

**EB-2021-0002**  
**Enbridge Gas Multi Year DSM Plan**  
**Oral Hearing Commencing March 28, 2022**

**Compendium of Exhibits**  
**Ontario Greenhouse Vegetable Growers**

**Exhibit \_\_\_\_\_**

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## ENBRIDGE GAS DSM PLAN -- INDUSTRIAL PROGRAM

### Industrial Sector Strategy

1. Enbridge Gas's proposed Industrial program is an evolution of the existing Industrial program with an enhanced focus on addressing market barriers and engaging a broader group of customers.
2. The following inputs were taken into consideration in the development of the proposed Industrial program:
  - The objectives outlined in the OEB's December 1, 2020 letter;<sup>1</sup>
  - The guiding principles outlined in the Proposed Framework;<sup>2</sup>
  - Lessons learned by Enbridge Gas through delivering programming to the industrial sector for over 25 years;
  - Learnings from evaluation studies conducted throughout the 2015-2020 Multi-Year DSM Plan; and
  - Feedback from stakeholders received through the course of the 2015-2020 Multi-Year DSM Plan, 2021 DSM Plan rollover, and in support of the development of this application.

### Market Overview

3. The industrial sector across the Enbridge Gas franchise amounts to more than 22,000 accounts that collectively consume 6.34 billion cubic meters of natural gas annually.<sup>3</sup> Industrial customers are considered facilities involved in the production or

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<sup>1</sup> EB-2019-0003, OEB Letter Post-2020 Natural Gas Demand Side Management Framework (December 1, 2020), pp. 2-3.

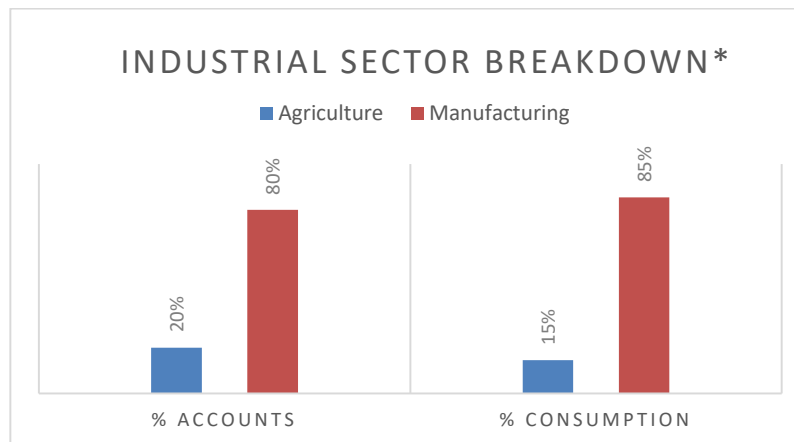
<sup>2</sup> EB-2021-0002, Application, Proposed Framework, Exhibit C, Tab 1, Schedule 1, pp. 5-8.

<sup>3</sup> These values are exclusive of customers and related consumption in Union rate zone R100 and T2 who are addressed directly through the Direct Access offering in the Large Volume Program.

enhancement of mercantile goods. The industrial market can be broken out into two market segments: agriculture and manufacturing.

4. Agriculture customers are facilities that cultivate plants or livestock such as greenhouses and poultry farms. They represent approximately 20% of accounts and 15% of gas consumption within the industrial sector. Customers in this segment have traditionally been more receptive to participation in DSM programs, as natural gas costs represent a high proportion of overall production costs due to the significant heating loads required year-round to support an optimal cultivation climate for crop production.
5. Manufacturing customers include all other types of industrial facilities such as automotive, pharmaceutical, asphalt, packaged goods, pulp and paper, and food/beverage/confectionary production plants. Manufacturing customers represent approximately 80% of accounts and 85% of gas consumption within the industrial sector. These customers can be most usefully segmented by annual consumption patterns since customers with similar load profiles will typically have similar energy solutions needs. Larger industrial customers, typically those with baseload consumption profiles in excess of 10,000 m<sup>3</sup>/year are considered to have year-round process-related gas loads; whereas smaller industrial customers with lower baseload consumption profiles use most of their natural gas for space heating, and therefore have seasonal dependent loads.
6. Table 1 below shows a breakdown of the industrial sector illustrating the distribution of accounts and their annual gas consumption loads.

Table 1



\*These values are exclusive of customers and related consumption in Union rate zones R100 and T2 who are addressed directly through the Direct Access offering in the Large Volume Program.

7. Industry in Ontario has declined over the past decade as U.S. demand for Ontario manufactured goods has decreased and global market pressures have caused manufacturing to be outsourced to countries with less labour, safety and environmental regulations, and more economic incentives to support local manufacturing.<sup>4</sup> While the overall manufacturing sector continues to see reductions, a variety of industries catering to local needs such as agriculture and fresh food production are experiencing growth. Future DSM results in the industrial sector should therefore focus on growing markets and finding ways to increase penetration of existing customers.
8. The full impacts of COVID-19 on the industrial sector have yet to be realized and could significantly impact the number of accounts through business closures in each segment as well as exacerbate key barriers, especially financial constraints associated with investing in conservation measures. In a recent survey conducted

<sup>4</sup> Manufacturing Ontario's Future: Leveraging Ontario's Manufacturing Sector to Drive Ontario's Economic Success, Canadian Manufacturers & Exporters (2018), p. 10.

on behalf of Enbridge Gas by Ipsos (Attachment 1) it was identified that as many as 23% of industrial customers claimed that the pandemic delayed their plans to make energy efficiency upgrades and 3% had to cancel their plans completely (Attachment 1, page 43).

### Lessons Learned

9. The most predominant barriers limiting participation in DSM programming for industrial customers can be addressed by considering the following questions: Is the customer aware of the program? Does the customer understand how the program can benefit them? Does the customer have sufficient resources to participate in the program? Enbridge Gas continues to work to address these three barriers as follows.

### Market Awareness of the DSM Program

10. Industrial programs are delivered by Enbridge Energy Solutions Advisors (“ESAs”) who work with customers on a one-to-one basis to address the unique processes and opportunities within each customer facility. Prioritization of Enbridge Gas resources has traditionally focused on the largest customers within the sector with the most savings potential, limiting broad awareness and participation to those customers targeted by ESAs.
11. Additional resourcing and renewed focus will be placed on supporting customers who have not previously participated in DSM programming. Although this effort aims to increase participation over time and uncover new opportunities, it is also expected to increase the overall cost of the program, with a reduction in average project size and associated cost-effectiveness.
12. Smaller industrial customers with predominant space heating loads are more akin to a commercial warehouse facility than a large industrial plant. As a result, these

customers will be eligible for Enbridge Gas's Commercial Prescriptive Downstream, Prescriptive Midstream and Direct Install offerings that allow for broader participation and reach among smaller customers through engagement with alternative delivery channels.

#### Communicating the Value of Energy Efficiency and DSM Programming

13. Energy typically accounts for just one to two percent of production costs for the bulk of manufacturing sub-segments,<sup>5</sup> and natural gas represents only a fraction of overall energy used, which makes prioritizing natural gas efficiency challenging in the face of competing capital and operational improvement initiatives. Furthermore, some customers are of the belief that their sites are already operating as efficiently as possible. Others are reluctant to introduce new technologies or measures due to skepticism of achievable savings and/or concern about unforeseen impacts to production.

14. Some of these challenges can be overcome through educating the industry about best practices in energy efficiency as well as quantifying the energy and non-energy benefits realized by those who engage in DSM programming. Enbridge Gas accomplishes this by hosting customer workshops and webinars focused on industry relevant topics. Case studies, technical documents and best practice guides are also developed to provide illustrations of different efficiency opportunities that may exist within a plant, detailing the energy and non-energy benefits that have been achieved by former participants of Enbridge Gas's DSM programming.

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<sup>5</sup> Chart of the Day: The Manufacturing Cost Components for a Bunch of Different Things, Sam Ro (May 1, 2013)  
Source: US Census Bureau, Morgan Stanley Research <https://www.businessinsider.com/chart-the-cost-of-manufacturing-stuff-2013-4>

#### Addressing Resource Constraints

15. Industrial customers often lack the technical expertise and/or internal resources to support the identification, quantification, justification and implementation of energy efficiency projects. Furthermore, even when a project is identified, financial barriers such as internal competition for limited available capital, tight financial planning cycles, and the low cost of natural gas relative to other expenses impact DSM program participation.
  
16. Enbridge Gas's ESAs work with customers as an extension of their team, and provide support to help identify, quantify, and develop an implementation plan for efficiency projects. As summarized in the Ipsos April 2020 Qualitative Research Report (see Attachment 2), "Many participants rely on Enbridge and other utility partners to 'fill in the gaps' in terms of knowledge, tools, and resources to undertake conservation projects. This might include support and expertise in conducting assessments, putting together the figures and numbers to build a business case, in recommendations for third party contractors and experts, and in understanding industry-specific or general best practices. A few characterize these as equally or more valuable than financial incentives" (Attachment 2, page 17).
  
17. In addition to technical and execution support, Enbridge Gas's Industrial program provides financial incentives to offset the incremental costs associated with implementing energy efficiency projects. Proposed incentives are being increased in an effort to bring down project payback periods to more inviting levels and increase overall participation in programming.



Industrial Program Proposal

18. Enbridge Gas believes that the Industrial program is best positioned to support larger industrial customers, as it allows for the flexibility to address the unique process, equipment and customer specific characteristics that vary between industrial facilities. The offering provides participants with technical support delivered by a dedicated Enbridge Gas ESA as well as financial incentives to overcome key barriers associated with the identification, quantification, justification, and implementation of energy efficiency measures.
19. Enbridge Gas believes that the role of ESAs, working with industrial customers year over year to drive continuous improvement, is one of the biggest contributing factors to the success of the Industrial program. As confirmed in the Ipsos April 2020 Qualitative Research Report, “the working relationship is often viewed as an ongoing partnership that has resulted in reduced consumption and real money savings” (Attachment 2, page 8). A continued focus on developing and expanding these one-to-one relationships will be a priority to broaden market reach and provide value to industrial ratepayers.
20. In addition to the Industrial program, industrial customers will be eligible to participate in the Commercial Prescriptive Downstream, Direct Install and Prescriptive Midstream offerings, however it is anticipated that the vast majority of projects, especially involving customers with significant process loads, will require customized solutions engineered to address the specific characteristics of the varied operations and facilities.
21. A high-level description of the Industrial program as well as key elements associated with the offering are listed below in Table 2:

Table 2

<u>Offering Name</u>	<u>High Level Description</u>	<u>Key Offering Elements</u>
Industrial Custom	The Industrial Custom offering applies a continuous energy improvement approach to help industrial customers improve natural gas consumption efficiency by identifying, quantifying, and incentivizing energy efficiency projects.	Long term customer support by Enbridge Gas ESAs for engineering, technical and business support of energy efficiency projects including, financial incentives for projects, sub-metering support, studies, and energy management tools (Energy Management Information Systems or EMIS).

OEB Objectives and Guiding Principles

22. The Industrial program has been designed to address the OEB’s primary objective for DSM programming, “assisting customers in making their homes and business more efficient in order to help better manage their energy bills.”<sup>6</sup> The program also addresses the secondary objectives that include that DSM should “help lower overall average annual natural gas usage” and “play a role in meeting Ontario’s greenhouse gas reductions goals.”<sup>7</sup>

23. Industrial customers represent some of the largest gas consumers in Ontario, and therefore present significant gas savings potential. They are among the most challenging to support as a result of the need for a custom approach to address the unique characteristics of each facility and processes therein. Enbridge Gas has proposed a distinct Industrial program to ensure appropriate effort and resources are allocated towards maximizing savings potential within the sector and supporting

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<sup>6</sup> EB-2019-0003, OEB Letter Post-2020 Natural Gas Demand Side Management Framework (December 1, 2020), p. 2.  
<sup>7</sup> Ibid, p. 3.

customers in driving deep energy savings through a continuous energy improvement approach.

24. The Industrial program also addresses the guiding principles outlined in the Proposed Framework including:

- DSM plans should include strategies to increase the natural gas savings by targeting key segments of the market and/or customers with significant room for efficiency improvements.<sup>8</sup>
- DSM plans should minimize lost opportunities for energy efficiency and should be designed to pursue long term energy savings.<sup>9</sup>

## **Industrial Custom Offering**

### Background

25. Historically, both Union and EGD rate zones have had great success across the province in applying a custom approach to assist industrial customers in undertaking energy efficiency projects and realizing significant natural gas savings. The proposed Industrial Custom offering will continue to provide industrial customers with the technical engineering support of an ESA, as well as financial incentives, to promote the implementation of energy efficiency projects and realize meaningful gas savings. Improvements to the Industrial Custom offering have been made to align the offering across the franchise-area with a universal set of eligibility criteria, educational and technical support initiatives, and enhanced incentive structures.

26. Enbridge Gas retained Ipsos to undertake two market surveys to understand evolving customer and market needs as part of its continuous improvement

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<sup>8</sup> EB-2021-0002, Application, Proposed Framework, Exhibit C, Tab 1, Schedule 1, p. 7.

<sup>9</sup> Ibid.

practices. The Ipsos April 2020 qualitative research report (Attachment 2) focused on the experience of Enbridge Gas's larger industrial customers, and a second qualitative research report in 2021 (Attachment 1) gauged the broader industrial market to ensure findings from the 2020 research were largely applicable to the sector. Many respondents in the surveys noted that the technical assistance provided by Enbridge Gas ESAs to identify and quantify energy efficiency opportunities was equal or in some cases more influential in driving positive outcomes than the financial incentive.

27. This customer feedback confirms that industrial customers highly value the technical expertise and assistance provided through the Industrial Custom offering. To further enhance the value of the offering, Enbridge Gas has included enabling initiatives, such as EMIS funding, previously offered in the discontinued Strategic Energy Management ("SEM") and Comprehensive Energy Management ("CEM") offerings to further assist customers in identifying and measuring savings opportunities.

28. Although the Industrial Custom offering has been, and is expected to continue to be the most cost-effective offering across the DSM portfolio, overall cost-effectiveness has been declining as a result of a variety of factors:

- Enbridge Gas has been delivering DSM to the industrial market for over 25 years. Although significant opportunity continues to exist within the sector, as Enbridge Gas continues to work with customers on implementing opportunities, it is only reasonable to expect returns to gradually diminish over time.
- In 2021, Enbridge Gas adjusted the new construction greenhouse baseline assumptions to accommodate for advancements in standards. This adjustment resulted in a significant reduction in claimable savings associated with greenhouse new construction projects.

- The Evaluation Contractor’s (“EC”) 2018 custom Net-to-Gross (“NTG”) study demonstrated significantly higher estimated free ridership results for manufacturing projects completed within Union rate zones than previously, negatively impacting overall net results and cost-effectiveness of the offering.

29. Growth in natural gas savings results associated with the Industrial Custom offering will be driven by implementing measures to reduce free ridership and engaging a broader group of customers in participating in the offering.

#### Objective

30. The objective of the Industrial Custom offering is to support participants in achieving sustained and progressive energy efficiency by applying a continuous energy improvement approach. Participants receive a combination of technical support through a dedicated ESA and financial incentives to enable the identification, quantification, prioritization, and implementation of natural gas saving measures.

#### Target Market

31. The Industrial Custom offering is targeted to industrial customers, subject to eligibility details outlined below.

#### Offering Details

32. The Industrial Custom offering is delivered to customers through a combination of Enbridge Gas ESAs, customer outreach strategies and targeted communications initiatives. As part of its communication initiatives, Enbridge Gas provides customers with technical publications, case studies, quarterly updates, and in-person or online workshops to generate interest and awareness in the offering.

33. ESAs have developed long-standing relationships with industrial customers, supporting customers in the long term strategic quantification and prioritization of

energy efficiency opportunities in their facilities. This relationship is very important, especially for industrial customers who lack the time, resources and in some cases technical expertise to identify, assess and facilitate implementation of energy efficiency opportunities. An ESAs ongoing influence can help foster a customer's focus on comprehensive energy management and continuous energy improvement leading to that customer undertaking DSM activities year over year, driving incremental efficiency over time.

34. ESAs provide many services to customers to identify and quantify energy efficiency opportunities, such as energy consumption analysis and load profiling, site-walk throughs, plant and equipment testing and assessments, thermal imaging, and sub-metering of equipment. Engineering analysis, which serves as the basis for understanding energy efficiency opportunities, is also offered to assist in the development of a strong business case to pursue efficiency projects.

35. When more detailed engineering analysis is required, ESAs can connect customers with qualified vendors and offer financial incentives to cover up to 50% of the costs associated with energy audits, studies, sub-metering and EMIS systems to help quantify opportunities.

#### Eligibility Criteria

36. To be eligible for the offering, a participant must be an Enbridge Gas industrial customer.<sup>10</sup> Large Volume rate classes T2 and R100 in Union rate zone are ineligible for this offering and are supported directly through the Large Volume program.

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<sup>10</sup> Industrial customers are non-residential customers involved in the production and/or enhancement of mercantile goods and/or the cultivation of plants and/or livestock.

### Incentives/Enablers

37. There are two types of financial incentives available to participants: opportunity identification incentives and project implementation incentives. To support the identification of energy efficiency projects, where deemed appropriate by an ESA, financial incentives to cover up to 50% of the costs associated with third party audits, studies and metering (for example, air balance testing or steam trap studies) are available to help customers identify and quantify savings opportunities and justify project implementation.

38. Implementation incentives are calculated on a project basis and are based on estimated natural gas savings associated with the implementation of efficiency measures.

39. Enbridge Gas proposes the following incentive structure:<sup>11</sup>

- \$0.20/m<sup>3</sup> saved for the first 50,000 m<sup>3</sup> saved
- \$0.10/m<sup>3</sup> saved for each m<sup>3</sup> saved beyond 50,000 m<sup>3</sup>

*Conditions:*

The overall incentive is capped at \$100,000 per project and should not exceed 50% of the incremental project cost.

40. Projects that yield less energy savings are likely to require higher financial incentives to cover enough of the initial project costs to assist in overcoming financial barriers. Projects that yield higher energy savings will likely result in meaningful cost savings and therefore require less financial incentive to make the energy project viable. This

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<sup>11</sup> Incentives are subject to change and may evolve over time based on changing market needs. Limited Time Offers (LTOs) may also be made available to customers from time to time to drive adoption of specific measures and/or behaviors. Financial incentives should not exceed 50% of incremental project cost, unless otherwise specified through an LTO. Alternative incentive structures may apply to greenhouse construction projects.

enhanced tiered financial incentive structure is intended to make smaller energy projects more affordable, therefore enhancing reach and supporting industrial customers who are less likely to have previously participated in the offering.

#### Considerations for Continuous Improvement

41. Enbridge is proposing several enhancements to the Industrial Custom offering to optimize overall performance through a focus on free ridership mitigation strategies. Although Enbridge Gas has made significant improvements to address its project screening processes, the following additional measures will be included as part of the Industrial Custom offering in an effort to screen free riders and drive net DSM results.
42. In an effort to better understand the participation circumstances of customers, Enbridge Gas is hiring a third-party to conduct fast-feedback surveys to interview offering participants and assess the influence the offering had on the implementation of efficiency projects. The intent is to gather data that provides more clear, direct and actionable feedback than has typically been provided to Enbridge Gas through the NTG studies so that issues can be identified and addressed.
43. New construction greenhouse baselines have been adjusted to better reflect market standards and screen out projects that would otherwise be free riders.
44. The proposed harmonized tiered incentive structure is designed to cover a larger proportion of incremental project costs associated with smaller projects that would otherwise not yield reasonable enough payback periods to be implemented without Enbridge Gas's DSM support.
45. Finally, the proposed Industrial Custom offering applies a harmonized approach to project eligibility, screening and substantiation requirements that incorporates best



practices from each of the previously separate utility offerings. Examples of such initiatives include the universal adoption of a base case screening questionnaire as well as a formal offering agreement form requiring participant signoff prior to project implementation.

### Metrics

46. The metric for the Industrial Custom offering is net annual natural gas savings, measured in m<sup>3</sup>.

### Gross Measurement

47. This offering will use several customized approaches as the basis for natural gas savings (m<sup>3</sup>) gross measurement, examples include engineering calculations and energy modelling such as the USDA Agricultural Research Service's Virtual Grower, as determined appropriate by Enbridge Gas's technical experts.

### Impact Evaluation & Verification

48. The most recent NTG study examining the Industrial program conducted by the EC was for the 2018 program year and was conducted for the separate EGD and Union rate zone offerings. Enbridge Gas recommends that the EC conduct a NTG study (including both free ridership and spillover) for this offering ideally following the first year of program implementation.

49. Enbridge Gas also recommends that repeated NTG studies are conducted for the offering throughout the term of the plan, however, Enbridge Gas recommends such studies are not conducted more frequently than every 2 years in an effort to minimize participant survey fatigue. The focus of the studies should be based on areas where the offering design has been changed.

50. Furthermore, NTG studies should provide detailed and transparent information at a segment level, in order to provide Enbridge Gas with program design information that can be actioned. Enbridge Gas also submits that it is critical that NTG studies are executed as close to project implementation as practical to ensure relevant and timely customer feedback is obtained. When the execution of NTG study is delayed, employee turnover at the project site can impact the quality of the responses and the study.

51. Enbridge Gas recommends that third-party verification studies (also known as Custom Project Savings Verification or “CPSV” studies) are appropriate for this offering given that most gross measurement claims are developed by the utility. Since Enbridge Gas has been conducting gross measurement claims for several years, and has been engaged in the ECs review of the utility’s gross measurement savings claims, Enbridge Gas submits that less rigorous, multi-year CPSV evaluations are appropriate in an effort to reduce participant survey fatigue and lower evaluation costs. The EC provided similar recommendations in the 2021-2022 DSM EM&V Plan:<sup>12</sup>

The annual CPSV process has historically included an extensive evaluation effort to verify the savings achieved by custom DSM programs in C&I facilities. While the level of evaluation is warranted due to the portion of the gross cumulative portfolio savings represented by these programs (50% in 2018), consistent year-over-year verification results have demonstrated that a less rigorous process could be employed to provide similar value... The EC recommends that future evaluations implement a multi-year rolling sample methodology to determine custom C&I gross savings.

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<sup>12</sup> 2021-2022 Natural Gas Demand Side Management Evaluation, Measurement, and Verification (EM&V) Plan, DNV GL (February 4, 2021), pp. 6-7. <https://www.oeb.ca/sites/default/files/2021-2022-DSM-EMV-Plan-Addendum-20210204.pdf>

Process Evaluation

52. Over the term of the plan, Enbridge Gas will explore process evaluation topics based on the evolving needs of the offering in the pursuit of continuous improvements to program design and delivery. The approach to process evaluation is discussed in Exhibit E, Tab 4, Schedule 5.



ENBRIDGE GAS INC.

Answer to Interrogatory from  
Ontario Greenhouse Vegetable Growers (OGVG)

Interrogatory

**Issue 6**

Reference:

General

Preamble:

With respect to parts a) and b) of this interrogatory OGVG notes that it asked a similar interrogatory of EGI in EB-2019-0271 (OGVG-1) covering the 2015 to 2019 period; it is OGVG's expectation that the answers provided in that proceeding for parts a) and b) and their sub parts (as updated on April 6, 2020) are adequate for the purposes of this proceeding, subject to adding information relating to 2020.

Question(s):

- a) For each rate class in both the Enbridge Gas and Union Gas franchise areas, for the years 2015 to 2020, please provide the following information in table form:
- i) The total number of customers in the rate class in each year.
  - ii) The total DSM costs allocated to the rate class in each year, including amounts embedded in base rates and amounts recovered through deferral and variance accounts (or for years where disposition has not yet been applied for the forecast amounts to be recovered through deferral and variance accounts).
  - iii) The total number of customers in the rate class that were DSM participants in each year.
- b) Please provide in table form:
- i) The total number of customers in each rate class at the beginning of 2021.
  - ii) The forecast total amount of DSM costs to be allocated to each rate class in 2021, both embedded in base rates and through deferral and variance accounts.

- iii) The total number of customers in each rate class at the beginning of 2021 that were participants in DSM offered by EGI (or its predecessor companies) from 2015 to 2020.
  - iv) The total number of customers in each rate class at the beginning of 2021 that were participants in DSM offered by EGI (or its predecessor companies) from 2015 to 2020 more than once.
  - v) The total number of customers in each rate class at the beginning of 2021 that did not participate in DSM offered by EGI (or its predecessor companies) from 2015 to 2020.
- c) With respect to the contract rate class customers identified in part b) v) of this interrogatory as having not participated in DSM offered by EGI (or its predecessor companies) over the 2015-2020 period, please provide in table form an analysis of the reasons why, to the extent known, those customers have not participated. By way of example, OGVG would expect the table to indicate the number of customers in each rate class that have been contacted by EGI for the purposes of engaging them in DSM where the customer has declined to participate for its own reasons; the number of customers that were contacted and evaluated for possible DSM programming where it was determined the customer would not benefit from the incremental DSM products offered by EGI (i.e. the customer's operations were already optimized); the number of customers that EGI has simply never been in contact with respect to possible DSM participation, and so on.
- d) Please describe what incentive, if any, there is in EGI's proposed DSM framework that incentivizes EGI to seek out new contract class customers for its DSM programming as opposed to re-visiting customers that have already participated.
- e) Please describe what dis-incentive, if any, there is in EGI's proposed DSM framework that dis-incentivizes EGI from revisiting contract class customers that they have already previously engaged in DSM programming rather than seeking out contract rate customers that have never participated in DSM programming.

Response:

The Company would like to thank OGVG for the clear reference to a previous proceeding and interrogatory. This both is helpful and efficient, and also greatly appreciated by the company staff who are trying to respond to a large number of questions in a fixed period of time.

- a)  
 i. Table 1 below indicates the EGD rate zones and Union rate zones annual average number of customers by rate class for the period of 2015-2020.

Table 1

General Service/Rate Zone	Rate Class	2015	2016	2017	2018	2019	2020
EGD	Rate 1	1,930,657	1,959,569	1,990,032	2,017,128	2,042,127	2,064,531
EGD	Rate 6	163,634	164,692	166,224	167,216	168,190	169,084
EGD	Rate 9	6	6	3	2	2	2
Union South	M1	1,083,032	1,097,031	1,111,544	1,127,353	1,141,279	1,154,987
Union South	M2	7,437	7,730	7,553	7,469	7,783	7,863
Union North	R01	333,773	339,334	344,458	349,354	353,643	357,603
Union North	R10	2,152	2,219	2,192	2,118	2,144	2,201
<b>Total</b>		<b>3,520,692</b>	<b>3,570,581</b>	<b>3,622,006</b>	<b>3,670,639</b>	<b>3,715,168</b>	<b>3,756,270</b>

Contract Market / Rate Zone	Rate Class	2015	2016	2017	2018	2019	2020
EGD	Rate 100	2	2	3	3	4	9
EGD	Rate 110	227	269	263	274	282	335
EGD	Rate 115	25	27	27	26	22	20
EGD	Rate 125	5	5	4	4	4	4
EGD	Rate 135	42	45	45	43	43	40
EGD	Rate 145	52	38	37	33	26	22
EGD	Rate 170	26	25	26	27	23	21
EGD	Rate 200	1	1	1	1	-	1
EGD	Rate 300	2	2	2	2	1	2
EGD	Rate 315	2	2	1	1	-	-
Union North	Rate_20	50	47	46	44	54	57
Union North	Rate_25	80	78	79	78	55	52
Union North	Rate_100	10	11	11	11	12	12
Union South	Rate_M4	156	165	185	208	232	239
Union South	Rate_M5	80	72	59	38	42	38
Union South	Rate_M7	28	28	30	30	36	47
Union South	Rate_M9	2	2	3	3	4	4
Union South	Rate_M10	2	2	2	3	2	2
Union South	Rate_T1	37	37	37	37	37	39
Union South	Rate_T2	22	22	23	24	25	25
Union South	Rate_T3	1	1	1	1	1	1
<b>Total</b>		<b>852</b>	<b>881</b>	<b>885</b>	<b>891</b>	<b>905</b>	<b>969</b>

- ii. Please see response to Exhibit I.7.EGI.STAFF.17a.
- iii. For the EGD rate zone and Union rate zones' customers who were DSM participants by rate class for the period of 2015-2019 please see the response to Exhibit I.5.EGI.GEC.5.

b)

- i. Table 2 below indicates the EGD rate zone and the Union rate zones' annual average number of customer by rate class based on January-2021 month-end

Table 2

General Service/Rate Zone	Rate Class	Jan-21
EGD	Rate 1	2,080,545
EGD	Rate 6	170,071
EGD	Rate 9	2
Union South	M1	1,163,052
Union South	M2	7,863
Union North	R01	359,753
Union North	R10	2,183
<b>Total</b>		<b>3,783,469</b>

Contract Market / Rate Zone	Rate Class	Jan-21
EGD	Rate 100	13
EGD	Rate 110	377
EGD	Rate 115	21
EGD	Rate 125	4
EGD	Rate 135	42
EGD	Rate 145	19
EGD	Rate 170	22
EGD	Rate 200	1
EGD	Rate 300	1
EGD	Rate 315	1
Union North	Rate_20	57
Union North	Rate_25	69
Union North	Rate_100	12
Union South	Rate_M4	234
Union South	Rate_M5	38
Union South	Rate_M7	52
Union South	Rate_M9	4
Union South	Rate_M10	3
Union South	Rate_T1	39
Union South	Rate_T2	25
Union South	Rate_T3	1
<b>Total</b>		<b>1035</b>



- ii. See the response to Exhibit I.7.EGI.STAFF.17a.
- iii. Table 3 below indicates the total number of customers in the EGD rate zone and Union rate zone who were DSM participants by rate class from 2015-2020

**Table 3**

<b>General Service</b>	<b>Rate Class</b>	<b>Unique Customers</b>
EGD	RATE 1	164,424
EGD	RATE 6	6,972
Union South	Rate M1	90,624
Union South	Rate M2	1,598
Union North	Rate 01	13,415
Union North	Rate 10	374
<b>Total</b>		<b>277,407</b>
<b>Contract Market</b>	<b>Rate Class</b>	<b>Unique Customers</b>
EGD	RATE 100	5
EGD	RATE 110	167
EGD	RATE 115	12
EGD	RATE 135	24
EGD	RATE 145	5
EGD	RATE 170	11
Union North	Rate 20	36
Union North	Rate 100	15
Union South	Rate M4	181
Union South	Rate M5	43
Union South	Rate M7	39
Union South	Rate T1	32
Union South	Rate T2	21
<b>Total</b>		<b>591</b>

**NOTES:**

- Table 3 includes a customer count which is not the same as the unit or participant count. In some cases, multiple units can be installed for a single customer (e.g. prescriptive programs). In other cases, programs did not report on participant numbers but are included here to be responsive (e.g. EGD Low Income TAPS).
- Table 3 includes only unique participants. Participants who participated in multiple years were only counted once.
- Rate class categorization for this analysis was determined based on the customers current rate class in order to answer b) iii and b) iv and is not necessarily the same rate class the customer was in at the time the project was implemented. The EGD rate zone home labeling program delivered in 2015 was excluded.

- iv. Table 4 below indicates the total number of customers in the EGD rate zone and Union rate zone who were DSM participants by rate class from 2015-2020, more than once

**Table 4**

<b>General Service</b>	<b>Rate Class</b>	<b>Repeat Customers</b>
EGD	RATE 1	9,837
EGD	RATE 6	1,805
Union South	Rate M1	6,460
Union South	Rate M2	530
Union North	Rate 01	1,529
Union North	Rate 10	116
<b>Total</b>		<b>20,277</b>
<b>Contract Market</b>	<b>Rate Class</b>	<b>Repeat Customers</b>
EGD	RATE 100	4
EGD	RATE 110	97
EGD	RATE 115	11
EGD	RATE 135	18
EGD	RATE 145	4
EGD	RATE 170	6
Union North	Rate 20	25
Union North	Rate 100	14
Union South	Rate M4	149
Union South	Rate M5	29
Union South	Rate M7	39
Union South	Rate T1	28
Union South	Rate T2	20
<b>Total</b>		<b>444</b>

**NOTES:**

- Table 4 includes a customer count which is not the same as the unit or participant count. In some cases, multiple units can be installed for a single customer (e.g. prescriptive programs). In other cases, programs did not report on participant numbers but are included here to be responsive (e.g. EGD Low Income TAPS).
- Rate class categorization for this analysis was determined based on the customers current rate class in order to answer b) iii and b) iv and is not necessarily the same rate class the customer was in at the time the project was implemented. The EGD rate zone home labeling program delivered in 2015 was excluded.

- v. Table 5 below indicates the total number of customers in the EGD rate zone and Union rate zone who were not DSM participants by rate class from 2015-2020

Table 5

Customers That Have		
General Service	Rate Class	not Participated
EGD	RATE 1	1,916,121
EGD	RATE 6	163,099
Union South	Rate M1	1,072,428
Union South	Rate M2	6,265
Union North	Rate 01	346,338
Union North	Rate 10	1,809
<b>Total</b>		<b>3,506,060</b>
Customers That Have		
Contract Market	Rate Class	not Participated
EGD	RATE 100	8
EGD	RATE 110	210
EGD	RATE 115	9
EGD	RATE 135	18
EGD	RATE 145	14
EGD	RATE 170	11
Union North	Rate 20	21
Union North	Rate 100	-3
Union South	Rate M4	53
Union South	Rate M5	-5
Union South	Rate M7	13
Union South	Rate T1	7
Union South	Rate T2	4
<b>Total</b>		<b>360</b>

- c) Enbridge Gas serves over 300,000 customers that comprise of both contract and non-contract rate accounts through its commercial and industrial programs. Although Enbridge Gas makes attempts to reach as many customers as possible in a given year through Energy Solutions Advisors, newsletters, trade events and by extension service providers (contractors/distributors/retailers of high-efficient equipment), it is not reasonable to expect Enbridge Gas to track every interaction with every account in a given year. That said, Enbridge Gas can provide insight into some of the main reasons why contract rate customers who have been contacted by Enbridge Gas choose not to participate in the program, they include:

- 1) Most customers have limited available funding each year, and other investment opportunities can be prioritized over energy efficiency projects as a result of low natural gas rates.

- 2) Customer's limited resources (people and time).

Due to limited tolerance for disruption in operations while installing equipment, most facilities can only execute a limited number of projects each year. As a result, productivity improvement, and process or operational change projects, or projects with high electrical savings typically take priority over natural gas efficiency projects.

- 3) Reliability issues and concerns about performance of energy efficient equipment

Producing products safely, on time and on budget is what is most important to facilities. Adding a new piece of equipment represents a risk, which can negatively impact the decision to invest in a new technology.

- 4) Other uncontrollable interruptions from time to time, such as labor/supply shortage, key staffing changes, pandemic impact, etc.

It is unlikely an Energy Solutions Advisor will visit a customer site and not identify an opportunity to improve efficiencies. Whether or not that opportunity is a priority for the individual customer account when measured against all other possible investment opportunities available is what more likely results in the customer choosing not to participate in the offering in a given year. A customer may not participate in one year, yet the same customer may participate the following year due to a change in their individual circumstances related to one of the items listed above.

- d) Enbridge Gas must achieve increasingly higher gas savings targets year over year, which requires Enbridge Gas to not only find ways to drive incremental savings among DSM participants, but also reach a broader group of customers who have not previously participated in programming. There is no specific incentive in the proposed DSM framework that incentivizes Enbridge Gas to seek out new contract class customers for its DSM programming as opposed to re-visiting customers that have already participated.
- e) Contract rate customers are large gas users with multiple heating systems and opportunities to drive efficiencies. As stated above, in order to earn incentives Enbridge Gas must achieve higher natural gas savings results year over year, which requires helping previous participants drive incremental savings as well as reaching a broader group of customers who have not previously participated in programming.

Enbridge Gas does not prioritize previous participants over non-participants, all customers are provided an equal opportunity to participate in the program.

There is no direct dis-incentive in the proposed DSM framework that disincentivizes Enbridge Gas from revisiting contract class customers that they have already previously engaged in DSM programming with.



ENBRIDGE GAS INC.

Undertaking Response to Ontario Greenhouse Vegetable Growers (OGVG)

Undertaking

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With respect to exhibit I.6.EGI.OGVG.1, Tables 1 to 5, to update those tables to include 2021 results for the contract rate class.

Response:

Tables 1 to 5 are updated for contract rate classes below:

Table 1 below indicates the EGD rate zones and Union rate zones annual average number of contract customers by rate class for the period of 2015-2021:

Table 1

<b>Contract Market / Rate Zone</b>	<b>Rate Class</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
EGD	Rate 100	2	2	3	3	4	9	15
EGD	Rate 110	227	269	263	274	282	335	392
EGD	Rate 115	25	27	27	26	22	20	21
EGD	Rate 125	5	5	4	4	4	4	4
EGD	Rate 135	42	45	45	43	43	40	42
EGD	Rate 145	52	38	37	33	26	22	19
EGD	Rate 170	26	25	26	27	23	21	22
EGD	Rate 200	1	1	1	1	-	1	1
EGD	Rate 300	2	2	2	2	1	2	1
EGD	Rate 315	2	2	1	1	-	-	1
Union North	Rate_20	50	47	46	44	54	57	58
Union North	Rate_25	80	78	79	78	55	52	52
Union North	Rate_100	10	11	11	11	12	12	12
Union South	Rate_M4	156	165	185	208	232	239	230
Union South	Rate_M5	80	72	59	38	42	38	39
Union South	Rate_M7	28	28	30	30	36	47	56
Union South	Rate_M9	2	2	3	3	4	4	4
Union South	Rate_M10	2	2	2	3	2	2	2
Union South	Rate_T1	37	37	37	37	37	39	39
Union South	Rate_T2	22	22	23	24	25	25	25
Union South	Rate_T3	1	1	1	1	1	1	1
<b>Total</b>		<b>852</b>	<b>881</b>	<b>885</b>	<b>891</b>	<b>905</b>	<b>969</b>	<b>1036</b>

Table 2 indicates the EGD rate zone and the Union rate zones' annual average number of contract customer by rate class based on January-2022 month-end:

Table 2

<b>Contract Market / Rate Zone</b>	<b>Rate Class</b>	<b>Jan-22</b>
EGD	Rate 100	16
EGD	Rate 110	412
EGD	Rate 115	18
EGD	Rate 125	4
EGD	Rate 135	41
EGD	Rate 145	18
EGD	Rate 170	25
EGD	Rate 200	1
EGD	Rate 300	1
EGD	Rate 315	1
Union North	Rate_20	60
Union North	Rate_25	70
Union North	Rate_100	12
Union South	Rate_M4	227
Union South	Rate_M5	38
Union South	Rate_M7	62
Union South	Rate_M9	4
Union South	Rate_M10	3
Union South	Rate_T1	39
Union South	Rate_T2	25
Union South	Rate_T3	1
<b>Total</b>		<b>1078</b>



Table 3 below indicates the total number of contract customers in the EGD rate zone and Union rate zones who were DSM participants by rate class from 2015-2021:

Table 3

<b>Contract Market</b>	<b>Rate Class</b>	<b>Unique Customers</b>
EGD	RATE 100	6
EGD	RATE 110	183
EGD	RATE 115	12
EGD	RATE 135	26
EGD	RATE 145	5
EGD	RATE 170	11
Union North	Rate 20	38
Union North	Rate 100	15
Union South	Rate M4	180
Union South	Rate M5	40
Union South	Rate M7	55
Union South	Rate T1	31
Union South	Rate T2	22
<b>Total</b>		<b>624</b>

- NOTES:
- Table 3 includes a customer count which is not the same as the unit or participant count. In some cases, multiple units can be installed for a single customer (e.g. prescriptive programs). In other cases, programs did not report on participant numbers but are included here to be responsive (e.g. EGD Low Income TAPS).
  - Table 3 includes only unique participants. Participants who participated in multiple years were only counted once.
  - Rate class categorization for this analysis was determined based on the customers current rate class in order to answer b) iii and b) iv and is not necessarily the same rate class the customer was in at the time the project was implemented. The EGD rate zone home labeling program delivered in 2015 was excluded.

Table 4 below indicates the total number of customers in the EGD rate zone and Union rate zones who were DSM participants by rate class from 2015-2021, more than once

Table 4

<b>Contract Market</b>	<b>Rate Class</b>	<b>Repeat Customers</b>
EGD	RATE 100	5
EGD	RATE 110	113
EGD	RATE 115	12
EGD	RATE 135	20
EGD	RATE 145	4
EGD	RATE 170	6
Union North	Rate 20	29
Union North	Rate 100	15
Union South	Rate M4	149
Union South	Rate M5	27
Union South	Rate M7	55
Union South	Rate T1	28
Union South	Rate T2	21
<b>Total</b>		<b>484</b>

- NOTES:
- Table 4 includes a customer count which is not the same as the unit or participant count. In some cases, multiple units can be installed for a single customer (e.g. prescriptive programs). In other cases, programs did not report on participant numbers but are included here to be responsive (e.g. EGD Low Income TAPS).
  - Rate class categorization for this analysis was determined based on the customers current rate class in order to answer b) iii and b) iv and is not necessarily the same rate class the customer was in at the time the project was implemented. The EGD rate zone home labeling program delivered in 2015 was excluded.

Table 5 below indicates the total number of customers in the EGD rate zone and Union rate zones who were not DSM participants by rate class from 2015-2021

Table 5

<b>Contract Market</b>	<b>Rate Class</b>	<b>Customers That Have not Participated</b>
EGD	RATE 100	10
EGD	RATE 110	229
EGD	RATE 115	6
EGD	RATE 135	15
EGD	RATE 145	13
EGD	RATE 170	14
Union North	Rate 20	22
Union North	Rate 100	-3
Union South	Rate M4	47
Union South	Rate M5	-2
Union South	Rate M7	7
Union South	Rate T1	8
Union South	Rate T2	3
<b>Total</b>		<b>369</b>



ENBRIDGE GAS INC.

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To consider the issues surrounding a funding solution where contract rate customers through their contracting with Enbridge are able to essentially fund their DSM investments using the savings that they experience over an appropriate period of time, similar in nature to how contract rate customers can fund their what otherwise would be their capital contribution requirements through the hourly allocation factor.

Response:

Enbridge Gas does not believe financing DSM investments, which are assets owned and operated by the contract rate customer, is an appropriate activity for a utility to undertake. The DSM investments made by a customer are in assets that are also owned by the customer. This contrasts with the financing of capital contributions for distribution assets that are owned by the utility.

There are numerous customer financing options available in the market today, and as such, the availability of financing is not considered a barrier for contract rate participation in the DSM programs.



ENBRIDGE GAS INC.

First Tracks Consulting Service Inc. Answers to  
Interrogatories from Ontario Greenhouse Vegetable Growers (OGVG)

**Exhibit I.7.EGI.OGVG.2**

Ref: EGI Reply Evidence pages 17-18.  
EB-2016-0186 Exhibit B.CCC.3

Preamble:

EGI Reply Evidence pages 17-18: *As mentioned above, large regulatory asset balances create risks for Enbridge's investors should future OEB Panels change their policies supporting DSM programs. These regulatory assets also pose risks should future OEB Panels change their policy supporting the natural gas utility industry in general. For example, the EFG report in this proceeding recommends that Ontario consider "whether future building codes should allow for any fossil fuel heating, water heating, cooking and other gas end uses." If regulatory policies do actually transition away from natural gas in the future, some investors and regulators worry that a mismanaged transition could have negative consequences on customers and investors. For example, some regulators fear that large scale electrification could result in spiraling gas rates, as the fixed costs of the gas system are spread over fewer remaining customers. This is especially worrisome if higher income customers drive early electrification, leaving low income or other disadvantaged groups to shoulder ongoing costs. Investors might also worry that a mismanaged transition would result in largescale asset write offs in attempts to lessen rate impacts. These investors might worry that regulatory assets not backed by physical property would be at higher risk for write-downs. To mitigate these risks, some regulators are already recommending that gas asset lives be lowered to accelerate the draw-down of unamortized asset balances.*

EB-2016-0186 Exhibit B.CCC.3: *In light of the uncertainty caused by Cap and Trade and the Climate Change Action Plan, Union's plan is to review depreciation from a system-wide basis as part of its 2019 rebasing application.*

- a) Please confirm that, while noting the potential impact on rates of lower volumes and declining customer numbers in the future, First Tracks Consulting Services Inc. did not attempt to forecast such impacts in conjunction with the impact of the possible amortization of DSM related spending.
- b) Please confirm that, other than delays associated with the tracking of variances in DSM-related deferral and variance accounts for future disposition, there is no concern about intergenerational equity or cumulative future rate impacts associated with EGI's proposal to continue to expense all DSM related costs.

- c) In EB-2016-0186 Union proposed to shorten the asset life of the Panhandle Reinforcement Project in response to concerns about future declining load and customer numbers and asserted that it would be reviewing depreciation from a system wide-basis because of those same concerns on rebasing in 2019. Now that Union is part of the amalgamated entity EGI and rebasing has been deferred to 2024, please provide EGI's current position on the risks associated with declining load and customer numbers and its plans to address those risks as part of its next rebasing application, including any plans to seek approval of shortened amortization periods.

Response:

- a) Confirmed.
- b) Please see discussion of intergenerational equity provided in response to Exhibit I.7.EGI.SEC.5. and Exhibit I.7.EGI.SEC.6.
- c) Enbridge Gas Response:

Enbridge Gas notes that this interrogatory is out of scope for this proceeding and therefore cannot respond.

**Exhibit I.7.EGI.OGVG.3**

Ref: EGI Reply Evidence page 31.

Preamble:

*While the current OEB Panel clearly supports DSM, investors are aware that legislators and regulators in Ohio, New Hampshire, and other jurisdictions have changed course and greatly reduced DSM funding in recent years.*

- a) Please provide a summary of the drivers that have caused legislators and regulators in Ohio, New Hampshire and other jurisdictions to greatly reduce DSM funding in recent years. Please comment on the applicability of those drivers to Ontario.

Response:

- a) I have not analyzed the drivers that caused legislators and regulators to adopt these funding policies.



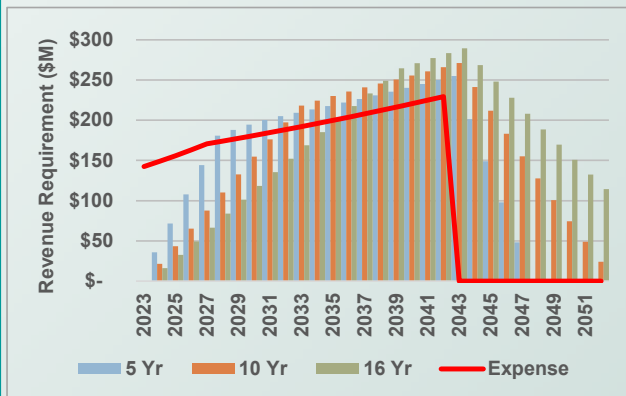


# Impact of Amortization Term

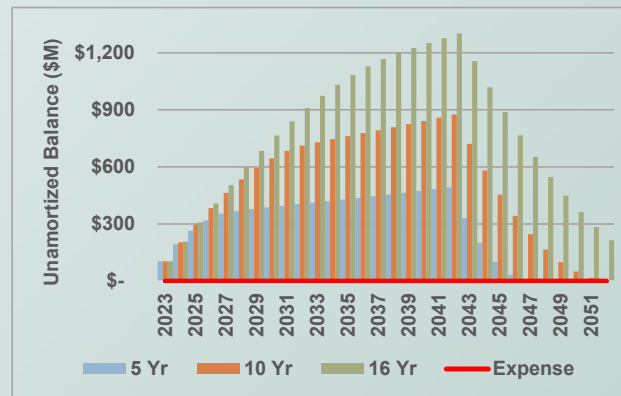
## ➤ Longer amortization terms:

- Decrease revenue requirements in early years (allowing more head room for larger DSM budgets)
- Increase revenue requirement in later years (but delaying crossover point against expense treatment)
- Increase unamortized asset balances (and utility earnings)

Revenue Requirement



Unamortized Asset Balance



Cost of Capital





Legacy Rate Zone	Rate Class	2015			2016			2017			Number of Unique Participants
		Number of Unique Participants	Net Annual Natural Gas Savings (m3)	Net Cumulative Natural Gas Savings (m3)	Number of Unique Participants	Net Annual Natural Gas Savings (m3)	Net Cumulative Natural Gas Savings (m3)	Number of Unique Participants	Net Annual Natural Gas Savings (m3)	Net Cumulative Natural Gas Savings (m3)	
EGD	Rate 1	7,538	7,891,861	130,482,477	31,204	19,168,044	303,878,405	26,676	9,484,530	211,579,449	31,929
EGD	Rate 6	1,442	29,863,690	552,838,932	1,423	23,410,681	413,856,216	1,481	24,593,456	432,135,696	1,104
EGD	Rate 9	0	0	0	0	0	0	0	0	0	0
EGD	Rate 100	1	0	0	1	0	0	2	0	0	1
EGD	Rate 110	56	5,011,186	81,257,329	58	3,431,226	57,674,860	49	5,578,858	81,327,618	38
EGD	Rate 115	5	4,223,478	30,600,665	6	1,193,952	11,841,162	7	1,934,740	23,224,652	6
EGD	Rate 125	0	0	0	0	0	0	0	0	0	0
EGD	Rate 135	3	159,609	3,060,528	5	152,691	3,053,811	8	1,468,951	26,940,684	10
EGD	Rate 145	2	768,864	7,736,047	1	73,705	442,227	2	17,017	241,448	2
EGD	Rate 170	6	1,052,867	20,189,471	7	3,093,290	46,367,361	5	939,122	11,721,782	1
EGD	Rate 200	0	0	0	0	0	0	0	0	0	0
EGD	Rate 300	0	0	0	0	0	0	0	0	0	0
<b>Subtotal - EGD Rate Zone</b>		<b>9,053</b>	<b>48,971,556</b>	<b>826,165,451</b>	<b>32,705</b>	<b>50,523,589</b>	<b>837,114,042</b>	<b>28,230</b>	<b>44,016,674</b>	<b>787,171,329</b>	<b>33,091</b>
Union South	M1	22,698	8,920,216	165,934,101	8,043	8,761,471	199,525,829	14,313	12,694,913	285,003,163	16,422
Union South	M2	376	12,832,957	236,620,316	335	9,197,168	174,266,014	344	9,376,092	157,961,343	321
Union South	M4	77	12,055,087	185,194,844	60	7,200,772	122,125,573	83	19,309,735	294,502,187	68
Union South	M5	21	3,743,002	48,893,547	15	6,786,058	101,043,051	13	3,585,247	51,958,885	11
Union South	M7	29	14,955,473	228,537,027	23	10,262,569	153,973,313	25	3,898,032	44,887,295	24
Union South	M9	0	0	0	0	0	0	0	0	0	0
Union South	M10	0	0	0	0	0	0	0	0	0	0
Union South	T1	17	8,842,211	121,416,767	12	3,242,461	53,664,186	22	6,268,014	109,695,055	16
Union South	T2	16	50,153,666	603,578,141	14	6,559,202	78,053,652	14	7,968,530	99,801,882	15
Union South	T3	0	0	0	0	0	0	0	0	0	0
<b>Subtotal - Union South Rate Zone</b>		<b>23,234</b>	<b>111,502,613</b>	<b>1,590,174,743</b>	<b>8,502</b>	<b>52,009,702</b>	<b>882,651,619</b>	<b>14,814</b>	<b>63,100,563</b>	<b>1,043,809,810</b>	<b>16,877</b>
Union North	R01	2,656	1,726,629	34,164,933	893	1,623,133	35,973,641	1,970	2,378,398	55,848,593	1,773
Union North	R10	72	1,359,418	28,201,995	67	1,206,386	25,422,371	112	2,322,547	44,155,164	68
Union North	R20	17	2,956,852	43,791,103	13	917,634	13,592,977	13	702,776	12,923,442	12
Union North	R25	0	0	0	0	0	0	0	0	0	0
Union North	R100	7	7,531,680	54,432,706	6	212,851	1,794,650	7	1,505,937	26,002,233	5
<b>Subtotal - Union North Rate Zone</b>		<b>2,752</b>	<b>13,574,580</b>	<b>160,590,737</b>	<b>979</b>	<b>3,960,004</b>	<b>76,783,639</b>	<b>2,102</b>	<b>6,909,659</b>	<b>138,929,432</b>	<b>1,858</b>
<b>Total</b>		<b>35,039</b>	<b>174,048,749</b>	<b>2,576,930,931</b>	<b>42,186</b>	<b>106,493,294</b>	<b>1,796,549,300</b>	<b>45,146</b>	<b>114,026,896</b>	<b>1,969,910,572</b>	<b>51,826</b>
Contract Class related DSM (excluding T2 and R100)		234	53,768,630		201	36,354,357		229	43,702,491		189
Contract Class related DSM as % of total (excluding T2 and R100)		0.67%	30.89%		0.48%	34.14%		0.51%	38.33%		0.36%
Total Industrial Custom (I.5.EGI_GEC6_Attachment 1)		309			336			397			269
Industrial Custom-Contract Classes		?			?			?			?

2018		
Legacy Rate Zone	Rate Class	Net Annual Natural Gas Savings (m3)
EGD	Rate 1	9,903,642
EGD	Rate 6	25,144,195
EGD	Rate 9	0
EGD	Rate 100	0
EGD	Rate 110	2,303,478
EGD	Rate 115	1,001,500
EGD	Rate 125	0
EGD	Rate 135	1,817,063
EGD	Rate 145	1,201,214
EGD	Rate 170	855,513
EGD	Rate 200	0
EGD	Rate 300	0
<b>Subtotal - EGD Rate Zone</b>		<b>42,226,605</b>
Union South	M1	14,040,628
Union South	M2	9,105,916
Union South	M4	19,330,137
Union South	M5	712,452
Union South	M7	6,032,908
Union South	M9	0
Union South	M10	0
Union South	T1	2,325,576
Union South	T2	7,510,553
Union South	T3	0
<b>Subtotal - Union South Rate Zone</b>		<b>59,058,170</b>
Union North	R01	2,373,856
Union North	R10	1,633,299
Union North	R20	2,565,182
Union North	R25	0
Union North	R100	545,191
<b>Subtotal - Union North Rate Zone</b>		<b>7,117,528</b>
<b>Total</b>		<b>108,402,303</b>

Contract Class related DSM (excluding T2 and R100) 38,145,023  
 Contract Class related DSM as % of total (excluding T2 and R100) 35.19%

Total Industrial Custom (I.5.EGI\_GEC6\_Attachment 1)  
 Industrial Custom-Contract Classes

Legacy Rate Zone	Rate Class	2019				2020			2021		
		Net Cumulative Natural Gas Savings (m3)	Number of Unique Participants	Net Annual Natural Gas Savings (m3)	Net Cumulative Natural Gas Savings (m3)	Number of Unique Participants	Net Annual Natural Gas Savings (m3)	Net Cumulative Natural Gas Savings (m3)	Number of Unique Participants	Net Annual Natural Gas Savings (m3)	Net Cumulative Natural Gas Savings (m3)
EGD	Rate 1	217,259,492	34,148	12,402,647	283,196,583	38,771	11,395,298	247,553,835	39,777	13,020,858	286,505,160
EGD	Rate 6	460,096,256	1,319	28,772,324	495,950,401	1,305	16,897,166	312,536,900	1,573	20,466,211	351,644,225
EGD	Rate 9	0	0	0	0	0	0	0	0	0	0
EGD	Rate 100	0	3	969,652	19,845,882	2	309,302	5,067,113	4	589,283	9,614,950
EGD	Rate 110	37,697,726	40	3,843,836	68,730,005	46	5,748,190	107,906,275	39	5,463,531	88,952,469
EGD	Rate 115	18,018,625	6	4,823,891	96,947,274	5	2,139,955	40,772,570	20	3,781,492	61,312,709
EGD	Rate 125	0	0	0	0	0	0	0	0	0	0
EGD	Rate 135	30,852,172	8	1,007,998	20,037,306	15	2,628,878	48,783,232	13	2,587,278	41,893,750
EGD	Rate 145	29,788,545	1	0	0	1	0	0	1	6,985	123,530
EGD	Rate 170	13,761,541	3	440,376	3,837,699	4	631,906	8,430,540	13	839,406	14,014,324
EGD	Rate 200	0	0	0	0	0	0	0	0	0	0
EGD	Rate 300	0	0	0	0	0	0	0	0	0	0
<b>Subtotal - EGD Rate Zone</b>		<b>807,474,357</b>	<b>35,528</b>	<b>52,260,726</b>	<b>988,545,151</b>	<b>40,149</b>	<b>39,750,695</b>	<b>771,050,466</b>	<b>41,439</b>	<b>46,755,043</b>	<b>854,061,117</b>
Union South	M1	313,088,818	16,484	13,768,499	284,194,387	16,933	7,946,517	174,510,196	23,774	10,044,821	208,687,689
Union South	M2	156,974,059	287	9,668,000	166,165,257	333	3,866,165	64,600,761	258	6,893,621	111,923,626
Union South	M4	295,001,218	63	13,188,052	207,700,555	43	12,704,088	186,878,841	115	8,393,730	140,310,103
Union South	M5	7,379,848	12	648,119	8,950,741	8	88,111	1,190,529	4	459,414	7,551,672
Union South	M7	90,901,060	28	12,142,912	202,368,994	24	16,080,667	236,539,054	98	8,845,396	146,183,426
Union South	M9	0	0	0	0	0	0	0	0	0	0
Union South	M10	0	0	0	0	0	0	0	0	0	0
Union South	T1	37,133,165	13	655,167	11,638,326	9	1,228,200	23,462,576	17	2,035,854	33,188,087
Union South	T2	78,173,242	16	6,115,931	53,506,439	13	7,239,413	56,672,031	16	8,769,785	90,935,325
Union South	T3	0	0	0	0	0	0	0	0	0	0
<b>Subtotal - Union South Rate Zone</b>		<b>978,651,411</b>	<b>16,903</b>	<b>56,186,681</b>	<b>934,524,698</b>	<b>17,363</b>	<b>49,153,160</b>	<b>743,853,989</b>	<b>24,282</b>	<b>45,442,621</b>	<b>738,779,929</b>
Union North	R01	52,656,343	3,029	2,646,538	58,910,128	3,859	1,506,393	30,998,363	4,979	2,003,097	38,606,717
Union North	R10	30,927,459	71	1,674,723	36,000,471	63	482,775	9,188,220	82	785,112	12,983,873
Union North	R20	51,258,395	17	1,991,178	39,017,465	8	371,215	7,158,019	31	5,333,680	86,318,926
Union North	R25	0	0	0	0	0	0	0	0	0	0
Union North	R100	11,023,654	5	930,981	18,863,753	9	4,974,444	69,975,435	5	2,899,431	30,064,675
<b>Subtotal - Union North Rate Zone</b>		<b>145,865,852</b>	<b>3,122</b>	<b>7,243,420</b>	<b>152,791,816</b>	<b>3,939</b>	<b>7,334,827</b>	<b>117,320,037</b>	<b>5,097</b>	<b>11,021,320</b>	<b>167,974,191</b>
<b>Total</b>		<b>1,931,991,619</b>	<b>55,553</b>	<b>115,690,827</b>	<b>2,075,861,664</b>	<b>61,451</b>	<b>96,238,682</b>	<b>1,632,224,492</b>	<b>70,818</b>	<b>103,218,984</b>	<b>1,760,815,237</b>

Contract Class related DSM (excluding T2 and R100)  
 Contract Class related DSM as % of total (excluding T2 and R100)

194  
 0.35%

39,711,183  
 34.33%

165  
 0.27%

41,930,512  
 43.57%

354  
 0.50%

38,336,048  
 37.14%

Total Industrial Custom (I.5.EGI\_GEC6\_Attachment 1)  
 Industrial Custom-Contract Classes

281  
 ?

204  
 ?

226  
 ?

Legacy Rate Zone	Rate Class	2022			2023			2024		
		Number of Unique Participants	Net Annual Natural Gas Savings (m3)	Net Cumulative Natural Gas Savings (m3)	Number of Projects/Units	Net Annual Natural Gas Savings (m3)	Net Cumulative Natural Gas Savings (m3)	Number of Projects/Units	Net Annual Natural Gas Savings (m3)	Net Cumulative Natural Gas Savings (m3)
EGD	Rate 1	32,358	11,425,165	251,671,318	37,333	10,239,236	216,774,267	38,200	10,475,967	221,777,970
EGD	Rate 6	1,526	21,189,276	367,189,089	3,443	25,637,114	438,005,625	3,497	26,141,086	446,157,056
EGD	Rate 9	0	0	0	0	0	0	0	0	0
EGD	Rate 100	4	602,657	9,837,262	8	655,763	10,118,716	8	668,708	10,317,888
EGD	Rate 110	40	5,583,915	90,945,910	85	6,042,037	92,951,835	86	6,161,550	94,786,271
EGD	Rate 115	20	3,860,233	62,594,154	44	4,132,212	63,034,777	45	4,214,666	64,291,883
EGD	Rate 125	0	0	0	0	0	0	0	0	0
EGD	Rate 135	13	2,640,127	42,749,496	29	2,816,252	42,853,294	29	2,872,577	43,710,360
EGD	Rate 145	1	7,341	130,458	2	9,251	167,829	2	9,396	170,457
EGD	Rate 170	14	864,353	14,452,730	24	995,046	15,976,416	24	1,013,906	16,276,490
EGD	Rate 200	0	0	0	0	0	0	0	0	0
EGD	Rate 300	0	0	0	0	0	0	0	0	0
<b>Subtotal - EGD Rate Zone</b>		<b>33,975</b>	<b>46,173,066</b>	<b>839,570,416</b>	<b>40,966</b>	<b>50,526,911</b>	<b>879,882,760</b>	<b>41,892</b>	<b>51,557,857</b>	<b>897,488,376</b>
Union South	M1	19,406	9,077,192	187,965,096	22,796	8,245,274	164,309,488	23,319	8,449,847	168,182,251
Union South	M2	247	7,031,063	114,745,147	698	7,291,044	113,940,306	709	7,449,138	116,314,754
Union South	M4	123	8,649,901	144,827,254	201	9,893,420	158,723,898	204	10,082,088	161,725,740
Union South	M5	4	470,859	7,745,865	8	522,150	8,161,615	8	532,330	8,319,909
Union South	M7	103	9,080,252	150,221,139	177	10,204,899	160,998,359	180	10,402,009	164,087,194
Union South	M9	0	0	0	0	0	0	0	0	0
Union South	M10	0	0	0	0	0	0	0	0	0
Union South	T1	17	2,081,705	33,950,894	39	2,256,452	34,821,457	39	2,300,930	35,505,871
Union South	T2	15	8,439,433	87,509,852	66	6,989,244	69,892,438	67	7,129,029	71,290,287
Union South	T3	0	0	0	0	0	0	0	0	0
<b>Subtotal - Union South Rate Zone</b>		<b>19,915</b>	<b>44,830,404</b>	<b>726,965,247</b>	<b>23,984</b>	<b>45,402,483</b>	<b>710,847,559</b>	<b>24,527</b>	<b>46,345,371</b>	<b>725,426,007</b>
Union North	R01	4,386	1,900,093	36,688,884	4,729	1,832,552	34,686,295	4,833	1,880,540	35,511,079
Union North	R10	76	805,536	13,445,383	178	814,749	13,041,439	181	837,299	13,360,986
Union North	R20	31	5,442,172	88,077,605	79	5,790,464	88,137,584	80	5,906,122	89,897,918
Union North	R25	0	0	0	0	0	0	0	0	0
Union North	R100	5	2,790,212	28,932,158	22	2,310,756	23,107,559	22	2,356,971	23,569,710
<b>Subtotal - Union North Rate Zone</b>		<b>4,498</b>	<b>10,938,013</b>	<b>167,144,030</b>	<b>5,007</b>	<b>10,748,521</b>	<b>158,972,877</b>	<b>5,117</b>	<b>10,980,932</b>	<b>162,339,693</b>
<b>Total</b>		<b>58,389</b>	<b>101,941,483</b>	<b>1,733,679,692</b>	<b>69,958</b>	<b>106,677,914</b>	<b>1,749,703,196</b>	<b>71,535</b>	<b>108,884,161</b>	<b>1,785,254,075</b>

Contract Class related DSM (excluding T2 and R100)	371	39,283,513	694	43,317,946	707	44,164,282
Contract Class related DSM as % of total (excluding T2 and R100)	0.64%	38.54%	0.99%	40.61%	0.99%	40.56%

Total Industrial Custom (I.5.EGI_GEC6_Attachment 1)	231	511	521
Industrial Custom-Contract Classes	?	?	?

Legacy Rate Zone	Rate Class	2025			2026			2027		
		Number of Projects/Units	Net Annual Natural Gas Savings (m3)	Net Cumulative Natural Gas Savings (m3)	Number of Projects/Units	Net Annual Natural Gas Savings (m3)	Net Cumulative Natural Gas Savings (m3)	Number of Projects/Units	Net Annual Natural Gas Savings (m3)	Net Cumulative Natural Gas Savings (m3)
EGD	Rate 1	38,964	10,685,486	226,213,529	39,744	10,899,196	230,737,800	40,538	11,117,180	235,352,556
EGD	Rate 6	3,579	26,725,158	455,692,697	3,626	27,132,161	463,531,551	3,698	27,674,805	472,802,182
EGD	Rate 9	0	0	0	0	0	0	0	0	0
EGD	Rate 100	9	682,082	10,524,246	9	695,724	10,734,730	9	709,638	10,949,425
EGD	Rate 110	88	6,284,781	96,681,997	90	6,410,476	98,615,637	92	6,538,686	100,587,949
EGD	Rate 115	45	4,298,959	65,577,721	46	4,384,938	66,889,276	47	4,472,637	68,227,061
EGD	Rate 125	0	0	0	0	0	0	0	0	0
EGD	Rate 135	30	2,930,029	44,584,567	30	2,988,629	45,476,259	31	3,048,402	46,385,784
EGD	Rate 145	2	9,584	173,866	2	9,776	177,344	2	9,971	180,891
EGD	Rate 170	25	1,034,184	16,602,020	25	1,054,868	16,934,060	26	1,075,965	17,272,742
EGD	Rate 200	0	0	0	0	0	0	0	0	0
EGD	Rate 300	0	0	0	0	0	0	0	0	0
<b>Subtotal - EGD Rate Zone</b>		<b>42,742</b>	<b>52,650,264</b>	<b>916,050,643</b>	<b>43,572</b>	<b>53,575,769</b>	<b>933,096,656</b>	<b>44,443</b>	<b>54,647,284</b>	<b>951,758,589</b>
Union South	M1	23,790	8,645,111	171,808,562	24,255	8,763,336	174,697,960	24,740	8,938,602	178,191,919
Union South	M2	726	7,615,903	118,818,872	734	7,731,205	120,825,088	748	7,885,829	123,241,590
Union South	M4	208	10,283,730	164,960,255	212	10,489,404	168,259,460	217	10,699,192	171,624,949
Union South	M5	8	542,977	8,486,307	8	553,837	8,656,033	8	564,913	8,829,154
Union South	M7	184	10,610,049	167,368,938	188	10,822,250	170,716,317	191	11,038,695	174,130,643
Union South	M9	0	0	0	0	0	0	0	0	0
Union South	M10	0	0	0	0	0	0	0	0	0
Union South	T1	40	2,346,948	36,215,989	41	2,393,887	36,940,309	42	2,441,765	37,679,115
Union South	T2	69	7,271,609	72,716,092	70	7,417,041	74,170,414	72	7,565,382	75,653,822
Union South	T3	0	0	0	0	0	0	0	0	0
<b>Subtotal - Union South Rate Zone</b>		<b>25,026</b>	<b>47,316,328</b>	<b>740,375,016</b>	<b>25,508</b>	<b>48,170,961</b>	<b>754,265,581</b>	<b>26,018</b>	<b>49,134,380</b>	<b>769,350,892</b>
Union North	R01	4,932	1,928,185	36,321,640	5,027	1,945,862	36,839,202	5,127	1,984,779	37,575,986
Union North	R10	186	861,212	13,699,877	186	863,517	13,824,681	190	880,788	14,101,175
Union North	R20	82	6,024,244	91,695,876	83	6,144,729	93,529,794	85	6,267,624	95,400,390
Union North	R25	0	0	0	0	0	0	0	0	0
Union North	R100	23	2,404,110	24,041,104	23	2,452,193	24,521,926	24	2,501,236	25,012,365
<b>Subtotal - Union North Rate Zone</b>		<b>5,222</b>	<b>11,217,752</b>	<b>165,758,498</b>	<b>5,320</b>	<b>11,406,301</b>	<b>168,715,603</b>	<b>5,426</b>	<b>11,634,427</b>	<b>172,089,915</b>
<b>Total</b>		<b>72,991</b>	<b>111,184,344</b>	<b>1,822,184,157</b>	<b>74,399</b>	<b>113,153,031</b>	<b>1,856,077,840</b>	<b>75,887</b>	<b>115,416,091</b>	<b>1,893,199,397</b>

Contract Class related DSM (excluding T2 and R100)	721	45,047,568		735	45,948,519		750	46,867,490
Contract Class related DSM as % of total (excluding T2 and R100)	0.99%	40.52%		0.99%	40.61%		0.99%	40.61%

Total Industrial Custom (I.5.EGI_GEC6_Attachment 1)	532			542			553	
Industrial Custom-Contract Classes	?			?			?	



## Energy Manager Subsidy

In one other program for very large customers, utility program administrators will directly subsidize the salary of an energy manager who will act as a full-time employee at the participating organization. This energy manager will be help identify opportunities, secure financial incentives, report, and track results, and instill a culture of continuous energy management in the organization.

In Ontario, IESO already has had a successful manager program since 2011. As such, Enbridge Gas may want to look towards the example of FortisBC, who has an energy manager program designed to supplement BC Hydro's program on the electric side. In this program, FortisBC funds the salary – up to \$60,000 – who will work under an existing BC Hydro energy manager to drive participation in FortisBC's gas programs as well as BC Hydro's electric programs<sup>40</sup>. Organizations with a FortisBC energy manager include BC Housing, Metro Vancouver, University of British Columbia, and several school districts.

## Recommendations

While Enbridge Gas's programs are largely in line with those of similar jurisdictions, there are a few steps that could lower free ridership, increase depth of savings, and expand participation:

18. Significantly reduce or eliminate incentive caps for C&I projects
19. Perform a process evaluation with an express goal of understanding programs influence on decision making process and recommend ways to reduce free ridership
20. Consider moving towards negotiated incentives for custom projects
21. Evaluate the effectiveness and extent of current account management for large and medium customers and encourage account managers to push to create multi-year Memoranda of Understanding outlining specific energy commitments. Alternatively, expand the Energy Performance (Whole Building P4P) Program to include all large C&I customers.
22. Consider adding RCx/SEM/Energy Manager programs.

## SMALL BUSINESS DIRECT INSTALL

On top of the C&I programs described above, Enbridge Gas has also been offering a small business direct install program aimed at smaller commercial customers. Similar to other direct install programs, Enbridge Gas's offerings pay for a free on-site assessment by a trained and contracted service provider that will identify low-cost energy efficiency measures. The service provider goes on to produce a report outlining the opportunity and, pending customer approval, installs the identified measure. Enbridge Gas's incentives will cover 75-80% of the incremental equipment cost and 50% of the labor cost. The program initially focused on air curtains for shipping doors, dock door seals, and demand control kitchen ventilation. Going forward, the

<sup>40</sup> See, for example: <https://www.fortisbc.com/rebates-and-energy-savings/rebates-and-offers/rebates-business/energy-specialist-frequently-asked-questions>