes Built	15%	1,634	2,179	3,269	2,956
Commercial Savings by Design – New Developments	25%	21	28	42	31
School Energy Competition – Schools	10%	59	78	117	14
Run it Right – Participants	20%	18	24	36	62
Comprehensive Energy Management – Participants	20%	16	21	32	5
Total Weighted Scorecard Target Achieved					111.1%
Scorecard Incentive Achieved					\$605,238

Natural gas savings results by offering for the EGD rate zones is provided in Table 4.4 below.



Table 4.4 2018 Annual and Cumulative Natural Gas Savings

	PROGRAM/SECTOR/OFFER	GROSS ANNUAL GAS SAVINGS (M ³)	NET ANNUAL GAS SAVINGS (M ³)	GROSS CCM (M ³)	NET CCM (M ³)
RESOURCE ACQUISITION	Residential				
	Home Energy Conservation	7,433,371	6,318,365	185,834,276	157,959,135
	Adaptative Thermostats	3,008,470	2,888,131	45,127,050	43,321,968
	Total Residential	10,441,841	9,206,497	230,961,326	201,281,103
	Commercial & Industrial				
	Custom Industrial	19,086,385	9,938,280	313,313,279	163,142,223
	Custom Commercial	18,248,818	9,861,695	334,075,520	189,808,402
	Run It Right	51,919	25,991	259,595	129,953
	Prescriptive	2,506,079	2,132,394	42,931,613	36,473,435
	Direct Install	3,984,799	3,785,559	59,771,991	56,783,410
	Energy Leaders	1,206,466	1,206,466	29,708,545	29,708,545
	Total Commercial & Industrial	45,084,466	26,950,386	780,060,543	476,045,968
LOW INCOME	Low Income				
	Single Family (Part 9)	698,549	697,146	15,992,420	15,978,389
	Multi-Residential (Part 3)	5,375,764	5,372,576	114,200,777	114,168,897
	Total Low Income	6,074,313	6,069,722	130,193,197	130,147,286
	Grand Total	61,600,620	42,226,605	1,141,215,066	807,474,357

4.2 LOST REVENUE ADJUSTMENT MECHANISM

The Lost Revenue Adjustment Mechanism (“LRAM”) allows the Enbridge Gas to recover the lost distribution revenue associated with DSM activity in the EGD rate zones. For more information on the LRAM, refer to Section 11.3 of the DSM Guidelines.

In 2018, the variance of the lost distribution revenues associated with DSM activity for the EGD rate zone was -\$0.015M, as outlined in Table 4.5 below.



Table 4.5 2018 LRAM Statement

RATE CLASS	BUDGET NET PARTIALLY EFFECTIVE (M ³)	ACTUAL NET PARTIALLY EFFECTIVE (M ³)	VOLUME VARIANCE (M ³)	DISTRIBUTION MARGIN (\$)	LRAM ALLOCATION (\$)	ACTUAL LRAM (\$)
Rate 110	2,860,406	380,452	(2,479,955)	0.5449	(\$13,513)	\$2,073
Rate 115	2,283,490	171,445	(2,112,045)	0.1275	(\$2,692)	\$219
Rate 135	90,655	170,629	79,974	1.7010	\$1,360	\$2,902
Rate 145	406,752	498,347	91,595	1.1394	\$1,044	\$5,678
Rate 170	609,446	71,293	(538,153)	0.2427	(\$1,306)	\$173
Totals	6,250,749	1,292,166	(4,958,583)		(\$15,107)	\$11,045
Amount to be paid back to Ratepayers					\$15,107	

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

4.3 COST-EFFECTIVENESS RESULTS

Cost-effectiveness screening for the 2015-2020 DSM Framework uses the “TRC-Plus” test. A secondary reference tool is the Program Administrator Cost (“PAC”) test. The cost-effectiveness tests are performed at the program and portfolio level. Table 4.6 and Table 4.7 provide the program and portfolio TRC-Plus and PAC results, respectively, for the EGD rate zone.

Table 4.6 2018 TRC-Plus Summary

PROGRAM	NPV TRC-PLUS BENEFITS	TRC-PLUS PROGRAM COSTS	INCREMENTAL COSTS	TOTAL TRC COSTS	NET TRC-PLUS	TRC-PLUS RATIO
Resource Acquisition Total	\$152,598,000	\$9,385,000	\$58,000,000	\$67,385,000	\$85,213,000	2.26
Low Income Total	\$28,288,000	\$5,058,000	\$7,157,000	\$12,215,000	\$16,073,000	2.32
Total DSM Portfolio	\$180,886,000	\$14,443,000	\$65,157,000	\$79,600,000	\$101,286,000	2.27

Table 4.7 2018 PAC Summary

PROGRAM	NPV PAC BENEFITS	TOTAL PAC COSTS	NET PAC BENEFIT	PAC RATIO
Resource Acquisition Total	\$133,014,000	\$43,161,000	\$89,853,000	3.08
Low Income Total	\$25,123,000	\$11,237,000	\$13,886,000	2.24
Total DSM Portfolio	\$158,137,000	\$54,398,000	\$103,739,000	2.91



4.4 BUDGETS AND SPENDING

Total 2018 DSM spend for the EGD rate zones was \$66.2M, compared to an OEB-approved budget of \$67.6M. See Table 4.8 for more details.

Table 4.8 2018 OEB Approved Budget vs Spending

PROGRAM	OEB APPROVED BUDGET (BUILT INTO RATES)	2018 SPENDING	VARIANCE
Resource Acquisition	\$43,162,456	\$41,427,686	(\$1,734,770)
Home Energy Conservation	\$18,000,000	\$23,256,751	\$5,256,751
Residential Adaptive Thermostats	\$2,175,000	\$1,578,427	(\$596,573)
Commercial & Industrial Custom	\$7,361,562	\$7,696,271	\$334,709
Commercial & Industrial Prescriptive	\$2,232,905	\$1,164,036	(\$1,068,869)
Commercial & Industrial Direct Install	\$4,758,344	\$1,726,487	(\$3,031,857)
Small Commercial New Construction	\$1,305,566	\$0	(\$1,305,566)
Energy Leaders (Large & Small C/I)	\$400,000	\$324,138	(\$75,862)
Run it Right (RA)	\$1,584,600	\$522,385	(\$1,062,215)
Comprehensive Energy Management (RA)	\$95,000	\$0	(\$95,000)
Overheads	\$5,249,479	\$5,159,191	(\$90,288)
Low Income	\$13,309,177	\$12,984,841	(\$324,336)
Home Winterproofing	\$6,477,200	\$5,224,730	(\$1,252,470)
Low-Income Multi-Residential - Affordable Housing	\$3,813,296	\$4,417,079	\$603,783
Low-Income New Construction	\$1,400,000	\$1,752,191	\$352,191
Overheads	\$1,618,681	\$1,590,841	(\$27,840)
Market Transformation	\$6,882,454	\$7,486,514	\$604,060
Residential Savings by Design	\$3,250,000	\$4,257,045	\$1,007,045
Commercial Savings by Design	\$1,075,000	\$1,234,997	\$159,997
School's Energy Competition	\$500,000	\$248,768	(\$251,232)
Run it Right (MT)	\$315,400	\$608,623	\$293,223
Comprehensive Energy Management (MT)	\$905,000	\$314,424	(\$590,576)
Overheads	\$837,054	\$822,657	(\$14,397)
Program Cost Subtotal	\$55,648,873	\$54,326,352	(\$1,322,521)
Overhead Subtotal	\$7,705,214	\$7,572,689	(\$132,525)
Program Costs Total	\$63,354,087	\$61,899,041	(\$1,455,046)
Portfolio Overheads	\$4,200,000	\$4,255,425	\$55,425
Grand Total	\$67,554,087	\$66,154,466	(\$1,399,621)



Included in the spend amounts above are customer incentives deferred to future years, for offerings where incentives are paid when future milestones/activities are reached. The deferred amounts will be used when the customer incentive commitment is due. For more information on customer incentive deferrals, please refer to Section 5.3.2 of the OEB's Mid-Term Report.

Specifically, the amounts are:

- Low-Income New Construction: \$814,200
- Residential Savings by Design: \$1,890,000
- Commercial Savings by Design: \$75,000



Appendix A: 2018 Avoided Costs

The inflation factor used is 2.1%. The discount rate is 4.0%. Avoided costs are presented in nominal dollars.

YEAR	2018 GAS AVOIDED COSTS							
	WATER HEATING		SPACE HEATING		COMBINED SPACE & WATER HEATING		INDUSTRIAL	
	BASELOAD (\$/M ³)		BASELOAD (\$/M ³)		BASELOAD (\$/M ³)		BASELOAD (\$/M ³)	
	RATE	NPV	RATE	NPV	RATE	NPV	RATE	NPV
1	0.1607	0.1640	0.1863	0.1984	0.1778	0.1889	0.1661	0.1696
2	0.1926	0.3453	0.2107	0.3968	0.2141	0.3905	0.1920	0.3503
3	0.1850	0.5094	0.2041	0.5777	0.2035	0.5709	0.1856	0.5149
4	0.1906	0.6685	0.2102	0.7533	0.2096	0.7459	0.1912	0.6745
5	0.1963	0.8228	0.2165	0.9235	0.2159	0.9156	0.1969	0.8293
6	0.2022	0.9724	0.2230	1.0886	0.2223	1.0802	0.2028	0.9795
7	0.2082	1.1175	0.2297	1.2487	0.2290	1.2398	0.2089	1.1251
8	0.2145	1.2583	0.2366	1.4040	0.2359	1.3946	0.2152	1.2663
9	0.2209	1.3948	0.2437	1.5547	0.2430	1.5448	0.2216	1.4033
10	0.2275	1.5273	0.2510	1.7008	0.2502	1.6904	0.2283	1.5361
11	0.2344	1.6557	0.2586	1.8425	0.2578	1.8317	0.2351	1.6650
12	0.2414	1.7802	0.2663	1.9799	0.2655	1.9686	0.2422	1.7899
13	0.2486	1.9010	0.2743	2.1131	0.2734	2.1015	0.2494	1.9111
14	0.2561	2.0182	0.2825	2.2424	0.2817	2.2304	0.2569	2.0287
15	0.2638	2.1318	0.2910	2.3678	0.2901	2.3553	0.2646	2.1427
16	0.2717	2.2420	0.2997	2.4894	0.2988	2.4765	0.2726	2.2532
17	0.2798	2.3489	0.3087	2.6073	0.3078	2.5941	0.2808	2.3605
18	0.2882	2.4526	0.3180	2.7217	0.3170	2.7081	0.2892	2.4645
19	0.2969	2.5531	0.3275	2.8326	0.3265	2.8187	0.2979	2.5653
20	0.3058	2.6506	0.3374	2.9402	0.3363	2.9259	0.3068	2.6632
21	0.3150	2.7452	0.3475	3.0445	0.3464	3.0299	0.3160	2.7581
22	0.3244	2.8369	0.3579	3.1457	0.3568	3.1308	0.3255	2.8501
23	0.3341	2.9259	0.3687	3.2438	0.3675	3.2286	0.3352	2.9393
24	0.3442	3.0122	0.3797	3.3390	0.3785	3.3235	0.3453	3.0259
25	0.3545	3.0958	0.3911	3.4314	0.3899	3.4156	0.3556	3.1098
26	0.3651	3.1770	0.4028	3.5209	0.4016	3.5048	0.3663	3.1913
27	0.3761	3.2557	0.4149	3.6077	0.4136	3.5914	0.3773	3.2702
28	0.3874	3.3321	0.4274	3.6920	0.4260	3.6754	0.3886	3.3468
29	0.3990	3.4061	0.4402	3.7737	0.4388	3.7568	0.4003	3.4211
30	0.4110	3.4779	0.4534	3.8529	0.4520	3.8358	0.4123	3.4931



YEAR	2018 AVOIDED CARBON COSTS	
	RESIDENTIAL & COMMERCIAL & INDUSTRIAL	
	(\$/M ³)	
	RATE	NPV
1	0.02	0.0200
2	0.04	0.0577
3	0.06	0.1109
4	0.08	0.1777
5	0.10	0.2563
6	0.10	0.3303
7	0.10	0.4000
8	0.10	0.4656
9	0.11	0.5336
10	0.11	0.5976
11	0.11	0.6579
12	0.11	0.7147
13	0.11	0.7681
14	0.12	0.8230
15	0.12	0.8747
16	0.12	0.9234
17	0.12	0.9692
18	0.13	1.0160
19	0.13	1.0600
20	0.13	1.1014
21	0.13	1.1405
22	0.14	1.1801
23	0.14	1.2173
24	0.14	1.2524
25	0.15	1.2878
26	0.15	1.3212
27	0.15	1.3526
28	0.15	1.3821
29	0.16	1.4118
30	0.16	1.4398



2018 WATER AND ELECTRICITY AVOIDED COSTS																
Y E A R	WATER HEATING				SPACE HEATING				COMBINED SPACE & WATER HEATING				INDUSTRIAL			
	ELECTRICITY (\$/KWH)		WATER (\$/1000 LITRE)		ELECTRICITY (\$/KWH)		WATER (\$/1000 LITRE)		ELECTRICITY (\$/KWH)		WATER (\$/1000 LITRE)		ELECTRICITY (\$/KWH)		WATER (\$/1000 LITRE)	
	RATE	NPV	RATE	NPV	RATE	NPV	RATE	NPV	RATE	NPV	RATE	NPV	RATE	NPV	RATE	NPV
1	0.1369	0.1369	0.8864	0.8864	0.1369	0.1369	0.8864	0.8864	0.1369	0.1369	0.8864	0.8864	0.1369	0.1369	0.8864	0.8864
2	0.1399	0.2687	0.9060	1.7394	0.1399	0.2687	0.9060	1.7394	0.1399	0.2687	0.9060	1.7394	0.1399	0.2687	0.9060	1.7394
3	0.1429	0.3953	0.9249	2.5595	0.1429	0.3953	0.9249	2.5595	0.1429	0.3953	0.9249	2.5595	0.1429	0.3953	0.9249	2.5595
4	0.1458	0.5171	0.9441	3.3477	0.1458	0.5171	0.9441	3.3477	0.1458	0.5171	0.9441	3.3477	0.1458	0.5171	0.9441	3.3477
5	0.1489	0.6341	0.9638	4.1054	0.1489	0.6341	0.9638	4.1054	0.1489	0.6341	0.9638	4.1054	0.1489	0.6341	0.9638	4.1054
6	0.1522	0.7467	0.9851	4.8347	0.1522	0.7467	0.9851	4.8347	0.1522	0.7467	0.9851	4.8347	0.1522	0.7467	0.9851	4.8347
7	0.1551	0.8549	1.0044	5.5348	0.1551	0.8549	1.0044	5.5348	0.1551	0.8549	1.0044	5.5348	0.1551	0.8549	1.0044	5.5348
8	0.1582	0.9587	1.0241	6.2069	0.1582	0.9587	1.0241	6.2069	0.1582	0.9587	1.0241	6.2069	0.1582	0.9587	1.0241	6.2069
9	0.1613	1.0583	1.0441	6.8522	0.1613	1.0583	1.0441	6.8522	0.1613	1.0583	1.0441	6.8522	0.1613	1.0583	1.0441	6.8522
10	0.1644	1.1540	1.0646	7.4717	0.1644	1.1540	1.0646	7.4717	0.1644	1.1540	1.0646	7.4717	0.1644	1.1540	1.0646	7.4717
11	0.1676	1.2459	1.0854	8.0665	0.1676	1.2459	1.0854	8.0665	0.1676	1.2459	1.0854	8.0665	0.1676	1.2459	1.0854	8.0665
12	0.1709	1.3341	1.1067	8.6375	0.1709	1.3341	1.1067	8.6375	0.1709	1.3341	1.1067	8.6375	0.1709	1.3341	1.1067	8.6375
13	0.1743	1.4188	1.1284	9.1858	0.1743	1.4188	1.1284	9.1858	0.1743	1.4188	1.1284	9.1858	0.1743	1.4188	1.1284	9.1858
14	0.1777	1.5001	1.1505	9.7121	0.1777	1.5001	1.1505	9.7121	0.1777	1.5001	1.1505	9.7121	0.1777	1.5001	1.1505	9.7121
15	0.1812	1.5781	1.1730	10.2174	0.1812	1.5781	1.1730	10.2174	0.1812	1.5781	1.1730	10.2174	0.1812	1.5781	1.1730	10.2174
16	0.1847	1.6530	1.1960	10.7025	0.1847	1.6530	1.1960	10.7025	0.1847	1.6530	1.1960	10.7025	0.1847	1.6530	1.1960	10.7025
17	0.1883	1.7250	1.2195	11.1683	0.1883	1.7250	1.2195	11.1683	0.1883	1.7250	1.2195	11.1683	0.1883	1.7250	1.2195	11.1683
18	0.1920	1.7940	1.2434	11.6155	0.1920	1.7940	1.2434	11.6155	0.1920	1.7940	1.2434	11.6155	0.1920	1.7940	1.2434	11.6155
19	0.1958	1.8604	1.2677	12.0448	0.1958	1.8604	1.2677	12.0448	0.1958	1.8604	1.2677	12.0448	0.1958	1.8604	1.2677	12.0448
20	0.1996	1.9240	1.2926	12.4570	0.1996	1.9240	1.2926	12.4570	0.1996	1.9240	1.2926	12.4570	0.1996	1.9240	1.2926	12.4570
21	0.2036	1.9851	1.3179	12.8527	0.2036	1.9851	1.3179	12.8527	0.2036	1.9851	1.3179	12.8527	0.2036	1.9851	1.3179	12.8527
22	0.2075	2.0438	1.3437	13.2327	0.2075	2.0438	1.3437	13.2327	0.2075	2.0438	1.3437	13.2327	0.2075	2.0438	1.3437	13.2327
23	0.2116	2.1002	1.3701	13.5974	0.2116	2.1002	1.3701	13.5974	0.2116	2.1002	1.3701	13.5974	0.2116	2.1002	1.3701	13.5974
24	0.2158	2.1543	1.3970	13.9476	0.2158	2.1543	1.3970	13.9476	0.2158	2.1543	1.3970	13.9476	0.2158	2.1543	1.3970	13.9476
25	0.2200	2.2062	1.4243	14.2838	0.2200	2.2062	1.4243	14.2838	0.2200	2.2062	1.4243	14.2838	0.2200	2.2062	1.4243	14.2838
26	0.2243	2.2560	1.4523	14.6066	0.2243	2.2560	1.4523	14.6066	0.2243	2.2560	1.4523	14.6066	0.2243	2.2560	1.4523	14.6066
27	0.2287	2.3039	1.4807	14.9165	0.2287	2.3039	1.4807	14.9165	0.2287	2.3039	1.4807	14.9165	0.2287	2.3039	1.4807	14.9165
28	0.2332	2.3499	1.5098	15.2141	0.2332	2.3499	1.5098	15.2141	0.2332	2.3499	1.5098	15.2141	0.2332	2.3499	1.5098	15.2141
29	0.2378	2.3940	1.5394	15.4998	0.2378	2.3940	1.5394	15.4998	0.2378	2.3940	1.5394	15.4998	0.2378	2.3940	1.5394	15.4998
30	0.2424	2.4363	1.5695	15.7740	0.2424	2.4363	1.5695	15.7740	0.2424	2.4363	1.5695	15.7740	0.2424	2.4363	1.5695	15.7740