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BY RESS, EMAIL AND COURIER

March 5, 2020

Christine Long
Board Secretary
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms. Long:

Re: Enbridge Gas Inc.
Ontario Energy Board File No.: EB-2020-0066
Voluntary Renewable Natural Gas Program Application

Enclosed please find the application and pre-filed evidence of Enbridge Gas Inc. ("Enbridge Gas") requesting approval of a Voluntary Renewable Natural Gas Program.

Should you have any questions, please contact the undersigned.

Sincerely,

(Originally Signed)

Brandon Ott
Technical Manager, Regulatory Applications

c.c.: David Stevens, Aird & Berlis LLP
All Interested Parties EB-2019-0194, EB-2017-0319 and EB-2011-0242/0283

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ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act*, *1998*, S.O. 1998, c. 15, Sched. B, as amended;

AND IN THE MATTER OF an application by Enbridge Gas Inc. for an order or orders related to its Voluntary Renewable Natural Gas Program;

AND IN THE MATTER OF an application by Enbridge Gas Inc. for an order or orders amending or varying the rates charged to customers for the sale, distribution, transmission, and storage of gas commencing as of January 1, 2021.

APPLICATION

1. The Applicant, Enbridge Gas Inc. (“Enbridge Gas” or the “Company”), is an Ontario corporation with its head office in the City of Toronto. It carries on the business of selling, distributing, transmitting and storing natural gas within Ontario.

2. Enbridge Gas hereby applies to the Ontario Energy Board (the “OEB” or the "Board"), pursuant to section 36 of the *Ontario Energy Board Act*, *1998* as amended (the "Act"), for an Order or Orders enabling the Company to commence the operation of its Voluntary Renewable Natural Gas (“RNG”) Program (“Voluntary RNG Program”, or the “Program”). Enbridge Gas intends to commence the Voluntary RNG Program in early 2021.

3. In the November 2018 Made-in-Ontario Environment Plan, the Ontario Government indicated its plans to meet Ontario’s 2030 emission reduction target, including increased use of clean fuels such as RNG. The Government also highlighted its goal of increasing access to clean and affordable energy for families. Taking these items into account, the Made-in-Ontario Environment Plan requires natural gas utilities to implement a voluntary RNG option for customers.

4. Enbridge Gas has developed a Voluntary RNG Program that will provide interested customers with the opportunity to pay a small monthly charge that will enable Enbridge Gas to purchase RNG as part of the Company's overall gas supply. Enbridge Gas will regularly report to participants in the Voluntary RNG Program regarding the impact of their participation and the impact of the overall program on greenhouse gas ("GHG") emissions. The amount of RNG procured will depend on the number of participants in the Voluntary RNG Program, the availability of RNG, as well as the cost difference between RNG and traditional natural gas at any given time.

5. Enbridge Gas proposes that each participant in the Voluntary RNG Program will pay a fixed charge of $2 per month. The funds received for the Voluntary RNG Program will be used to purchase RNG at regular intervals (procurement intervals) as described in Exhibit B, Tab 2, Schedule 2.

6. Any avoided costs realized as a result of reduced Federal Carbon Charges will be tracked in OEB-approved Federal Carbon Charge – Customer Variance Accounts for the EGD and Union rate zones (Account Nos. 179-502 and 179-421). Enbridge Gas will apply to dispose of final net balances in these accounts in future Federal Carbon Charge-related proceedings.

7. In advance of each procurement interval Enbridge Gas will determine:
   a. The available Voluntary RNG Program revenues per rate zone; and,
   b. The volume of RNG that can be purchased using available Voluntary RNG Program revenues for each rate zone to pay for the additional cost of RNG as compared to conventional natural gas.

8. Enbridge Gas will then proceed to purchase the determined volume of RNG for each rate zone and include the purchased RNG in the gas supply portfolio. All customers will continue to pay the then-current cost of traditional gas for their rate zone, as the additional cost of RNG will be paid from Voluntary RNG Program revenues.

9. The incremental cost of RNG above the cost of traditional gas supply will be funded entirely by Voluntary RNG Program participants, with no direct costs for RNG procured assigned to non-participants.

10. By this application, Enbridge Gas applies to the Board for such final and interim Orders as may be necessary to approve the cost consequences of the Company's Voluntary RNG Program. This includes approval of:
    a. The proposed $2 monthly charge for each participant in the Voluntary RNG Program;
    b. The addition of the Voluntary RNG Program charge to relevant Rate Schedules;
    c. The proposal to use the Voluntary RNG Program funds to pay for the incremental costs of RNG to include within the gas supply portfolios for each of the Company's rate zones;
    d. The proposal to charge the same rates to all customers within a rate zone for their gas supply, whether or not that customer is a participant in the Voluntary RNG Program; and,
    e. The proposal to continue to charge the same rates to all applicable customers within a rate zone for their Federal Carbon Charge contribution, whether or not that customer is a participant in the Voluntary RNG Program.

11. The Company further applies to the Board pursuant to the provisions of the Act and the Board's Rules of Practice and Procedure for such final and interim Orders and

directions as may be necessary in relation to the Application and the proper conduct of this proceeding.

12. The persons affected by this Application are the customers of Enbridge Gas. It is impractical to set out the names and addresses of the customers of Enbridge Gas because they are too numerous.

13. Enbridge Gas requests that a copy of all documents filed with the Board by each party to this proceeding be served on the Applicant and the Applicant's counsel as follows:

The Applicant:

Brandon Ott
Technical Manager,
Regulatory Applications
Enbridge Gas Inc.

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The Applicant's counsel:

Mr. David Stevens
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DATED March 5, 2020 at Toronto, Ontario.

ENBRIDGE GAS INC.

Per: _____[originally signed]_____

BACKGROUND

1. As the federal and provincial governments strive to achieve GHG emission reductions, Enbridge Gas believes that RNG can play a significant role while balancing the need for consumer choice, affordability and supporting economic prosperity. In this context, Enbridge Gas is proposing a Voluntary RNG Program to general service system gas customers, helping them support a renewable energy source that is aligned with environmental and energy policies.

Renewable Natural Gas

2. RNG is defined as a gaseous mixture comprised primarily of methane that is derived from processing biogas[1] or other recovered gases that are not directly produced from fossil fuel extraction, which has been conditioned or upgraded to meet pipeline quality natural gas standards, allowing for distribution to customers through existing natural gas pipeline systems in Ontario or other North American jurisdictions.

3. RNG is a renewable, carbon neutral energy source that results in GHG emission reduction. Reductions are achieved through the displacement of traditional fossil fuels and the capture of methane emissions which would otherwise enter the atmosphere from the decomposition of organic waste, wastewater or landfill waste.

4. When the costs of producing biogas and upgrading it to pipeline quality are considered, the cost of RNG is typically higher than the combined cost of carbon

[1] Biogas is a gaseous mixture comprised primarily of methane and carbon dioxide recovered from decomposition of biomass and that contains other constituents that restrict it from meeting pipeline quality natural gas standards.

pricing and traditional natural gas. This price differential is anticipated to continue for the foreseeable future. However, when considering the cost of RNG relative to other forms of renewable energy, RNG compares favourably as demonstrated in Exhibit C, Tab 1, Schedule 1. Further, RNG leverages existing valuable natural gas infrastructure. RNG is an interchangeable substitute to traditional natural gas and can be injected into existing transportation and distribution pipelines, stored in existing natural gas storage facilities, and can be delivered directly to customers and end-users' equipment and appliances. The flexibility offered by RNG as a clean, renewable energy creates an opportunity for local and regional benefits resulting from a shift to a more circular economy.

Policy Alignment

5. Enbridge Gas's proposal to create a voluntary RNG program is consistent with the objective of both the provincial and federal governments to reduce GHG emissions.

6. On November 29, 2018 the Government of Ontario introduced its Made-in-Ontario Environment Plan (the "MOEP"). The MOEP identifies several actions that will support the prudent use of energy and resources. These actions include conserving energy in homes and buildings to cut costs and reduce emissions, while increasing access to clean and affordable energy for families. The MOEP highlights a voluntary RNG program option as an important component of increasing access to clean and affordable energy for families. Particularly, the MOEP states that the government will "require natural gas utilities to implement a

voluntary renewable natural gas option for customers."[2] The Company has filed this Application as it is of the view that introducing RNG into Ontario's energy supply mix is an important step towards reducing the province's GHG emissions and also in response to the requirement outlined in the MOEP.

7. Beyond its specific requirement for a voluntary RNG option, the Ontario Government commits to shifting toward a waste management approach that considers waste "as a resource that can be recovered, reused and reintegrated back into the economy."[3] The MOEP states that RNG production is a waste management option for organic waste resulting in "a clean, carbon-neutral energy source."[4] RNG production through anaerobic digestion represents an opportunity to address the issue of organic waste across many sectors of the economy, as also highlighted in the "State of Waste Management in Canada" report prepared for the Canadian Council of Ministers of Environment[5]. Enbridge Gas's proposed Voluntary RNG Program aligns with the government's direction.

8. On June 21, 2018, the Federal Government's *Budget Implementation Act, 2018, No. 1* received Royal Assent, inclusive of Part V; the *Greenhouse Gas Pollution Pricing Act, S.C. 2018*, c. 12, s. 186 ("GGPPA"). Under the GGPPA, the federal carbon pricing program ("FCPP") applies to any province or territory that requested it or that did not have an equivalent carbon pricing system in place by January 1, 2019. On October 23, 2018, the federal government confirmed that the FCPP

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[2] Preserving and Protecting our Environment for Future Generations: A Made-in-Ontario Environment Plan ("MOEP"), page 33 (filed at Exhibit C, Tab 4, Schedule 2).
[3] https://www.ontario.ca/page/waste-management
[4] MOEP, page 41.
[5] https://www.ccme.ca/files/Resources/waste/wst_mgmt/State_Waste_Mgmt_in_Canada%20April%202015%20revised.pdf

would apply to Ontario. The FCPP includes a charge on fossil fuels (the "Federal Carbon Charge"), including natural gas, as a cost per unit of fuel. The Federal Carbon Charge is imposed on distributors, importers and producers under Part 1 of the GGPPA. The Federal Carbon Charge began on April 1, 2019 at a rate of 3.91 cents/m^3 of natural gas, and will increase annually until it reaches 9.79 cents/m^3 of natural gas in 2022.

9. Under Part 1 of the GGPPA, Enbridge Gas is exempt from paying the Federal Carbon Charge on volumes of RNG (referred to as "biomethane" in the GGPPA)[6].

10. Looking forward, the federal government is developing a Clean Fuel Standard ("CFS"), which will require fossil fuel producers, importers and distributors to reduce the carbon intensity of the fuels used in Canada. The CFS is proposed to impose a compliance obligation on the natural gas sector starting January 1, 2023. One of the proposed compliance pathways available to natural gas distributors to satisfy their CFS obligation is the blending of low carbon intensity fuels with natural gas. As a result, Enbridge Gas would be required to procure RNG as part of the Company's supply portfolio.

The Board's EB-2011-0242/0283 Decision

11. In September 2011, Enbridge Gas Distribution Inc. ("EGD") and Union Gas Limited ("Union Gas") (together the "Utilities") each filed applications with the Board under section 36 of the *OEB Act* seeking an order or orders approving or fixing rates for the sale of natural gas by the Utilities that included the cost consequences of the

[6] GGPPA section 8(7)

purchase of biomethane, otherwise referred to as RNG[7]. EGD and Union Gas each proposed to acquire RNG as part of their respective gas supply portfolios. The Board determined that it would combine the applications into a single proceeding.

12. In its EB-2011-0242/EB-2011-0283 Decision, the Board found that the Utilities had not provided enough evidence concerning some necessary elements of the program. The Board gave the Utilities an opportunity to change or augment the evidentiary record with a view to developing a revised proposal.

13. Subsequent to the EB-2011-0242/EB-2011-0283 Decision, the Utilities, who amalgamated to form Enbridge Gas Inc. on January 1, 2019, have studied the potential for an RNG market in Ontario by conducting preliminary Requests for Proposals ("RFP") for the procurement of RNG and instituting a Board-approved RNG Enabling Program (EB-2017-0319) to help facilitate the development of RNG production facilities in Ontario. Further, Ontario has undergone several policy developments relevant to RNG and GHG emissions which have led the Company to take steps to better understand the challenges and opportunities of RNG as well as the approach that other jurisdictions have taken. Given the advances in these areas, Enbridge Gas submits this Application for Board approval of the Program, which will apply to its general service system gas customers.

14. Exhibit B, Tab 2, Schedule 1 provides details regarding Enbridge Gas's proposed Voluntary RNG Program and discusses the ways in which Enbridge Gas's

[7] EB-2011-0242 and EB-2011-0283.

application is responsive to both the MOEP and the Board's findings in EB-2011-0242/EB-2011-0283.

ENBRIDGE GAS'S VOLUNTARY RNG PROGRAM

1. Enbridge Gas has developed a Voluntary RNG Program which would enable customers to elect to pay an incremental charge in support of the provincial government's goal of reducing GHG emissions through the introduction of RNG into the Company's energy supply portfolio. By utilizing an optional approach, Enbridge Gas has sought to minimize risk and ensure that the Program does not result in increases to the gas distribution rates or system gas supply charges of non-participating customers.

2. Enbridge Gas intends to launch the Voluntary RNG Program in early 2021 pending OEB approval of this application.

3. Underpinning Enbridge Gas's Voluntary RNG Program design are a series of guiding principles that the Company expects will maximize the prospects of a successful program launch:
    i) Enbridge Gas will offer customers the opportunity to reduce GHG emissions resulting from natural gas usage;
    ii) The Program will not impact Enbridge Gas's commitment to maintain safe and reliable operations;
    iii) The Program will not increase the rates or costs of non-participating customers;
    iv) The Program will not require legislative changes or government funding;
    v) The Program will leverage existing systems and resources, and will not hinder utility integration efforts; and,
    vi) The Program will be simple, flexible and scalable.

Program Design

4. Enbridge Gas's proposed Voluntary RNG Program will offer system gas general service customers across all rate zones the option to pay a fixed $2 monthly charge to fund the incremental cost of including RNG volumes in the Company's system gas supply. Participating customers will not receive a specified proportion of their gas as RNG, nor will their contributions fund a set volume of RNG purchases. Rather, Enbridge Gas will use the fixed contributions from participating customers to fund the incremental cost of RNG relative to traditional natural gas, procuring as much RNG as can be purchased with the amount collected.

5. The proposed fixed monthly charge of $2 balances increasing consumer interest in the introduction of RNG into the Company's gas supply portfolio against consumers' sensitivity to cost. Enbridge Gas's research shows that $2 per month is a 'sweet spot' for customers who are willing to pay a premium to participate in a Voluntary RNG Program. As highlighted in Exhibit C, Tab 4, Schedule 1, market research suggests that 46% of customers will support a voluntary RNG program and are willing to contribute $2 per month where no RNG volume commitment is specified.

6. The proposed fixed $2 charge will provide participating customers with certainty regarding program cost, and will simplify marketing, administration and communications. In addition, the fixed charge, being disconnected from volumetric consumption, will assist Enbridge Gas in forecasting Program funds available for the purchase of RNG.

7. The Program will have no minimum term for participation, allowing customers to cancel their enrollment on 30 days' notice. While the Company expects a certain percentage of participants will leave the Program each month, it is anticipated that

this amount will at least be offset by new enrollments given marketing efforts and the relatively small financial commitment required for customers to join the program as new participants.

8. As noted, the Program will not offer participating customers a specified percentage or volume of RNG. Instead, the volumes of RNG procured will be driven by overall Program participation, the resulting funds collected and the incremental cost of RNG. Enbridge Gas forecasts procurement of 6,047 GJ of RNG in the first 12 months of the Program as shown in Exhibit C, Tab 2, Schedule 3.

9. Enbridge Gas plans to provide annual communications to participating customers outlining information such as the total amount of RNG procured under the Program, related GHG emission reductions, future forecasts, Program participation, and/or other relevant metrics.

10. Consistent with the bill presentation of the Federal Carbon Charge, Enbridge Gas intends to display customer contributions towards the Voluntary RNG Program (i.e. the $2 charge) as a separate line item of the bill.

11. Enbridge Gas applies the Federal Carbon Charge to all volumes of gas delivered to customers, including customers who have elected to participate in the Program[1]. To the extent that the RNG obtained by Enbridge Gas using Program funds reduces the Company's Federal Carbon Charge obligations, and subsequent remittance to the CRA, any variance between the Federal Carbon Charges

[1] With the exception of customers who qualify for exemption under the GGPPA and who have notified the Company of their exemption.

remitted to the CRA and the amount charged to customers will be tracked in existing OEB-approved Federal Carbon Pricing Program customer-related variance accounts, and will flow to all customers subject to the Federal Carbon Charge.

12. As detailed in Exhibit B, Tab 2, Schedule 2, Enbridge Gas proposes to begin RNG procurement using short-term contracts (e.g. seasonal or annual delivery contracts). RNG suppliers would prefer Enbridge Gas to enter into long-term (i.e. multi-year) RNG supply commitments which support investment in RNG production facilities. However, Enbridge Gas is not prepared to do so at this time without having a mechanism in place that would ensure the recovery of the associated RNG costs in rates years into the future.

13. RNG procured will form a part of Enbridge Gas' system gas supply, subject to measures to ensure its inclusion does not result in increased gas supply costs for non-participating customers. Inclusion of RNG purchased is consistent with Enbridge Gas's discussion of RNG in its 5 Year Gas Supply Plan.[2]

Program Eligibility

14. As discussed above, Enbridge Gas's Voluntary RNG Program will be open to any system gas general service customer across all rate zones, including the following rate classes: Rate 1, Rate 6, Rate 01, Rate 10, Rate M1 and Rate M2.

15. While commercial or industrial customers on system gas in general service rate classes may enroll in the Voluntary RNG Program, the Program has been

[2] EB-2019-0137, 5 Year Gas Supply Plan, page 106.

designed with a residential focus and will be marketed as such. Enbridge Gas expects that the small contribution amount of $2 per month will naturally appeal most to residential customers, in addition to some small commercial customers.

16. To the degree large commercial and industrial customers are interested in purchasing RNG, Enbridge Gas submits that this opportunity exists in the market today. Specifically, working with a gas marketer, RNG producer, or other third party, commercial and industrial customers can arrange for the purchase of RNG commodity or RNG-based offsets under a variety of commercial arrangements. Enbridge Gas can facilitate the delivery of all or a portion of such customer's RNG gas supply through currently available direct purchase and gas transportation options.

17. Should Enbridge Gas services be required to facilitate an arrangement between a customer and a third-party marketing RNG, existing business processes and systems will be relied upon. For example, a customer may purchase a portion of their gas supply as RNG from a gas marketer or RNG producer, who would in turn work within Enbridge Gas's established direct purchase framework to see that RNG is used to meet a customer's delivery obligations and consumption.

18. Enbridge Gas's Voluntary RNG Program will initially target a modest number of customers of approximately 16,000 in the first year, growing to 23,000 and 25,000 in the next two years (see Exhibit C, Tab 2, Schedule 1). This measured start will give the Company the opportunity to validate market demand with minimal system and process changes and will allow Enbridge Gas to refrain from initiating significant system changes until growing demand for RNG is evident and the Company is better positioned to consider long-term, fixed-price RNG supply contracts.

19. The proposed Program is readily scalable given that RNG volumes introduced to the system can vary directly with customer participation in the Program.

Program Enrollment

20. Enrollment in Enbridge Gas's Voluntary RNG Program will be available by either visiting the Company's website and enrolling online or by calling the Company's customer service call centres. During enrollment, customers will agree to the predefined terms and conditions of the Program such as the amount of the fixed charge and the terms of cancellation.

21. Participating customers will continue to maintain their enrollment status in the case of a move. Enbridge Gas also intends to offer the Program to new and moving customers during other customer service interactions.

Responding to the Board's EB-2011-0242/0283 Decision

22. In their 2011 RNG applications, the Utilities proposed to limit the volume of RNG purchased to an annual cap of 5.5 petajoules (145 million m^3). This quantity would have represented approximately 2% of system gas supply for the Utilities at that time[3]. The Utilities also requested approval of an RNG procurement model which included the purchase of RNG from Ontario producers at fixed prices over a 20-year term. The Utilities set the volume cap such that the estimated total bill impact on an annual basis for a typical residential customer would be no more than $18 per year.

[3] EB-2011-0242/EB-2011-0283, Renewable Natural Gas Application, Exhibit B, Tab 1, Page 1.

23. In its Decision and Order, the Board found the Utilities to have provided insufficient evidence to support approval of their applications[4], specifically citing the following areas as requiring additional evidence or consideration:

i) the technical and operational considerations of potential developers in Ontario;

ii) a rigorous cost benefit analysis;

iii) availability of similar programs in North America and elsewhere;

iv) consideration of the potential involvement of gas marketers; and,

v) the appropriate size of the program and customer acceptance of the resulting bill impacts.

24. Enbridge Gas has addressed the five concerns pointed out by the Board in its EB-2011-2042/EB-2011-0283 Decision in this proposal, as outlined below.

25. With respect to operational considerations of potential developers in Ontario, the Company has been active in supporting the development of RNG production facilities in the province. In 2018 the Board approved EGD's RNG enabling program by allowing the Company to provide RNG upgrading services as an unregulated business activity and RNG injection services as a regulated business activity (EB-2017-0319). Enbridge Gas is aware of two RNG production facilities currently under construction in Ontario and several more in the planning stage of development. Enbridge Gas will be working with these project developers and providing the services they require to get their RNG to market.

[4] EB-2011-0242/EB-2011-0283, Interim Decision and Order, Page 4.

26. Regarding the Program's cost and benefits, the Program will be completely voluntary on an opt-in basis and will not impose increased rates on those customers that choose not to participate in the program. The cost to participating customers ($2 per month) is modest, and customers will have the choice whether to participate or not. Participating customers will be able to assess the value of the program to them based on Enbridge Gas's reporting of Program results and associated GHG reductions.

27. With regards to other similar programs, Enbridge Gas has included reference to several other voluntary RNG programs offered in North America in Exhibit C, Tab 3, Schedule 1. The program offered by DTE Energy in Michigan is the most similar to Enbridge Gas's proposed Program. Enbridge Gas's Voluntary RNG Program differs somewhat from others in that it has been designed to avoid rate increases for non-participating customers. As a result, Enbridge Gas will not be in a position to enter into long-term fixed price RNG procurement agreements and will not be able to commit to a set RNG volume for specific customers or the Program as a whole. However, the Program will present an RNG option for customers that is scalable and avoids rate increases for non-participants.

28. Concerning gas marketers, at present the Company is aware of only one gas marketer offering a voluntary RNG program in Ontario. This provider's offer is different from Enbridge Gas's proposed Program in that participating customers pay for the cost of offsetting their specific traditional natural gas usage with an equivalent amount of RNG. Enbridge Gas's Program is primarily targeted at cost sensitive customers looking to support low-carbon initiatives by offering a fixed monthly charge added to their existing natural gas bill.

29. Enbridge Gas is of the view that the Program does not compete with energy marketers that may attempt to offer an RNG supply option. Rather, it is a complementary offering that would provide Ontario consumers with more choices. Gas marketers that seek to make RNG offers available in Ontario will be free to do so. Much like in the marketing of traditional natural gas, gas marketers will also have the freedom to design unique and innovative RNG products for customers that go beyond the scale, scope and format of Enbridge Gas's Program (e.g. RNG contracts providing 100% of a customer's consumption as RNG, contracts with fixed commodity prices over set terms, etc.).

30. In response to the Board's concern regarding the size of the Program and potential bill impacts, Enbridge Gas's Voluntary RNG Program is voluntary. Concerns regarding the bill impacts of the Program can be weighed by customers who will independently assess the costs and benefits for themselves. The size of the Program will be determined by the degree of customer acceptance it receives, and customers that opt into the Program will do so knowing exactly how their participation will impact their monthly gas bill.

RNG PROCUREMENT

1. Enbridge Gas's plan to procure RNG to support the Voluntary RNG Program will seek to maximize the quantity of RNG purchased based on the most current data available to the Company. As such, Enbridge Gas will purchase RNG based on forecast funding derived based on actual participation. The intent of this methodology is to minimize the risk of procuring on forecast Program participation. For the purpose of forecasting it is assumed that program participants will remain in the Program for a period of 12 months from their enrollment. While some participants may leave the Program each month, new participants are expected to at least offset any reduced funding.

2. Procuring in this manner will require Enbridge Gas to seek enrollment from customers first, then approach the marketplace and use the forecast funds from enrolled participants to purchase RNG. Subsequent to the initial purchase of RNG, Enbridge Gas will continue to procure RNG using funds available from forecast proceeds at intervals (procurement intervals) determined based on market conditions and funds collected. In advance of each procurement interval, Enbridge Gas will determine: (i) the available Voluntary RNG Program funds per rate zone; and (ii) the volume of RNG that can be purchased using available Voluntary RNG Program funds for each rate zone to pay for the incremental cost of RNG.

3. Enbridge Gas will procure RNG in accordance with its "Gas Supply Procurement Policies and Practices." The Company intends to procure RNG on short-term contracts from existing RNG producers or marketers in the secondary market. For example, Enbridge gas may purchase RNG for a seasonal or year-long contract, subject to the availability of RNG in the market on shorter terms. Enbridge Gas is aware of a number of RNG producers in Ontario expected to be in-service in 2020

and 2021 respectively and expects there will be volumes of RNG available in the market.

4. At least initially, RNG procurement will offset traditional supply purchases at Dawn in the Gas Supply Plan. Enbridge Gas will include forecast RNG volumes procured in its Annual Updates to the Gas Supply Plan filing. As the Program develops and grows over time, Enbridge Gas will adjust its procurement plan and may include longer term contracts based on market conditions.

MARKETING & COMMUNICATIONS STRATEGY

1. An effective marketing and communication strategy is necessary for the success of Enbridge Gas's Voluntary RNG Program. The primary objective of Enbridge Gas's marketing campaign will be to encourage adoption of the Voluntary RNG Program within targeted segments. The Company will accomplish this by creating awareness of RNG and its benefits, awareness of the Program, and by providing social recognition of Program participants.

2. The secondary objective of this strategy is to create a base level of awareness of RNG within the mass market, which will help to expand interest and participation in the Voluntary RNG Program in the longer-term, which will in turn help drive a more robust RNG market.

3. In pursuit of the primary objective noted above, the majority of the Program's marketing will be focused on target audiences that preliminary research suggests will be open to participating in a voluntary RNG program. The market research used to develop this Application suggests that once these customers understand what RNG is, they will be open to learning about the Voluntary RNG Program and enrolling. Enbridge Gas's market research shows that support for a voluntary RNG program is stronger amongst those who are already very aware of RNG. 77% of those who are very aware of RNG support a voluntary program compared to 59% of those not aware of RNG (see Exhibit C, Tab 4, Schedule 1). Enbridge Gas will engage in RNG marketing efforts that support education, awareness, adoption and recognition.

4. In pursuit of the secondary objective noted above, Enbridge Gas will implement low-cost marketing education and awareness initiatives throughout the Company's

franchise area over time in order to increase general knowledge of the environmental and economic benefits of RNG.

5. Targeted and mass market initiatives could include, but are not limited to:

i) Media (targeted, general)
- Print (Print ads)
- Radio

ii) Out of home (targeted)
- Street furniture (bus shelters/kiosks)
- Transit (bus/subway)

iii) Online (general)
- Owned (Enbridge Gas' digital assets, including web, social, LinkedIn)
- Paid (Display ads, paid search, sponsorships)

iv) Grassroots (targeted, general)
- Community outreach (e.g. leveraging local environmental and municipal events such as Toronto Environment Days)
- Social campaign

6. Enbridge Gas will provide participant recognition, subject to customers' consent, in order to acknowledge those who have voluntarily participated in this Program that benefits the environment. Some initiatives may include:

i) Promotion/Incentive (e.g. gift or reward for early adopters if required, such as points for rewards cards);

ii) Owned (e.g. use Enbridge Gas' digital assets to recognize customers/business participants); or,

iii) Lawn signs/on-premise window decals to publicly recognize homeowner or business participation in the Voluntary RNG Program.

Tracking & Reporting

7. Enbridge Gas will develop campaign metrics to measure the success of its marketing strategies based on awareness, customer engagement and program uptake. These metrics will be monitored over time to ensure the effectiveness of the marketing tactics being used and to allow the Company to adjust its marketing initiatives accordingly.

PARTICIPANT FORECAST, PROGRAM COSTS & RATE DESIGN

Participation Forecast

1. Supported by market research, the experience of Fortis BC, and the experience of DTE Energy, Enbridge Gas forecasts approximately 16,000 participants will enroll in the Company's Program in its first 12 months of operation. The participation rate is expected to increase over the second year of the Program; rising to a total of 23,000 before transitioning to a more measured pace of growth. By the end of the tenth year of the Program, Enbridge Gas forecasts 37,000 participants will be enrolled, as shown in Exhibit C, Tab 2, Schedule 1.

2. Enbridge Gas forecasts that Program participants' contributions in the first year of Program launch will be approximately $385,000, growing to approximately $850,000 annually by year ten. Enbridge Gas forecasts the cumulative program funds will be $6.8 million ("RNG Contributions") in the first ten years of Program operations.

Program Costs

3. Enbridge Gas forecasts total Program operating costs over the first ten years of the Program will be $2.7 million. It is estimated that approximately $400,000 of the operating costs will be incurred in the first year of Program launch, offset by a tax credit of just under $200,000 over the same period. Operating costs are expected to drop in future years to approximately $250,000 annually by year ten. Forecast costs include marketing costs, billing processing costs, customer contact center costs, legal costs and the revenue requirement associated with capital costs required for upgrades to internal systems (Exhibit C, Tab 2, Schedule 2).

4. The Company will manage these operating costs within its existing budgets until rebasing in 2024. Managing these costs within existing O&M budgets will allow

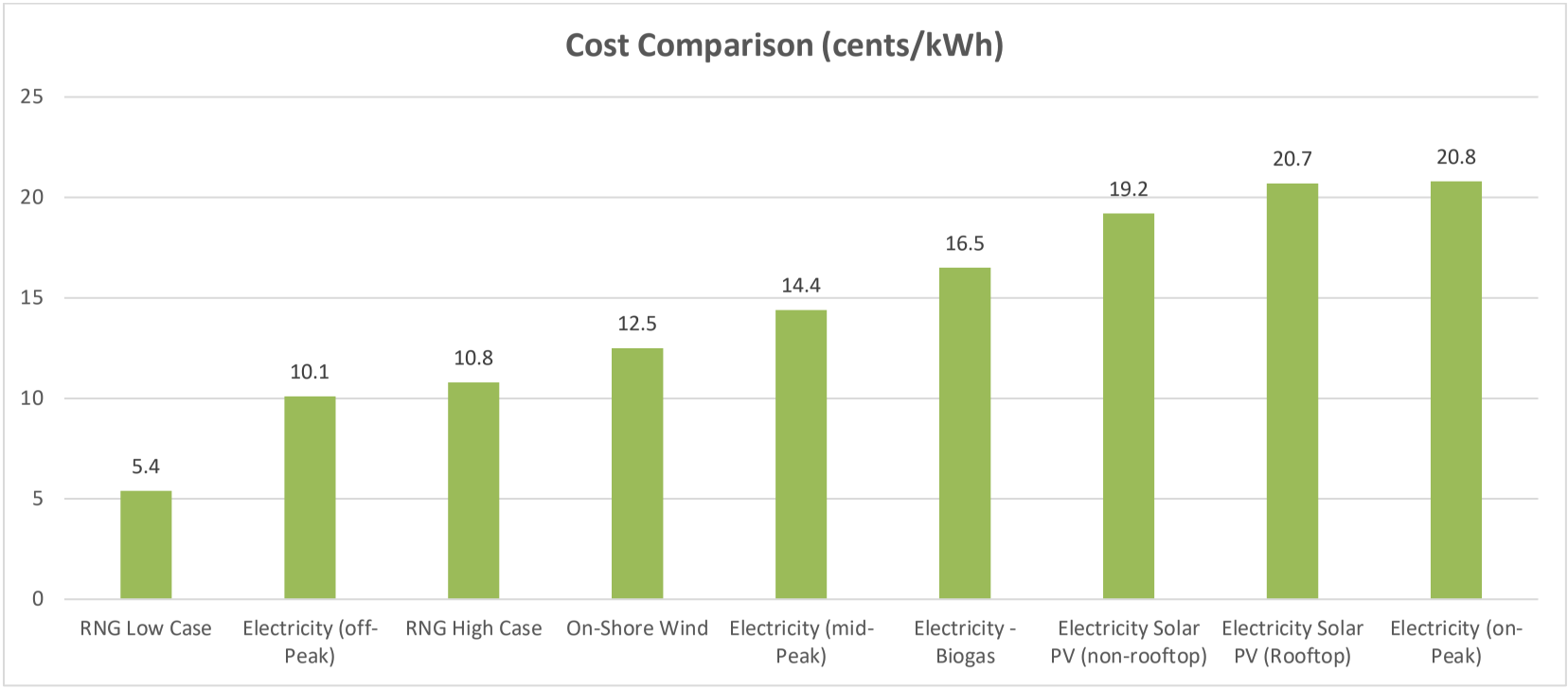
Enbridge Gas to dedicate all RNG Contributions collected during the deferred rebasing term toward the procurement of RNG, rather than the recovery of the Company's costs.

5. Enbridge Gas estimates that forecast RNG Contributions will allow the Company to procure over 200,000 GJ of RNG supply over the ten year forecast period, resulting in an emissions reduction of approximately 10,000 tCO2e. Enbridge Gas estimates available funds from the first 12 months of program operations will allow for procurement of over 6,000 GJ of RNG, increasing gradually to reach 30,000 GJ in year ten. Please see Exhibit C, Tab 2, Schedule 3.

Rate Design

6. The Voluntary RNG Program will offer general service system gas customers the option to pay a $2 fixed monthly charge to fund the incremental cost of including RNG volumes in system gas supply. The Program will be available to system gas customers in general service rate classes in the EGD and Union rate zones, specifically Rate 1, Rate 6, Rate 01, Rate 10, Rate M1 and Rate M2. Enbridge Gas proposes to update the applicable rate schedules to include a provision for the optional $2 monthly charge for system gas general service customers. Draft rate schedules are provided at Exhibit C, Tab 5, Schedules 1 and 2.

COST COMPARISON: RNG VS. OTHER RENEWABLES[1]



[1] Electricity prices as of Nov 2019, FIT/microFIT price schedule Jan 2017.

PARTICIPANT FORECAST

PROGRAM YEAR[1]	NUMBER OF PARTICIPANTS
Year 1	16,000
Year 2	23,000
Year 3	25,000
Year 4	26,000
Year 5	28,000
Year 6	30,000
Year 7	32,000
Year 8	33,000
Year 9	35,000
Year 10	37,000

[1] Years noted are not calendar years. Year 1 represents forecast participation 12 full months after program launch, with each subsequent year's forecast representing an incremental 12 months.

FORECAST PROGRAM COSTS

Figures in $	2021 1	2022 2	2023 3	2024 4	2025 5	2026 6	2027 7	2028 8	2029 9	2030 10
Rate Base Investment										
Capital Expenditures	600,000	-	-	-	-	-	-	-	-	-
Average Investment	587,700	521,152	457,505	397,655	337,808	277,964	218,123	158,286	98,451	38,620
Cumulative Capex	600,000	600,000	600,000	600,000	600,000	600,000	600,000	600,000	600,000	600,000
Total Cost of Service										
Operating Costs:										
Program Administration	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Program Marketing	150,000	100,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Billing & Customer Support	100,411	70,773	48,569	51,541	54,571	57,663	60,816	64,032	67,313	70,659
Legal	50,000	-	-	-	-	-	-	-	-	-
Depreciation Expense	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
Municipal taxes	-	-	-	-	-	-	-	-	-	-
Total Operating Costs	410,411	280,773	208,569	211,541	214,571	217,663	220,816	224,032	227,313	230,659
Rev Req Interest expense	17,134	15,194	13,338	11,593	9,849	8,104	6,359	4,615	2,870	1,126
AfterTx Req'd Return on Equity	19,297	17,112	15,022	13,057	11,092	9,127	7,162	5,197	3,233	1,268
Total Utility Req'd Return	36,431	32,306	28,361	24,650	20,941	17,231	13,521	9,812	6,103	2,394

Income Taxes										
Income tax on Req Rtrn on Equity	6,958	6,170	5,416	4,708	3,999	3,291	2,582	1,874	1,166	457
Income Tax Exp (Credit) on timing differences	(194,694)	21,633	21,633	21,633	21,633	21,633	21,633	21,633	21,633	21,633
Total Income Taxes	(187,736)	27,802	27,049	26,340	25,632	24,923	24,215	23,507	22,798	22,090
Required Return and Taxes	(151,305)	60,108	55,409	50,991	46,572	42,154	37,736	33,319	28,901	24,484
Total Cost of Service	**259,106**	**340,881**	**263,978**	**262,531**	**261,144**	**259,817**	**258,552**	**257,351**	**256,214**	**255,143**

TEN YEAR PROGRAM FORECAST

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
Funds Collected	$386,090	$548,264	$590,438	$632,613	$674,787	$716,961	$759,135	$801,309	$843,483	$885,658
RNG Volumes (GJ)	6,047	9,875	15,546	17,623	19,697	21,769	23,837	25,903	27,965	30,025
RNG Volumes (m^3)	162,377	265,183	417,449	473,228	528,932	584,556	640,102	695,568	750,950	806,248

JURISDICTIONAL RESEARCH

1. Enbridge Gas has conducted jurisdictional research to analyze current RNG programs in existence and has applied this research to the development phase of Enbridge Gas's Voluntary RNG Program. The results of this research are summarized below.

RNG Program Classification

2. Enbridge Gas has identified three main categories of voluntary renewable energy programs that are currently being offered by energy providers: contribution programs, energy-based programs, and carbon offset programs.

   i) **Contribution Programs:** these programs offer customers the opportunity to contribute (typically a flat rate) towards a renewable energy initiative that is developed and administered by the utility. Once enrolled in the program, customers pay a premium on top of their bill to enable the development or advancement of new programs aimed at lowering GHG emissions. Examples of contribution programs include DTE Energy's BioGreen Gas voluntary RNG program[1], as well as Enbridge Gas's proposed Program.

   ii) **Energy-based Programs:** these programs offer customers the opportunity to replace all or a portion of their traditional energy supply with renewable energy sources, paying a premium rate for the portion of their energy which is renewable. These programs allow utilities to procure higher cost renewable energy sources without necessarily increasing the rates of non-participating customers. Examples of energy-based programs in North America include Fortis BC's current RNG

[1] https://newlook.dteenergy.com/wps/wcm/connect/dte-web/home/service-request/residential/renewables/biogreen-gas

program[2], National Grid's RNG program in New York[3], Vermont Gas's RNG program[4] and Southern California Gas Company and San Diego Gas and Electric Company's proposed[5] RNG program in California.

iii) **Carbon Offset Programs:** these programs offer customers the opportunity to buy an equivalent amount of carbon offsets that in part or in full addresses their home's carbon footprint. Participating customers pay the utility or third party the full cost of carbon offset credits in an amount that is equivalent to their energy use. These carbon offsets may come from a variety of third party verified sources, including offsets produced through renewable energy. Various market participants in North America offer carbon offset programs.[6]

3. The table below sets out details of some of the RNG programs across these three main program types that Enbridge Gas has investigated.

[2] https://www.fortisbc.com/services/sustainable-energy-options/renewable-natural-gas/interested-in-signing-up-for-renewable-natural-gas
[3] https://www.nationalgridus.com/News/2019/04/National-Grid-Files-Rate-Review-Proposals-for-Downstate-New-York/
[4] https://www.vermontgas.com/renewablenaturalgas/
[5]https://www.socalgas.com/regulatory/documents/a-19-02-015/Application%20-%20Renewable%20Gas%20(A.19-02-XXX)%20-%20Final.pdf
[6]The attached link is an example of a marketer carbon offset program offered to customers in Canada: https://www.bullfrogpower.com/green-energy/green-natural-gas/

Program Name	Program Type	Program Start Date	Program Volumes	Program Participation
BioGreen Gas Program DTE Gas Company - Michigan	Contribution Program	• Michigan Public Services Commission approved a pilot on April 17, 2012. • DTE requested a 12-month pilot program extension while DTE prepared a filing for a permanent BioGreen Gas program, which was approved in April 2014. • The Regulator approved DTE's permanent program in April 2015.	• The initial pilot targeted the purchase of 10,000 Dth (10,550 GJ) at a price $10 per Dth, which was extended for another year for an additional 10,000 Dth for $11 per Dth.	• The pilot program was marketed for 130 days at a cost of ~$100,000 and achieved its 2,000 subscription level, in addition to receiving over 3,000 applications and over 100 customers on a wait list. • The pilot charged participating customers a fixed monthly price of $2.50 /Dth.
Biomethane Service Offering FortisBC Energy - Vancouver[7]	Energy-based Program	• A pilot program was established in 2010 • A permanent program was approved by the Regulator in December 2013.	• The pilot program had a supply cap of 250,000 GJ; which was subsequently increased by 280,000 GJ. • The pilot program supply price cap was set at $15.28 in 2010, and remained at the same level in the 2013 decision to approve the program on a permanent basis. • The permanent program had a biomethane supply cap of 1.5 PJ.	• The pilot did not meet its targets for residential subscribers but had modest success amongst small commercial and municipal customers. Total subscribers by June 2013 were over 5,000 customers (representing 0.76 of Fortis's total customer base). • Costs related to marketing and education were approximately $700,000 for 2011 and 2012, and an additional $700,000 over 2013 and 2014. • The pilot resulted in approximately $1.2 million in a variance account by the end of 2013. • The permanent program currently has 10,500 subscribers.

[7] Enrollment is currently closed due to increased demand; Fortis BC is holding off signing up new customers until additional supply is secured.

Program Name	Program Type	Program Start Date	Program Volumes	Program Participation
Southern California Gas Company & San Diego Gas & Electric Company – Renewable Natural Gas Tariff	Energy-based Program	• SoCalGas and SDG&E filed for approval of the program in February 2019, requesting approval to implement the program in 2022 due to the replacement of the current customer information system over 2020 and the freeze period associated with that.	n/a	• SoCal and SDG&E estimate the program administration and marketing cost to be approximately $1.5 million over the first five years of the program launch, in addition to approximately $800,000 for computer system programing costs.
Vermont Gas – Northwest Vermont	Energy-based Program	• The program was approved in September 2017 and became available to customers in early 2018.	• Vermont estimates RNG sales to reach approximately 64,000 Mcf annually (68,000 GJ) by the end of year five of program launch.	• The program targets to reach 720 subscribers by the end of year five (representing 0.014% of Vermont Gas' 50,000 customer base) • The program marketing budget was estimated at $50,000 for the first year of program launch.
Bullfrog Power – Green Natural Gas Program	Carbon Offset Program	• The program was launched in 2005 for customers across Canada. • The program offers customers the option to buy an equivalent amount of RNG to their conventional natural gas usage.	• The program has been able to inject over 7 million GJs into Canadian natural gas distribution systems.	• The program has over 10,000 RNG customers.

4. Enbridge Gas has leveraged the experience of other utilities and program providers to gain insight into customer participation, marketing approaches and other program characteristics and outcomes. Enbridge Gas will continue to leverage the learnings of other utilities offering voluntary RNG programs throughout implementation of the Program to inform the most efficient use of resources and to help the Program reach or exceed estimated participation targets.

MARKET RESEARCH

1. Enbridge Gas reviewed and conducted market research to assess the current RNG market and explore the viability of a voluntary RNG program.

2. Relevant research indicates that consumers around the world are increasingly motivated to be environmentally conscious. A study conducted by the Conference Board in collaboration with Nielsen in 2017 indicates that 69% of North Americans believe it is extremely or very important that companies implement programs to improve the environment.[1]

3. In a 2019 study conducted by Abacus Data[2], a random sample of Canadians were asked about possible solutions to, and actions to combat, climate change. 44% of respondents believe that in the future, "we should produce energy and electricity using 100% clean and renewable sources" while another 37% are not convinced that 100% of energy and electricity can be renewable and clean, but support a shift towards cleaner technology. Only 11% of Canadians believe that "shifting to clean and renewable energy sources like hydro, solar, and wind are costly and unnecessary."[3]

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[1] https://www.nielsen.com/ca/en/insights/article/2018/global-consumers-seek-companies-that-care-about-environmental-issues/
[2] https://abacusdata.ca/wp-content/uploads/2019/08/Climate-Emergency-Polling-July-2019-RELEASE.pdf
[3] https://abacusdata.ca/is-climate-change-an-emergency-and-do-canadians-support-a-made-in-canada-green-new-deal/

4. To gauge awareness of and interest in RNG initiatives among Ontario's natural gas customers, Enbridge Gas commissioned a research study in December 2018. The research explored:
   i. Awareness of, and opinions regarding, RNG;
   ii. Willingness to pay for RNG (e.g. absolute maximum monthly payment, interest in different payment structures);
   iii. Preferences of program design options; and,
   iv. Attitudes toward the environment, as well as the Enbridge Gas brand.

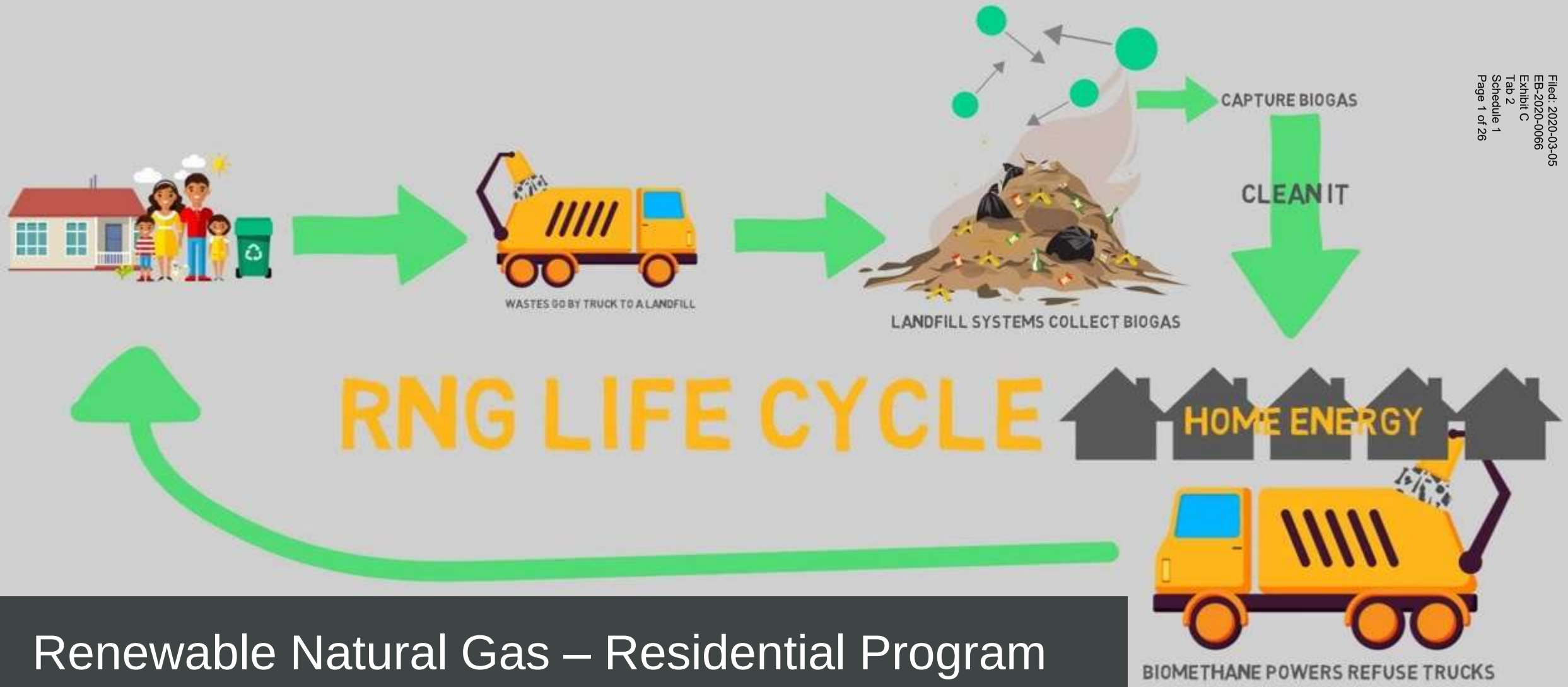
5. The study was conducted by Ipsos Public Affairs between December 12, 2018 and December 19, 2018 with a representative sample of 1,212 natural gas customers. Only customers who were fully or jointly responsible for decisions associated with their natural gas service were included in the sample of completed interviews. The results of the study are included at Exhibit C, Tab 4, Schedule 1.

6. A sizable group of customers expressed both their support and willingness to sign-up for a voluntary RNG program within the next month, suggesting a base of support for a voluntary RNG program.

7. The results of the survey indicate 47% of customers say they are willing to pay a premium for RNG, with no consideration for percentage blend of RNG (by comparison, 24% indicate that they would not be willing to pay anything, while the remaining 30% indicate that they are not sure). Customers expressed a wide range of views regarding the maximum monthly premium they would be willing to pay for RNG. With no consideration for the proportion of RNG in their gas supply, a large proportion of customers surveyed indicated that they would be willing to pay at least $2 per month for RNG (46%).

8. Enbridge Gas's study found that customers are concerned about the cost of energy (92%) and the environment (86%), with the majority of customers indicating they would be somewhat likely to pay a premium for environmentally friendly products. In general, customers who are younger, located in urban areas, already have some awareness of RNG, and have strong views regarding the environment are most receptive to Enbridge Gas implementing a voluntary RNG program.

9. Further support for customer willingness to pay for RNG is found in a 2017 online survey conducted amongst legacy EGD customers in which most surveyed customers (75%) indicated that they would be willing to pay $1.60 more per month on their bill to invest in RNG. The same survey indicated 46% of customers would be willing to pay more than $1.60 per month to increase the amount of RNG that is blended into the system over time.



Renewable Natural Gas – Residential Program

Ontario Results – Report

Market Research & Analysis // Winter 2019

Objectives & Methodology

Objectives

- The overall objective of the research is to gauge awareness of and interest in renewable natural gas initiatives among Ontario's natural gas customers. More specifically the research focuses on understanding customer …
  - Awareness of, and opinions about, renewable natural gas (RNG)
  - Willingness to pay for RNG projects (e.g. absolute maximum monthly payment, interest in different set-ups)
  - Preferences for program design options (e.g. determine interest in a voluntary program, length of program, etc.)
  - Attitudes toward the environment, as well as the utility brand

Methodology

- Online research was conducted by Ipsos Public Affairs from December 12-19, 2018 with Legacy EGD and Legacy UG residential customers
- In total, 1212 customers participated in the survey:

Total	Legacy Enbridge (EGD)	Legacy Union Gas (UG)
1212	720	492

- Survey respondents are a representative sample of customers according to age, region and gender
- Only those customers who are fully or jointly responsible for decisions associated with their natural gas service are included in the sample of completed interviews

Key Findings

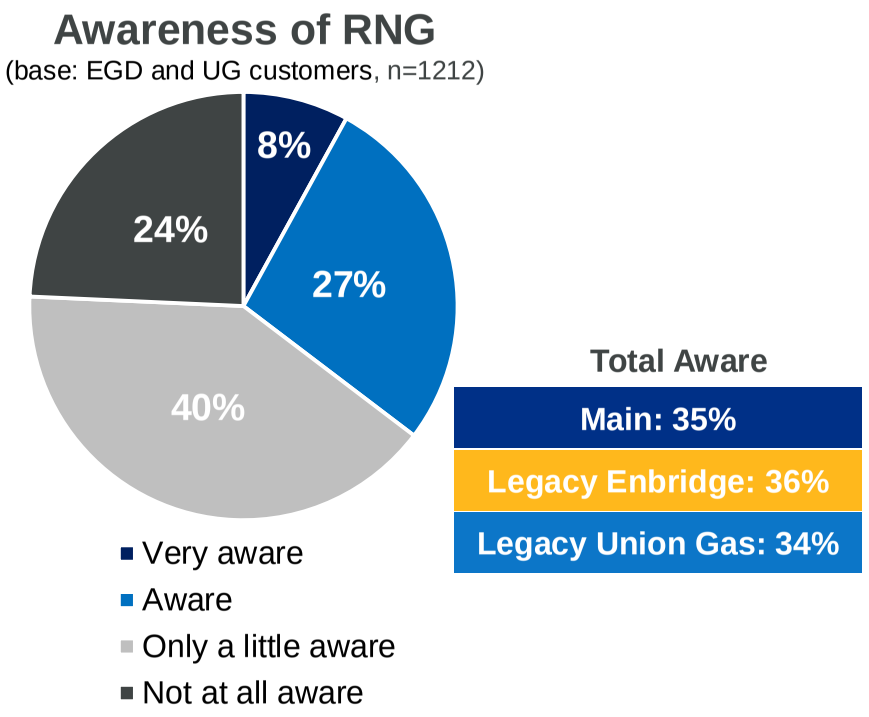
- Customers are quite **concerned about the cost of energy** (92%), but also **the environment** (86%), with the majority of customers indicating that they would be at least somewhat likely to pay a premium for environmentally friendly products (i.e. household products, electronics, clothing, natural gas, electricity, and other fuels)
- General **awareness of RNG** is quite high as the majority of customers (76%) indicate that they are a least a little aware of RNG – though few indicate that they are very aware (8%), leaving room for much more education on the product
- Once provided an explanation, customers show **support for investments in RNG** projects by Enbridge and Union Gas (89%) – support for RNG is also evident in perceptions of the importance of RNG in diverting waste, helping the environment, and supporting local investment
- Though generally in support (60%), customers are a little less sure (14% don't know) about a program that would have customers help pay for RNG investments, however, once provided with more details, customers provide their further feedback:
  - Without any cost consideration, **customers have a mix of preferences** – some would prefer a voluntary program (20%), while others prefer a mandatory program (27%), and yet again others a combination of the two (33%) – another 12% oppose any program
  - Once adding cost as a consideration, customers show equal amounts of **support for each of the program options** presented (68%, 65%, 70% for a $2/month voluntary program, a $2/month mandatory customer-wide program, and a voluntary round-up your bill program, respectively) – support declines significantly as the monthly cost increases, suggesting that customers care more about the total monthly cost than the specific design of the program
    - **Just over half (52%) of all customers support all three programs** – a version of the voluntary program ($2, $10 and/or $20/month), the mandatory program ($2/month), and the voluntary round-up program
    - Between 57% and 59% of all customers support two of the three types of programs
    - On the flip side, **17% of all customers offer no support** to any of these three types of programs (slightly less than the 24% of customers who indicate that they are not willing to pay anything for RNG)

Key Findings cont'd

- A sizeable group of customers express their ***strong*** **support and a** ***high*** **likelihood** of signing-up within the next month for a voluntary program, suggesting there is a good base of support for a voluntary program:
  - 25% at $2/month for 2% RNG (by comparison, unaided, 36% of all customers said they would pay a maximum of at least $2/month for 2% RNG)
  - 11% at $10/month for 5% RNG (unaided, 20% said they would pay at least $10/month for 5% RNG)
  - 6% at $20/month for 10% RNG (unaided, 11% said they would pay at least $20/month for 10% RNG)
- When it comes to program design, customers tend to **prefer a variable charge** (with a cap) over a fixed monthly charge (similar to a GHG offset purchase)
- Customers also prefer a **shorter agreement** (in years), indicating they are more likely to consider a program where the agreement terms are 1 or 2 years (there is little difference) compared to 5 or 10 years – note that customers who prefer a mandatory program are more receptive to agreement terms altogether
- The Legacy Enbridge Gas and Legacy Union Gas brand have an impact – those who have a strong impression of their utility are more likely to support an RNG program
- Altogether, customers who are younger, located in urban areas, with some awareness of RNG, and strong views towards the environment are most receptive to Enbridge Gas implementing an RNG program

Awareness of RNG

- Just over 1-in-3 customers are “very aware” or “aware” of RNG (similar to previous customer research)
- Awareness is slightly higher in Toronto (compared to the rest of the province) and among males as well as younger customers



	Total Aware
View of Environment	
Critical issue (n=380)	42%
Significant issue (n=387)	33%
One of many issues (n=348)	30%
Not an issue (n=81)	44%
Household Income	
Less than $40K (n=174)	33%
$40K-less than 80K (n=388)	33%
More than $80K (n=514)	40%
Age of Consumer	
18-34 (n=101)	45%
35-54 (n=439)	38%
55-64 (n=287)	27%
65+ (n=384)	36%

	Total Aware
Legacy Enbridge Gas	
Toronto (n=173)	44%
Central West (n=173)	33%
Central East (n=202)	34%
Eastern (n=115)	38%
Niagara (n=58)	27%
Legacy Union Gas	
Northern (n=84)	35%
Eastern (n=39)	35%
Southwestern (n=152)	33%
Central (n=217)	34%
Gender	
Male (n=654)	45%
Female (n=558)	24%

Q: How aware would you say that you are about renewable natural gas, this is sometimes also referred to as bio methane

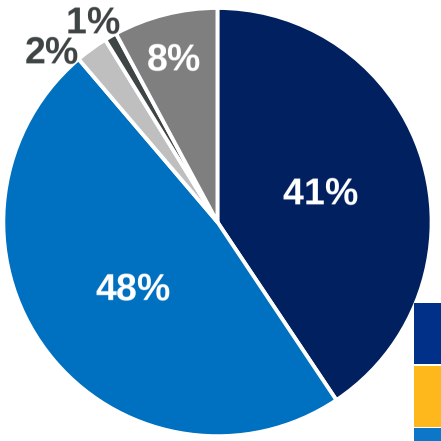
Support of RNG investments and projects

- After being provided a brief explanation of RNG, the majority of customers indicate support for their natural gas utility investing in RNG projects (almost 9-in-10 customers offer support!)
- Customers were a little less, but still, supportive (60%) of their utility offering a program that would allow customers to help pay for RNG projects – though a sizable group were not sure (14%)

Renewable natural gas is natural gas produced from organic waste from farms, forests, landfills, and water treatment plants. The gas can be captured, cleaned, and injected into traditional natural gas pipelines for use by customers like you. Renewable natural gas has similar environmental benefits as renewable or green electricity and would help you to reduce your greenhouse gas emissions by displacing traditional natural gas. Introducing renewable natural gas is a safe and reliable way for Ontarians to turn waste products into a useful energy source and lower greenhouse gas emissions at the same time.

Support of RNG investments by EGD/UG

(base: EGD and UG customers, n=1212)



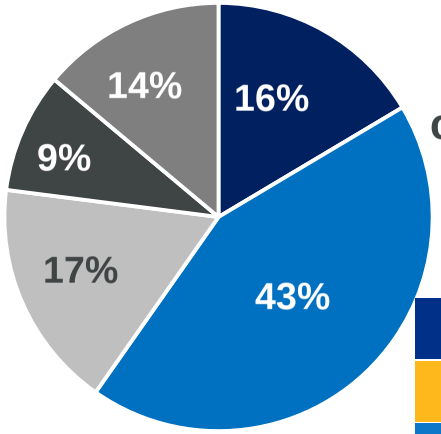
- Strongly support
- Somewhat support
- Somewhat oppose
- Strongly oppose
- Don't know / not sure

Total Support

- **Main: 89%**
- **Legacy Enbridge: 88%**
- **Legacy Union Gas: 90%**

Support of EGD/UG offering a program for customers to help pay for RNG projects

(base: EGD and UG customers, n=1212)



- Strongly support
- Somewhat support
- Somewhat oppose
- Strongly oppose
- Don't know / not sure

Total Support

- **Main: 60%**
- **Legacy Enbridge: 60%**
- **Legacy Union Gas: 60%**

Q: Would you support or oppose **[EGD/UG]** making investments in renewable natural gas projects in the province of Ontario? Q: Would you support or oppose **[EGD/UG]** offering a program that allows its residential customers to help pay for renewable natural gas projects in the province?

Reasons for support / opposition

- Reasons for support are predominantly focused on the environment and concern for future generations, while reasons for opposition focus on concerns with increased costs (especially among lower income customers) and who should bear the responsibility

Main Reasons for Support *(unaided)*

(base: all who support a program that allows residential customers to help pay for renewable natural gas projects, n=724)

Good/ better for/ helps the earth/ environment/ health of the planet	38%
Switch to an alternative/ renewable source of heat/ energy	11%
For the future/ next generation	11%
To reduce impact of climate change	8%
Reduces costs/ saves us money (in the future)	8%
Reduce/ re-use/ recycle (energy/ waste)	7%
It's important/ necessary (for everyone)	6%
Does not deplete resources/ sustainability	4%

Main Reasons for Opposition *(unaided)*

(base: all who oppose a program that allows residential customers to help pay for renewable natural gas projects, n=319)

Cannot afford increased costs (for energy/ heat)	37%
Corporations/ governments should be paying for this/ not the public	29%
Current price/ cost/ tax is too high	21%
Need more information/ research	5%
Top corporate employees are overpaid/ have too many benefits	4%
Don't want to pay for it	3%

Q: What would you say are the main reasons that you would participate in a program in support of renewable natural gas projects? Q: What would you say are the main reasons that you would not be very likely to participate in a program in support of renewable natural gas projects?

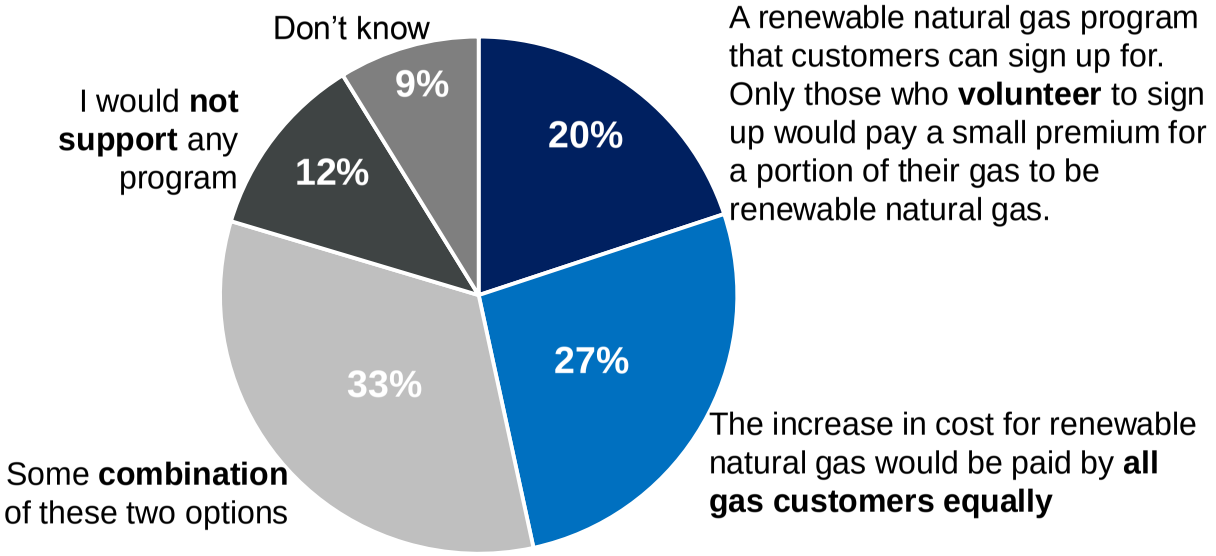
Type of RNG program

- Customer preference for the type of RNG program is mixed … 1-in-5 customers prefer a voluntary program (which is slightly higher among younger customers), while just over 1-in-4 prefer a mandatory program (akin to a rate increase) and 1-in-3 prefer some sort of combination of these options
- Just 12% indicate that they would not support any program at all (this is noticeably lower among younger customers at 3%)

The cost of renewable natural gas is greater than the cost of traditional natural gas. The additional costs for a renewable natural gas program can be paid by consumers in different ways.

Type of RNG Program

(base: EGD and UG customers, n=1212)



By customer age	18-34 (n=101)	35-54 (n=439)	55-64 (n=287)	65+ (n=384)
A renewable natural gas program that customers can sign up for. Only those who **volunteer** to sign up would pay a small premium for a portion of their gas to be renewable natural gas	32%	25%	18%	12%
The increase in cost for renewable natural gas would be paid by **all gas customers equally**	31%	21%	26%	32%
Some **combination** of these two options	28%	33%	36%	33%
I would **not support** any program	3%	10%	11%	16%
Don't know	6%	11%	8%	8%

Q: Which way would you prefer to see [EGD/UG] offer this program, if it were to do so? A renewable natural gas program that customers can sign up for. Only those who volunteer to sign up would pay a small premium for a portion of their gas to be renewable natural gas. / The increase in cost for renewable natural gas would be paid by all gas customers equally./ Some combination of these two options./ I would not support any program.

Unaided willingness to pay (monthly)

- Responses provide a good initial read on the price expectations that customers have, though levels of "don't know" indicate that customers are generally unsure
- 24% of customers are not willing to pay anything (thereby suggesting they are not very receptive to any program)
- Customers offer a wide range of values when indicating the maximum monthly premium they are willing to pay, and generally increase their amount as the % of RNG increases

- 47% of all customers willing to pay something, or 36% of all customers say they would be willing to pay at least $2/month for 2% RNG
- 26% of all customers willing to pay something, or 20% of all customers say they would be willing to pay at least $10/month for 5% RNG
- 15% of all customers willing to pay something, or 11% of all customers say they would be willing to pay at least $20/month for 10% RNG

Customers who specifically prefer…
Voluntary program (n=246): $16.25
Mandatory program (n=322): $20.55

Range of Prices mentioned *(unaided)* *accepted responses from 0-99*	**No % RNG consideration**	**2% RNG**	**5% RNG**	**10% RNG**	**50% RNG**
	All customers (n=1212)	**All customers willing to pay something at no % consideration (n=928)**			
$0 / not willing to pay anything	24%	4%	3%	2%	2%
$1	1%	6%	3%	2%	2%
$2	2%	8%	6%	3%	2%
$3 to $4	1%	3%	3%	4%	2%
$5	9%	14%	14%	10%	10%
$6 to $9	1%	1%	5%	4%	2%
$10	14%	10%	9%	13%	13%
$11 to $15	4%	3%	5%	5%	6%
$16 to $20	7%	1%	4%	6%	9%
$21+	8%	7%	8%	9%	15%
Mean (excl. 0) [median]	**$17.21 [$10]**	**$12.22 [$5]**	**$13.16 [$7]**	**$14.82 [$10]**	**$18.93 [$12]**
Don't know / not sure	30%	41%	40%	40%	39%

Q: What would you say is the absolute maximum amount of money you would pay as a premium, or extra per month, to ensure that a proportion of the natural gas used in homes and businesses in Ontario is renewable natural gas?

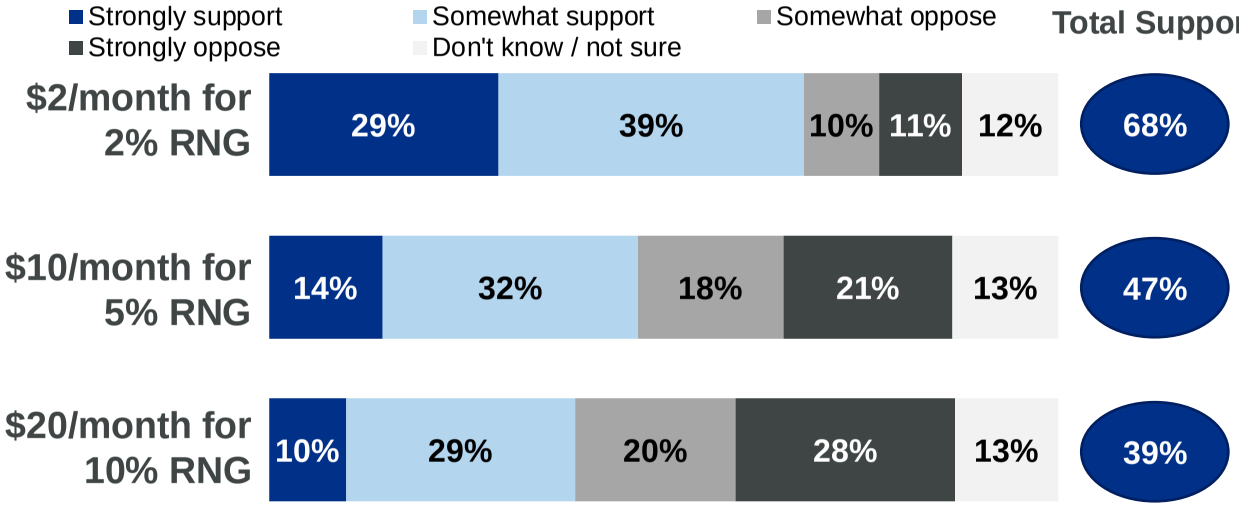
Voluntary RNG program offering

- Customers are quite supportive of a voluntary program at $2/month for 2% RNG with 1-in-4 indicating strong support and a strong likelihood of participation (indicators for substantial support), but support decreases significantly as the offering becomes more expensive

Investing in renewable natural gas can start with modest levels of blending renewable natural gas with conventional natural gas. Over time, it is expected the cost of renewable natural gas will decline, making renewable natural gas less expensive than it is today.

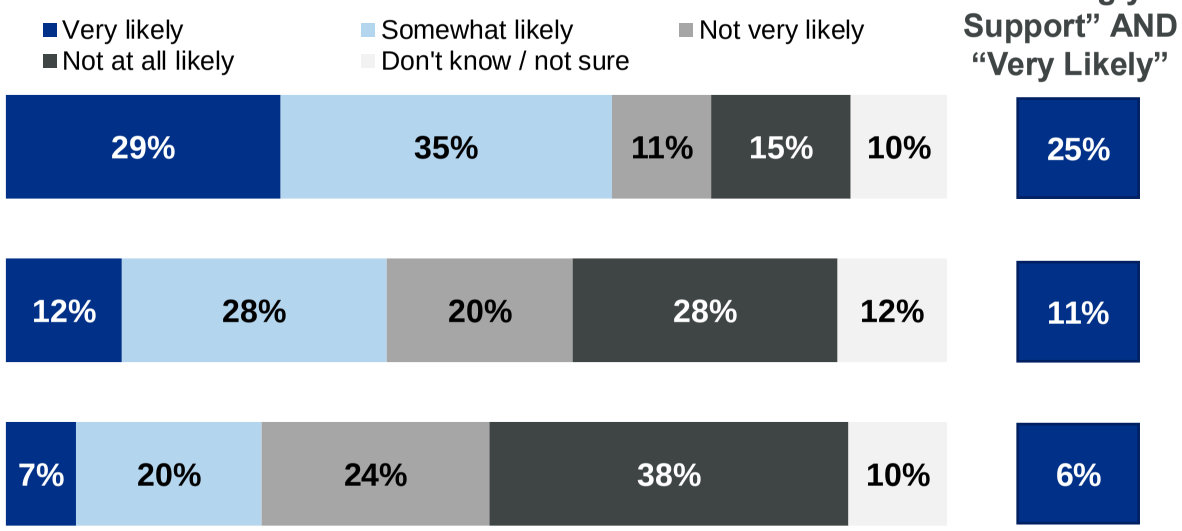
Reaction to voluntary program that costs [$] and ensures [%] of the natural gas used is RNG

(base: EGD and UG customers, n=1212)



Likelihood to sign-up for this program within the next month

(base: EGD and UG customers, n=1212)



Q: Knowing this, would you support or oppose a voluntary program that you can choose to register for that costs [INSERT $] for the benefit of knowing that [NSERT %] of the natural gas you use is from renewable sources?
Q: If this program were offered today, how likely would you be to sign-up for this program that costs [INSERT $] extra per month within the next month?

Voluntary RNG program offering – by key groups

- Support for a voluntary program (at all $ amounts) is much stronger among those who are already very aware of RNG, think the environment is at least a significant issue, and are younger (age 18-34)
- Those who had an initial preference for a mandatory program provide greater support to voluntary programs (once costs are considered) compared to those who preferred a voluntary program to start with – the $2/month program gains some support from customers who initially reported no support for any program indicating some receptivity at this price level

Reaction to voluntary program that costs [$] and ensures [%] of the natural gas used is RNG

(base: EGD and UG customers, n=1212)

Total Support (Strong/Somewhat)	Total (n=1212)	Aware of RNG				View of Environment				Initial Preference				Age			
		Very Aware (n=97)	Aware (n=331)	Only a little (n=489)	Not at all (n=294)	Critical issue (n=380)	Significant issue (n=387)	One of many issues (n=348)	Not an issue (n=81)	Voluntary (n=241)	Mandatory (n=323)	Some Combination (n=400)	No Support (n=140)	18-34 (n=101)	35-54 (n=439)	55-64 (n=287)	65+ (n=384)
$2/month for 2% RNG	68%	77%	71%	69%	59%	76%	75%	56%	45%	66%	83%	80%	22%	80%	67%	68%	66%
$10/month for 5% RNG	47%	64%	53%	45%	37%	62%	50%	32%	26%	49%	62%	56%	5%	60%	44%	49%	44%
$20/month for 10% RNG	39%	54%	47%	35%	31%	52%	41%	28%	21%	40%	50%	48%	3%	56%	39%	37%	36%

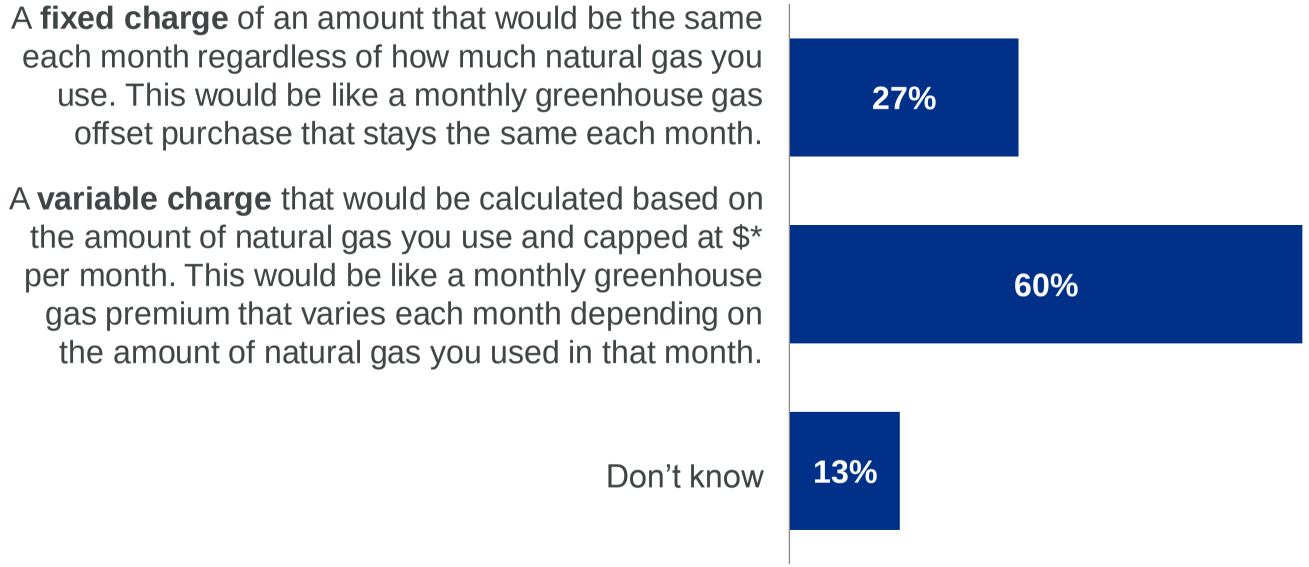
Q: Knowing this, would you support or oppose a voluntary program that you can choose to register for that costs [INSERT $] for the benefit of knowing that [NSERT %] of the natural gas you use is from renewable sources?

Program design elements

- Customers tend to support a variable charge (with some cap) over a fixed charge
  - The cap on the variable charge ranges from $5 to $20 (according to previously stated support for a voluntary program), but regardless of this amount support for a variable charge stays ahead of a fixed charge
- Customers indicate a greater likelihood of support for a program that has a 1-year or 2-year agreement term (compared to longer terms)

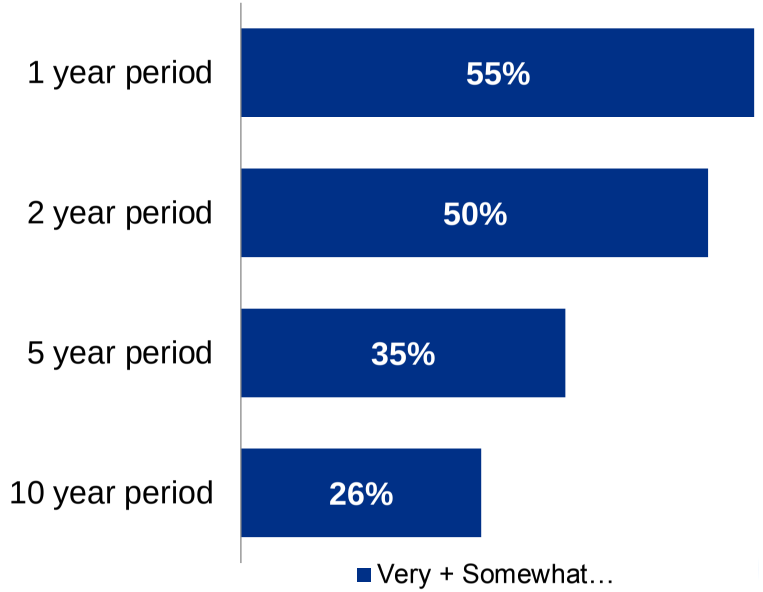
Type of Charge

(base: customers who support a voluntary program, n=945)



Likelihood of considering a voluntary agreement over the following terms …

(base: EGD and UG customers, n=1212)



By Type of RNG Program Preference

Voluntary (n=241)	Mandatory (n=323)
58%	69%
51%	67%
34%	49%
29%	34%

* Cap shown is $20, $10 or $5 based on level of support for a voluntary program at a cost equivalent (or near) that amount.

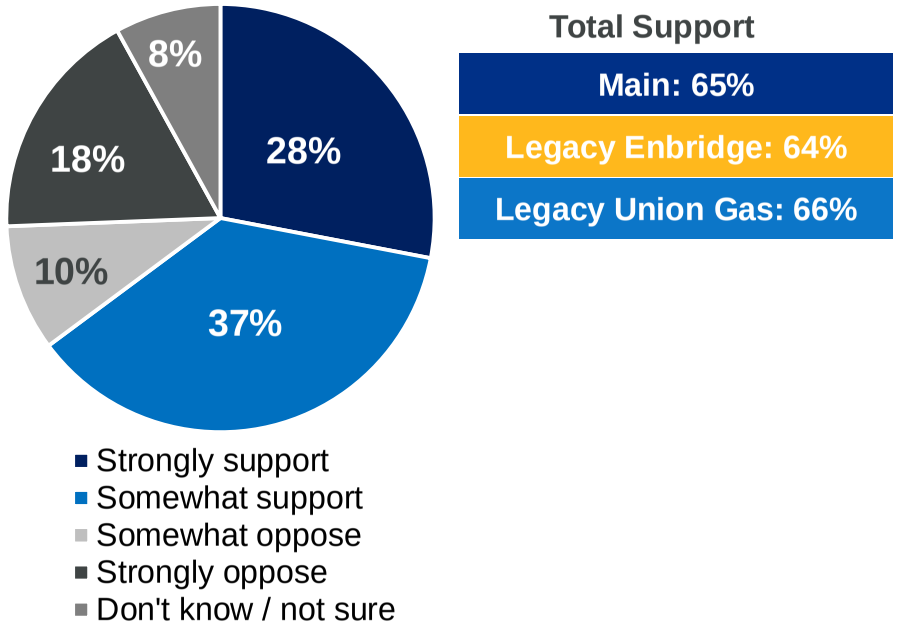
Q: If it were to do so, which way would you prefer to see **[EGD/UG]** charge a voluntary premium in support of renewable natural gas projects? Please read these options carefully. Q: How likely would you be to consider a voluntary agreement where you would pay a voluntary premium in support of renewable natural gas, where the terms of agreement were over a …

Other program offerings

- Customer support for a customer-wide mandatory program and voluntary “round-up for renewables” program are quite similar to each other with over 1-in-4 customers offering strong support for these types of programs (support is also similar to a voluntary program at $2/month, which sees 68% total support)

Customer-wide program that requires *all customers* to pay an additional $2/month

(base: EGD and UG customers, n=1212)

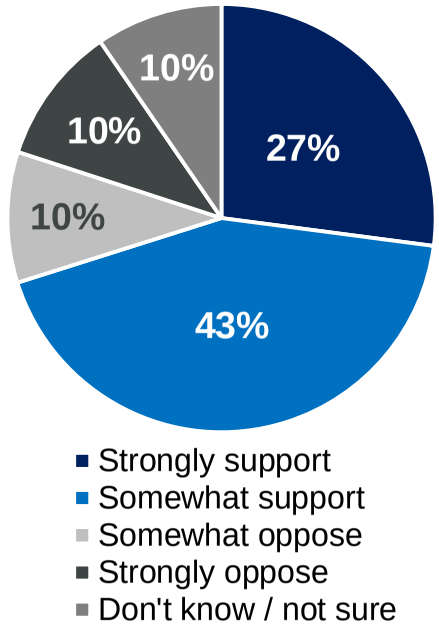


Total Support

- Main: 65%
- Legacy Enbridge: 64%
- Legacy Union Gas: 66%

Voluntary program of “Round-up for Renewables”

(base: EGD and UG customers, n=1212)



Total Support

- Main: 70%
- Legacy Enbridge: 69%
- Legacy Union Gas: 72%

Q: Alternatively, rather than offering a voluntary program, [EGD/UG] can ask all its customers to pay an additional $2.00 per month in a customer-wide program in support renewable natural gas. Would you support or oppose this program? Q: Or as a different option, would you support or oppose a voluntary program that would allow you to register to round up your bill to the nearest dollar each month, in support of renewable natural gas projects?

Other program offerings – by key groups

- Support for a mandatory and voluntary round-up program is not impacted by awareness of RNG as much as the voluntary program is, though support for each of these program offerings is similarly higher among those who think the environment is a critical issue and are younger
- Those who preferred a mandatory program without considering costs continue to support a mandatory program at $2 a month; they are equally supportive of the round-up program while support among those who preferred a voluntary program is much lower for either of these program options – those who would not support any program are more receptive to the voluntary round-up program

Reactions to other program offerings

(base: EGD and UG customers, n=1212)

Total Support (Strong/Somewhat)		Aware of RNG				View of Environment				Initial Preference				Age			
	Total (n=1212)	**Very Aware** (n=97)	**Aware** (n=331)	**Only a little** (n=489)	**Not at all** (n=294)	**Critical issue** (n=380)	**Significant issue** (n=387)	**One of many issues** (n=348)	**Not an issue** (n=81)	**Voluntary** (n=241)	**Mandatory** (n=323)	**Some Combination** (n=400)	**No Support** (n=140)	**18-34** (n=101)	**35-54** (n=439)	**55-64** (n=287)	**65+** (n=384)
Customer-wide program that requires *all customers* to pay $2/month	65%	67%	67%	65%	62%	79%	71%	52%	34%	50%	89%	79%	18%	76%	61%	63%	68%
Voluntary program of "Round-up for Renewables"	70%	74%	71%	74%	63%	81%	76%	60%	42%	69%	84%	79%	32%	76%	67%	72%	71%

Q: Alternatively, rather than offering a voluntary program, [EGD/UG] can ask all its customers to pay an additional $2.00 per month in a customer-wide program in support renewable natural gas. Would you support or oppose this program? Q: Or as a different option, would you support or oppose a voluntary program that would allow you to register to round up your bill to the nearest dollar each month, in support of renewable natural gas projects?

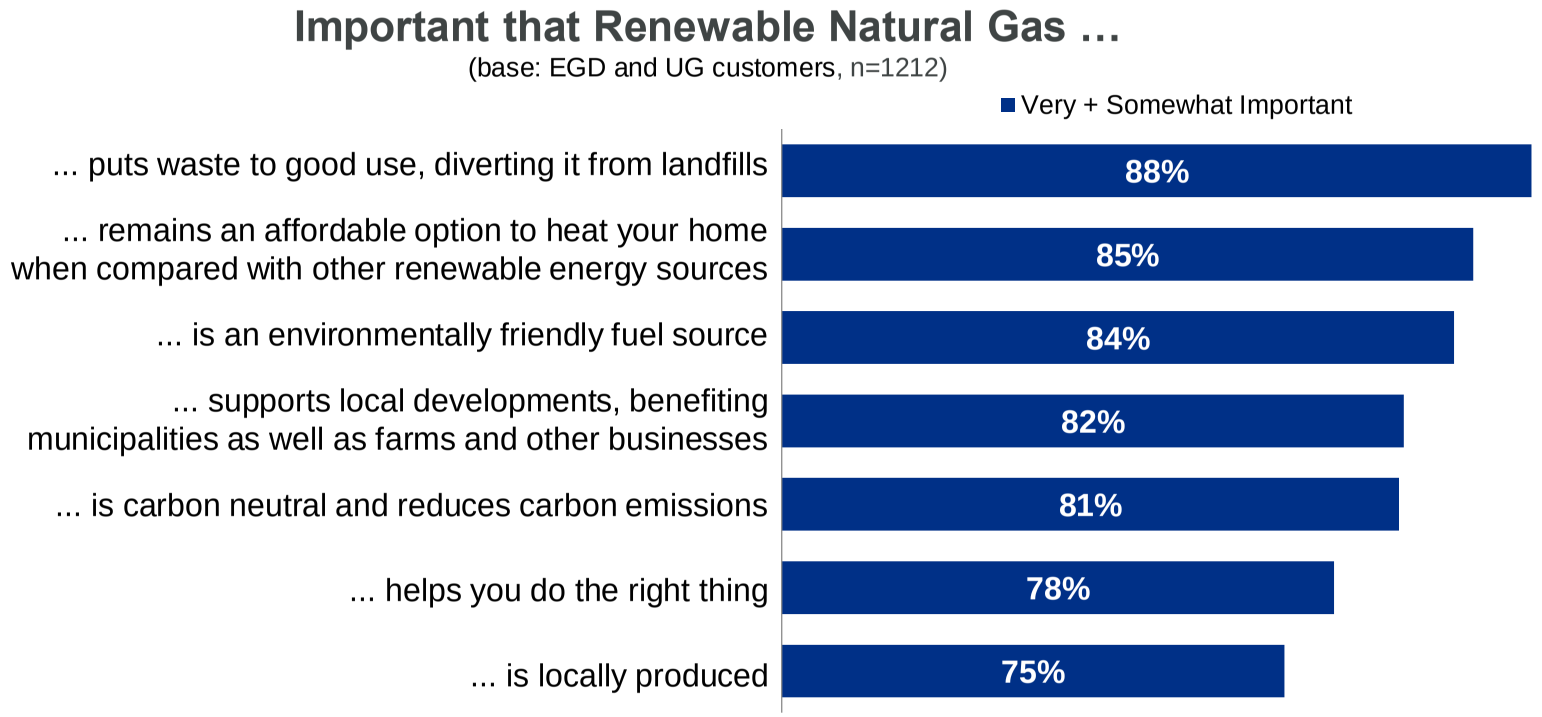
Change in program support

- Customers may change their level of support or opposition – for a residential RNG program offering to help pay for RNG projects – once further information or program details are provided
  - Support for an RNG program increases by 17% (at the same as decreasing by 14%) for a $2/month voluntary program – levels of support dwindle fast at higher monthly costs (as aggregate results also show)
  - Support for a round-up program increases slightly more at 22% but at the same time decreases by 17%
  - A majority do not change their initial reaction to a program, suggesting that the specific type of program does not sway majority opinion

Change in support/opposition to a specific program from initial reaction (at a respondent-level)	Support for EGD/UG offering a program for customers to help pay for RNG projects	Support for any of the voluntary program options			Support for a voluntary program of "Round-up for Renewables"	Support for mandatory program that requires all customers to pay an additional $2/month
		$2	$10	$20		
Total (n=1212)	60%	68%	47%	39%	70%	65%
Decrease (Support or Not Sure ⟶ Oppose)		14%	29%	37%	17%	16%
Same (Support ⟶ Support or Oppose ⟶ Oppose)		63%	59%	52%	58%	64%
Increase (Oppose or Not Sure ⟶ Support)		17%	7%	7%	22%	16%
Not Sure (both)		5%	5%	5%	3%	3%

RNG positioning statements

- A series of positioning statements indicate what is important to customers … all statements are met with strong support with RNG putting “waste to good use, diverting it from landfills” and remaining “an affordable option to heat your home when compared to other renewable energy sources” getting the highest importance ratings



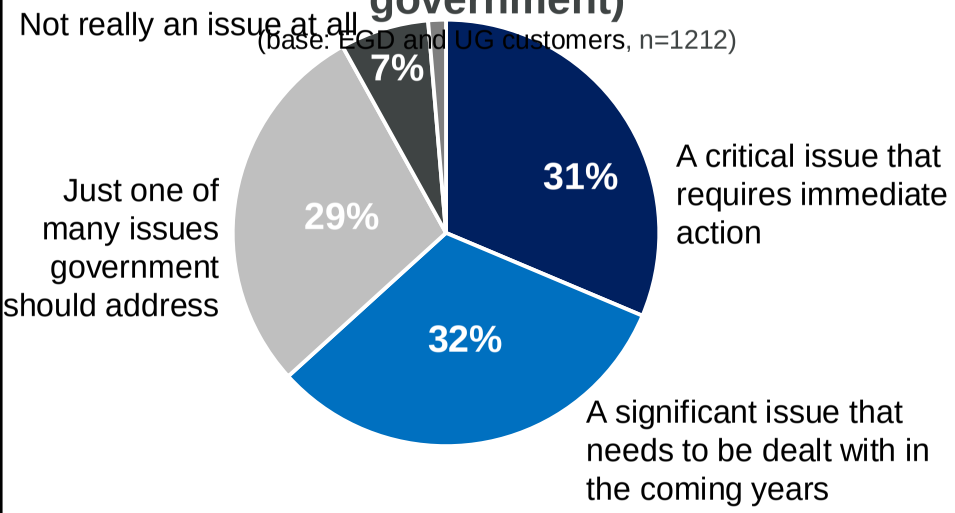
Q: Please consider the following statements about renewable natural gas. How important is it to you that ….

Concern with the environment

- Similar to previous research, almost 2-in-3 customers think the environment is at least a significant issue (this is consistent across Legacy EGD and UG customers)
- Among issues of potential concern, almost all (92%) customers indicate that they are least somewhat concerned with the cost of energy (followed by the state of the environment) – these are also the reasons that customers either oppose or support an RNG program

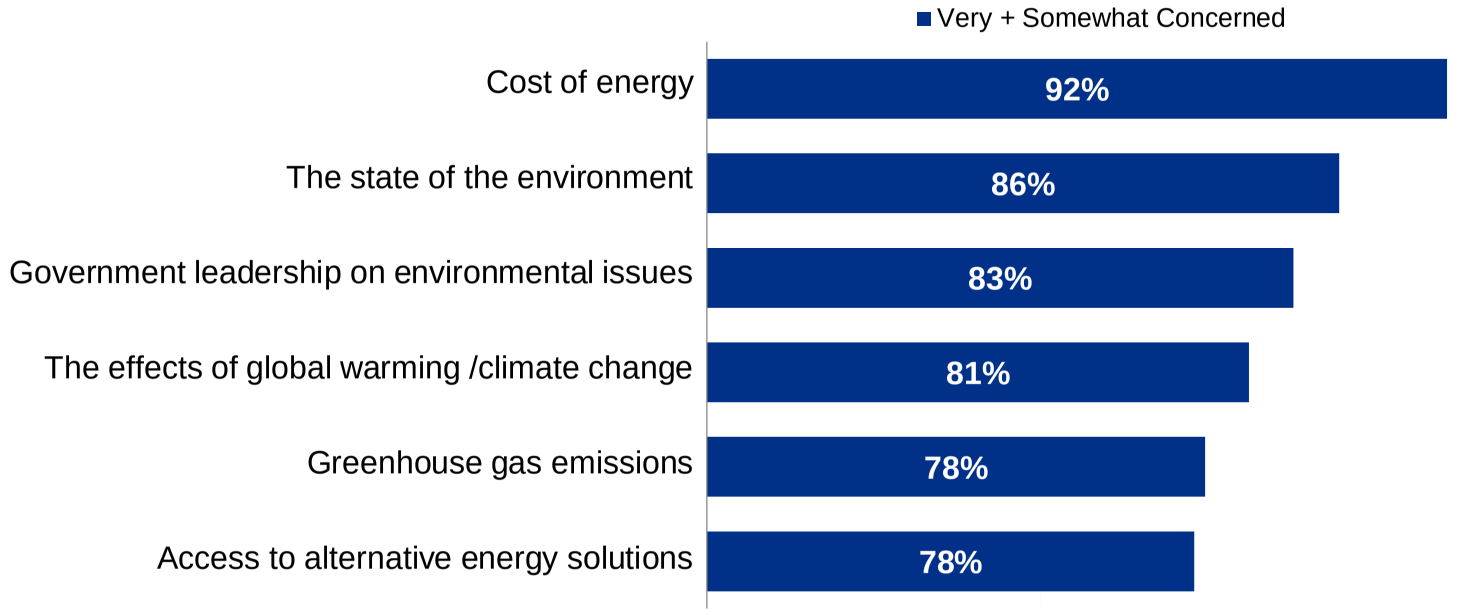
Importance of the Issue of the Environment (of all issues facing the government)

(base: EGD and UG customers, n=1212)



Concern with Specific Issues

(base: EGD and UG customers, n=1212)

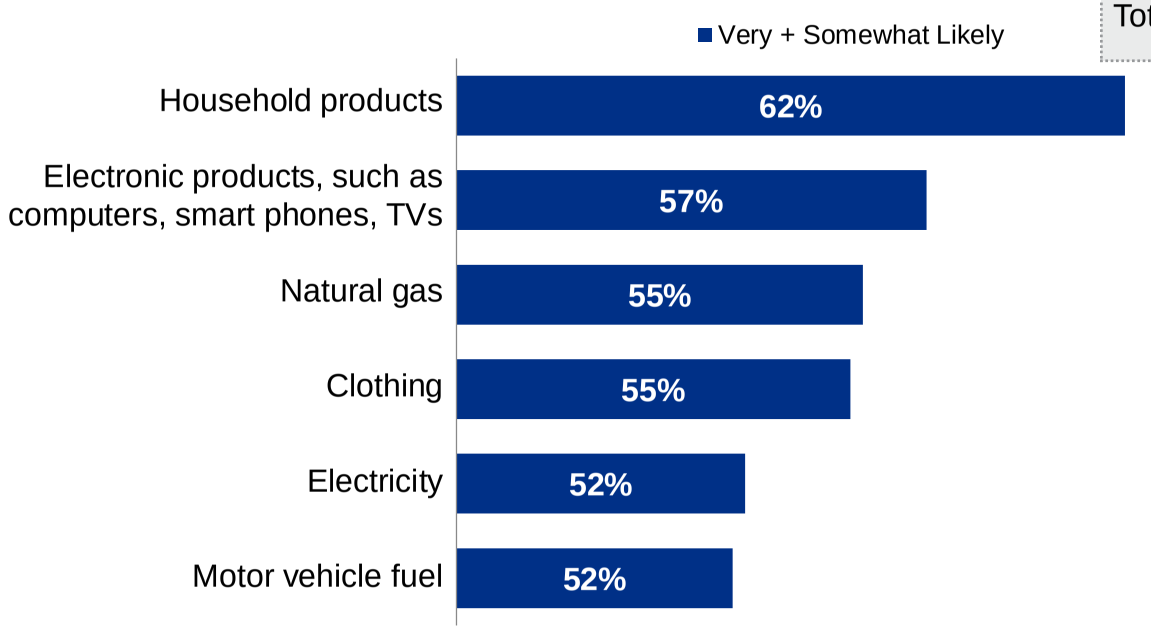


Q: Considering all of the issues that face the Ontario government today, how important would you say the issue of the environment is to you? Q: How concerned would you say that you are with each of the following?

Paying more for environment

- The majority of customers indicate that they would be willing to pay a premium for products that are environmentally friendly
- Those willing to pay more for environmentally friendly options for each of these products are more likely to support each of the types of programs, and are generally willing to pay more for RNG – these customers are an important target market for an RNG program

Likelihood to purchase environmentally friendly option for premium price (approx. 10% more)
(base: EGD and UG customers, n=1212)



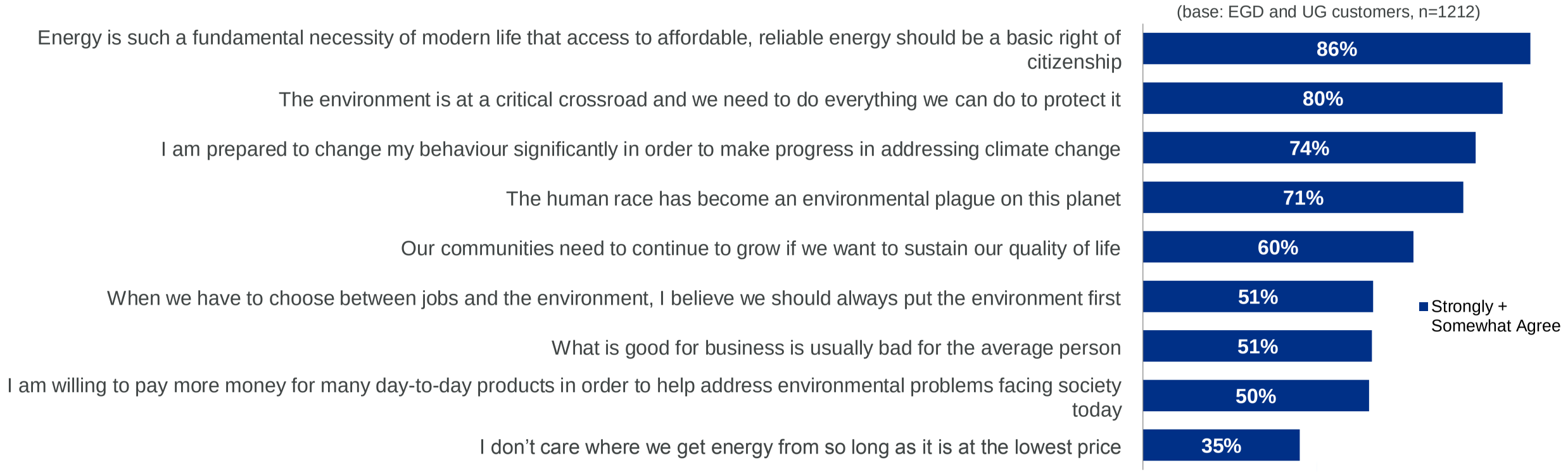
Program Support – for those willing to pay environmental premium

	Some Program Support	Any Voluntary Program Support	Mandatory Program Support	Round-Up Program Support	Max. Willing to Pay (No % RNG) Mean	Not willing to pay anything (No % RNG)
Total (n=1212)	60%	71%	70%	65%	$17.21	24%
	72%	83%	79%	77%	$18.97	10%
	73%	83%	81%	77%	$18.82	10%
	76%	85%	81%	81%	$19.94	8%
	74%	84%	80%	79%	$19.13	10%
	76%	85%	80%	81%	$20.60	9%
	75%	85%	81%	81%	$20.27	9%

Q: In each of following areas, if you had the choice, how likely would you be to purchase an environmentally friendly option for a premium price, let's say approx. 10% more?

Attitudinal Statements

- Customers acknowledge that energy is important, but also express a concern for the environment (and need for action, including a change in behaviour)
- While customers have expressed concern for the cost of energy, few agree with the statement *"I don't care where we get energy from so long as it is at the lowest price"*



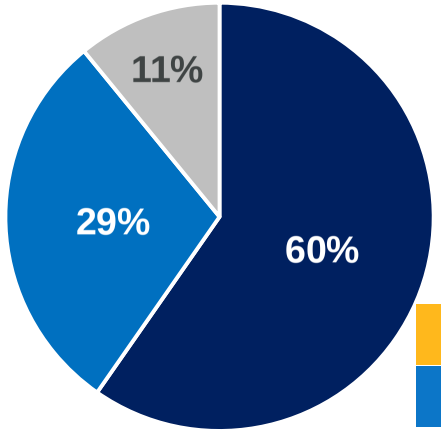
Q: Please let me know if you agree or disagree with the following statements.

Awareness of EE programs & incentives

- 3-in-5 customers are aware that their natural gas utility offers energy efficiency (EE) or conservation programs and among them just over 1-in-3 have participated in such a program
- Customers who have previously participated in an EE program tend to be more supportive of the different RNG programs compared to those who have not, especially the voluntary program

Aware that EGD/UG offers EE programs & incentives

(base: EGD and UG customers, n=1212)



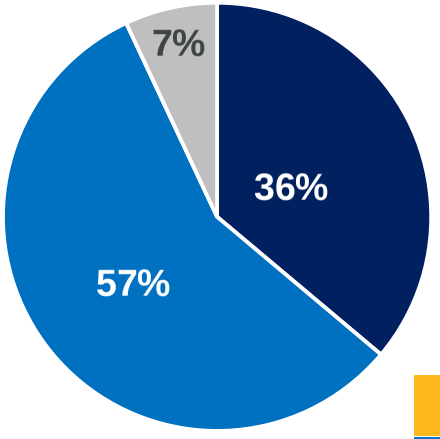
Aware (yes %)

- **Legacy Enbridge: 56%**
- **Legacy Union Gas: 65%**

■ Yes ■ No ■ Don't know / not sure

Ever participated in EE program offered by EGD/UG

(base: aware that EGD/UG offers programs, n=723)



Ever participated …	Some Program Support	Any Voluntary Program Support	Mandatory Program Support	Round-Up Program Support
Total (n=1212)	60%	71%	70%	65%
Yes (n=261)	67%	77%	70%	75%
No (n=412)	58%	67%	61%	70%

Participated (yes %)

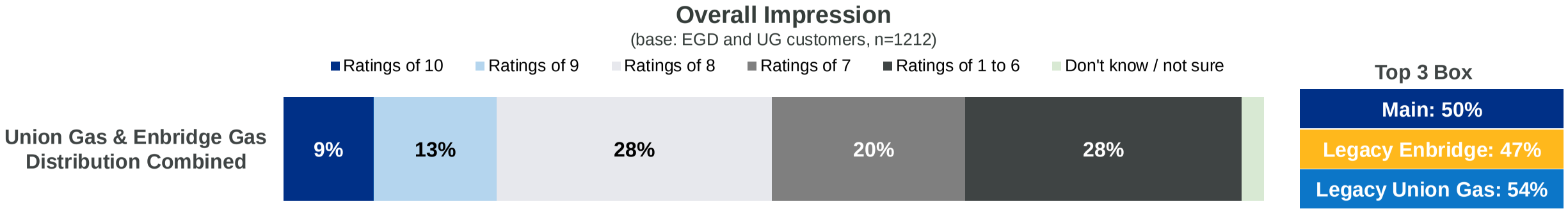
- **Legacy Enbridge: 36%**
- **Legacy Union Gas: 37%**

■ Yes ■ No ■ Don't know / not sure

Q: Are you aware that Enbridge Gas/ Union Gas offers energy conservation & energy efficiency improvement programs & incentives to help residential customers like you to save money on their energy bills? Q: Have you ever participated in any energy conservation programs offered by Enbridge Gas/ Union Gas?

Brand Impressions

- Overall brand impressions among customers are quite strong with 1-in-2 giving a top 3 box rating
- Those who have a strong impression of their utility are much more likely to support an RNG program



	Support for EGD/UG offering a program for customers to help pay for RNG projects	Support for any of the voluntary program options ($2, $10, $20/month)	Support for a voluntary program of "Round-up for Renewables"	Support for mandatory program that requires all customers to pay an additional $2/month
Total (n=1212)	60%	71%	70%	65%
Impact of Impression Rating				
Ratings of 9 or 10 (n=264)	75%	81%	80%	79%
Ratings of 7 or 8 (n=579)	63%	77%	75%	71%
Ratings of 1 to 6 (n=342)	44%	56%	57%	46%

Q: Using a scale of 1 to 10 where 1 means "Poor" and 10 means "Excellent" and all things considered, what is your overall impression of [EGD/UG] as a company?

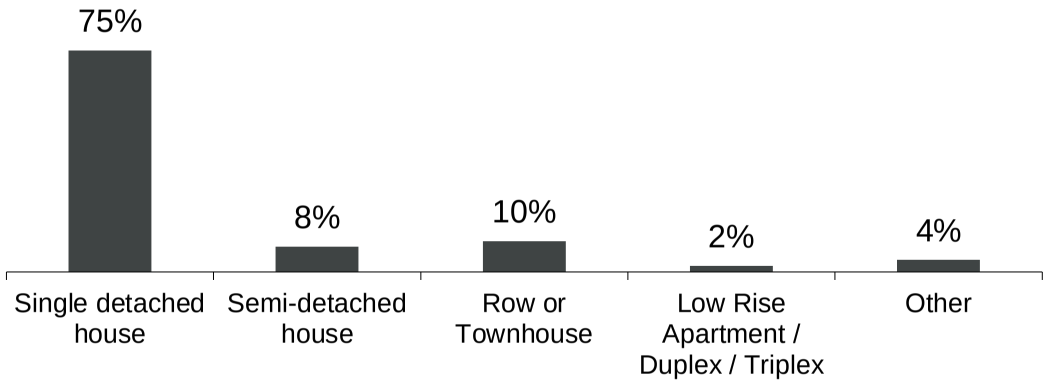
Who will pay $20/month for 20% RNG?

Among customers, 6% (n=70) indicate they strongly support and are very likely to sign-up for a voluntary program that costs $20/month within the next month. These customers …

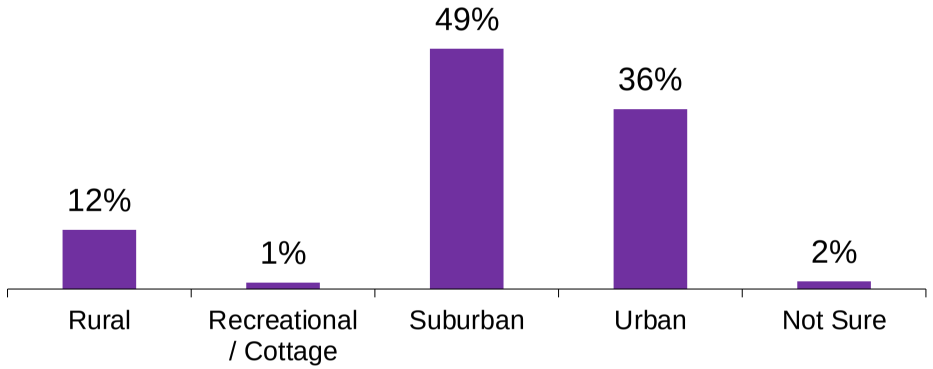
- ✓ Have strong attitudes towards the environment :
  - The environment is at a critical crossroad and we need to do everything we can do to protect it (96% agreement)
  - I am prepared to change my behaviour significantly in order to make progress in addressing climate change (95% agreement)
  - I am willing to pay more money for many day-to-day products in order to help address environmental problems facing society today (91% agreement)
  - The issue of the environment is critical (59% compared to 31% at the total level)
- ✓ Are more likely to already be aware of RNG at 55% aware (compared to 35% at the total level) and highlight the importance of the attributes of RNG
- ✓ Have slightly higher income levels compared to the average customer (~$105K compared to ~90K at the total level)
- ✓ Are slightly younger in age compared to the average (11% in 18-34 age category compared to 8% at the total level)
- ✓ Are found in both EGD/UG territories (same proportion as the customer population) but are more likely to be urban (45% vs. 36%)
- ✓ Slightly more likely to be paperless customers (54%) compared to the total (50%)
- ✓ Not surprisingly, their absolute maximum willingness to pay per month is higher than the average at $29.41(compared to $17.21)

Demographics (Home)

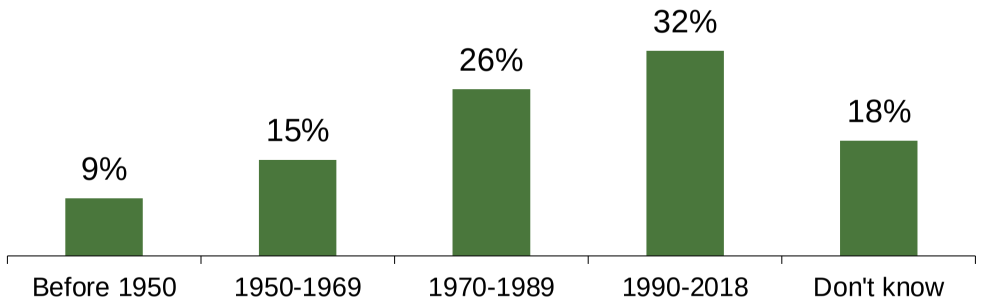
Type of residence



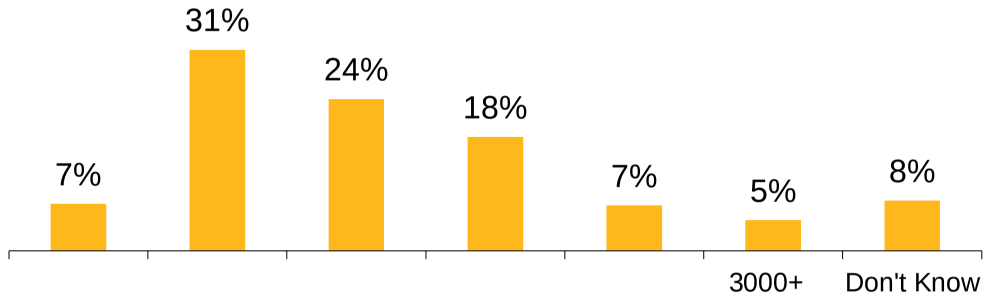
Geographic Area



Age of Home



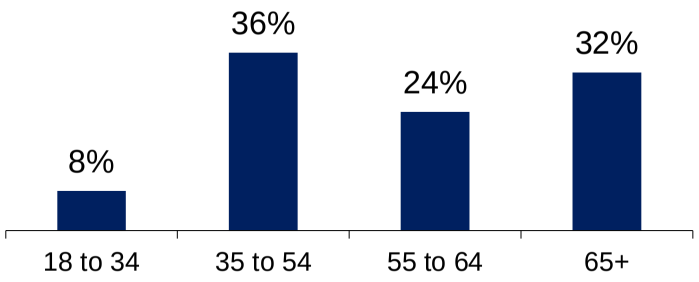
Size of Home (Sq Ft)



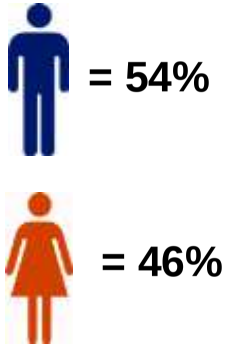
Q: Now thinking about your home, in what year was it built? Q: What is the approximate size of your home? Q: Which of the following best describes your primary residence? Q: How would you classify the area in which you live?

Demographics (Consumer)

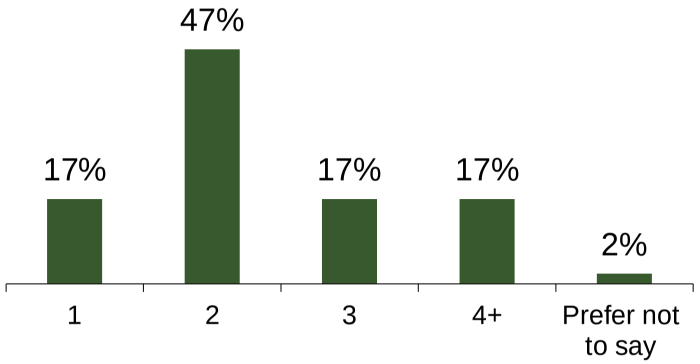
Age



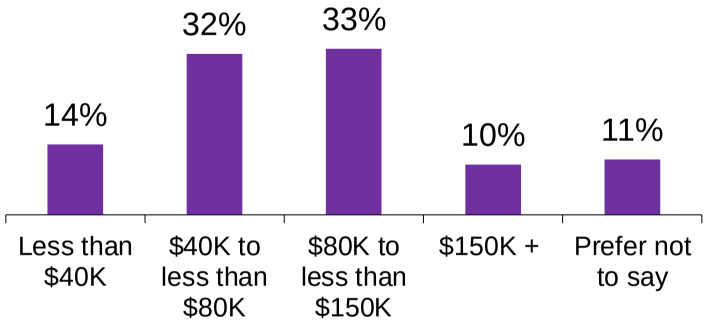
Gender



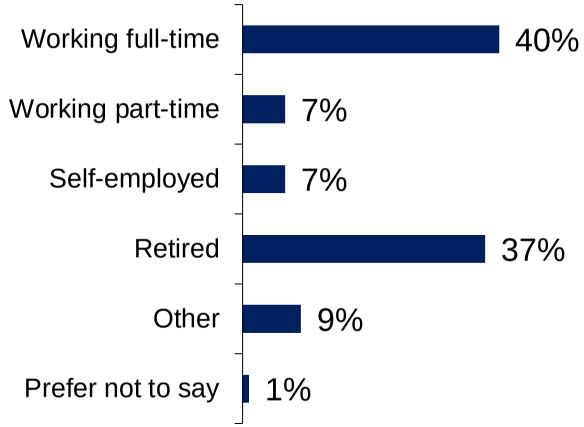
Household Size



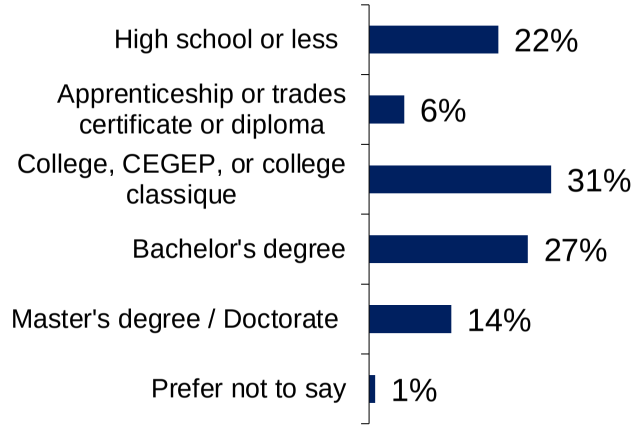
Household Income



Employment Status



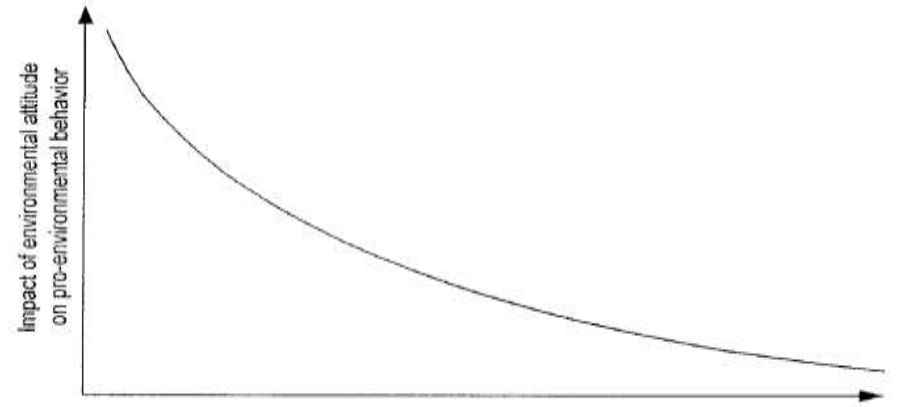
Level of education



Q: What age category do you belong to? Q: What is your gender? Q: Which of the following categories represents your total annual household income before taxes? Q: Including yourself, how many people live in your household? Q: How would you best describe your current employment status? Q: What is the highest level of education you have completed? Would you say …

Putting the research into a broader context helps to understand results and how we can use findings to predict future behaviour

- A large body of academic literature on exists on the value-action or the attitude-action gap
- The question of what shapes pro-environmental behaviour is complex and involves a number of different factors:
  - **Demographic**: gender (women have less environmental knowledge but are more emotionally engaged) and education (more education means more knowledge of environmental issues, but not necessarily increased pro-environmental behaviour)
  - **External**: institutional, economic, social and cultural
  - **Internal**: motivation, environmental knowledge (only a small fraction of pro-environment behaviour can be linked to knowledge), values, attitudes, environmental awareness, emotional involvement, locus of control, and priorities
- Research finds that pro-environmental attitudes (one of the internal factors) actually have varying and often a small impact on pro-environmental behaviour (this is the attitude-action gap)
- Some authors suggest that people choose behaviours with least cost (economic and / or psychological costs)
- "People often act in ways that both fail to align with their knowledge, values, attitudes, and intentions and fall short of maximising their material interests."



Low-cost high-cost model of pro-environmental behavior (Diekmann & Preisendoerfer).

Source: "Mind the Gap: why do people act environmentally and what are the barriers to pro-environmental behaviour" by A. Kollmuss and J. Agyman, Environmental Education Research, Vol. 8, No. 3, 2002.

Survey Instrument

Preserving and Protecting our Environment for Future Generations

A Made-in-Ontario Environment Plan

Ministry of the Environment, Conservation and Parks

Ontario

Minister's Message

Rod Phillips
Minister of the Environment, Conservation and Parks

The people of Ontario are passionate about the great outdoors and the natural spaces our communities offer. We recognize the importance of a clean environment to our health, our wellbeing and our economic prosperity for future generations. We also recognize the important responsibility we all have to our environment.

Ontario boasts hundreds of thousands of parks, hiking trails and forests to explore with our families and friends. Ontarians can camp in protected areas like Quetico Provincial Park in Northern Ontario and see firsthand the magnificence of a moose. We can also enjoy a family picnic at Victoria Park in Kitchener and enjoy local fresh fruits, vegetables and dairy products that were grown and produced on nearby farms. Ontario is home to hundreds of thousands of lakes, rivers and waterways that are the lifeblood of our province, where people fish, kayak and swim. We also rely on our waters to transport goods, feed our crops, and have a safe, reliable source of drinking water.

These waterways are under increasing pressure as urban development expands along their shorelines, invasive species expand on land and in water, and climate change causes changing weather patterns that can bring heavier rains resulting in damage to homes, businesses and public infrastructure.

Preserving and protecting our environment begins with a new vision for Ontario. One where hardworking taxpayers are protected and respected, and where environmental stewardship connects with the people of this province.

I am pleased to present the following made-in-Ontario plan to keep our province beautiful by protecting our air, land and water, preventing and reducing litter and waste, supporting Ontarians to continue to do their share to reduce greenhouse gas emissions, and helping communities and families prepare for climate change.

This plan will ensure we balance a healthy environment with a healthy economy, and will be reviewed on a four-year basis.

This is a plan that represents a clean break from the status quo.

We understand the pressure Ontarians feel with rising costs of living as well as skyrocketing energy costs that have hurt our economy and our competitiveness. They are understandably frustrated to see their hard-earned tax-dollars being put towards policies and programs that don't deliver results.

That's why a cap-and-trade program or carbon tax that seeks to punish people for heating their home or driving their cars remains unacceptable to the people of Ontario.

When the government does invest in environmental programs, taxpayers should not have to watch their hard-earned dollars be diverted towards expensive, ineffective policies and programs that do not deliver results.

The people of Ontario deserve recognition for the sacrifices they have made and the ones they continue to pay for.

Our plan reflects our province's specific needs and opportunities, and it does not include a carbon tax. We will continue to do our share to reduce greenhouse gases and we will help communities and families prepare to address climate change. With hard work, innovation and commitment, we will ensure Ontario achieves emissions reductions in line with Canada's 2030 greenhouse gas reduction targets under the Paris Agreement.

We will tap into the resourcefulness and creativity of our diverse and thriving private sector by helping them invest in and develop clean solutions to today's environmental challenges.

We have consulted extensively with the public, receiving more than 8,000 ideas and recommendations through our online portal. These comments have been considered alongside submissions from stakeholders and information from Indigenous communities who provided feedback on fighting climate change and other areas of environmental focus. We will continue to consult and engage on the proposals contained within this plan in the coming weeks and months.

All of us have a role to play in protecting the environment, and there are many great ideas across our province and country. It will be important that we continue to have constructive dialogue with other jurisdictions to tackle these environmental challenges together. One thing that has become particularly clear over the past few months is the fact that no one solution fits all provinces, regions or communities.

Our plan describes the actions Ontario is proposing to take and the ways we will enable industry, business, communities and people to continue to do their part.

Ontario families understand that we have a personal responsibility to leave behind a province better off than the one we inherited; not just environmentally, but financially as well.

I invite you to read our plan and join with us today, and every day, to create a better future for Ontario.

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Our Province Today

Those of us who call Ontario home couldn't ask for a better place to live, work and raise a family. The quality of life in our communities and the success of our businesses depends to a great extent on the clean air we breathe, the safe water we drink, and the well-protected lands and parks we enjoy.

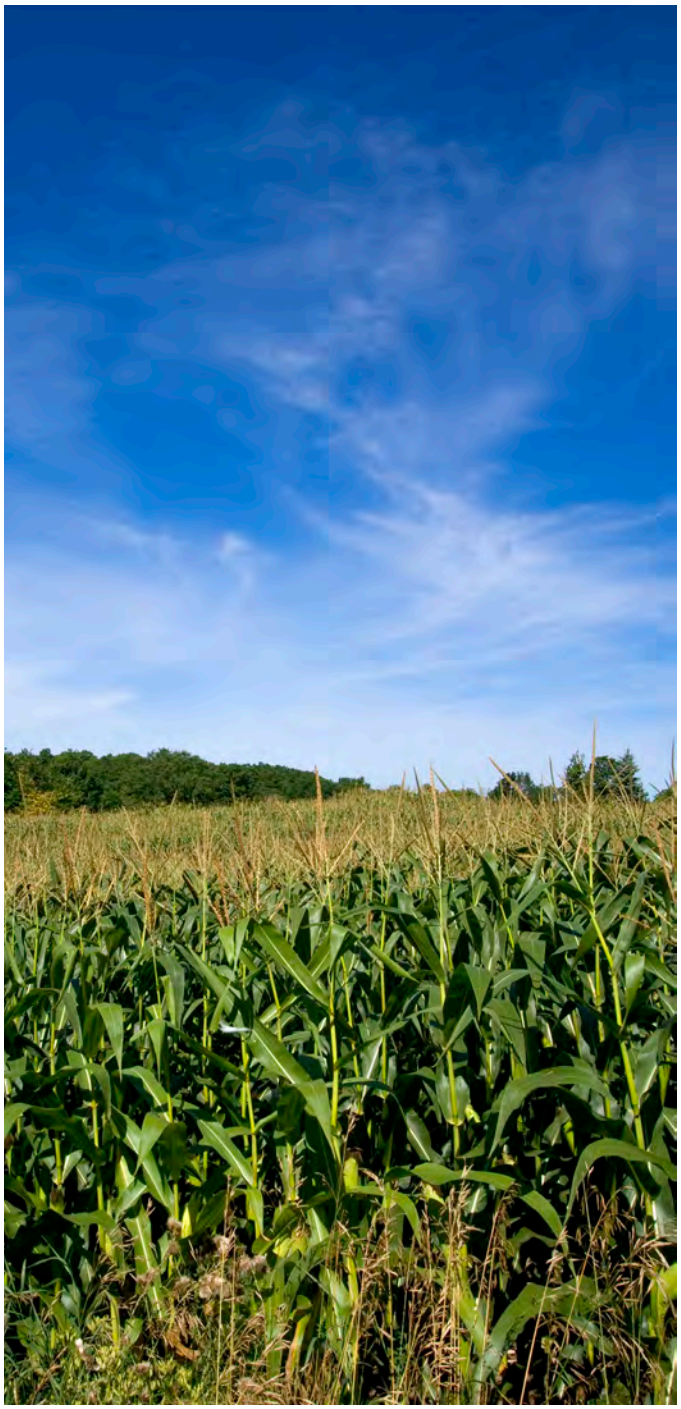
Today, the people of Ontario are breathing cleaner air with large reductions in levels of many harmful pollutants. In 2001, Ontario began the process of closing its coal plants and in the years since, we have significantly reduced pollutants such as nitrogen dioxide, sulphur dioxide, mercury and particulate matter.

Our Great Lakes attract millions of residents and visitors to waterfront communities around the province each year. These lakes provide safe drinking water to more than 70% of Ontarians and their watersheds are home to more than 4,000 species of fish, birds and other living things. They, along with all of our waterways and groundwater, underpin our province's economic prosperity and wellbeing – supporting Ontario's manufacturing, power generation, fisheries, tourism, agriculture and drinking water.

Parks and greenspace across our province provide individuals, families and tourists with opportunities to canoe in lakes, hike in forests and camp on protected lands.

THE CHALLENGE AHEAD

At the same time, climate change threatens these resources and our homes, communities and businesses, infrastructure, and our locally grown food and crops. It also threatens food security and road access for remote First Nations, as well as the health of ecosystems across our great province.



We can do more to protect ourselves from the extreme weather events that have flooded houses, buildings and roads, overwhelmed aging stormwater and wastewater systems, damaged crops, and brought heavy ice and wind storms that knocked out power for hundreds of thousands of people, including those who are most vulnerable.

Heat waves and recent drought conditions in some areas of the province, coupled with anticipated impacts of climate change and population growth, have intensified concerns related to water security for farmers, Indigenous communities, industry and municipalities.

We also recognize that there is much more that can still be done to keep our lands and waterways clean and free of litter. Nobody wants to see plastic and litter polluting our waterways, neighbourhoods and parks. No one wants sewage and wastewater overflowing into our lakes and rivers or salt making its way into our waterways. These issues are happening now and need to be addressed. There is also a need to address specific air quality concerns in communities that continue to face air quality challenges. True environmentalism begins with a sense of civic responsibility that we foster through meaningful action close to home.

Our environment plan reflects our government's commitment to addressing these pressing challenges. We will use the best science, real-time monitoring where available, and strong, transparent enforcement to protect our air, land and water, prevent and reduce litter and waste, support Ontarians to continue to do their share to reduce greenhouse gas emissions, and help communities and families prepare for climate change.

DOING OUR PART

In 2001, the government of the day announced the closure of the Lakeview Generating Station, setting the stage for the phase out of coal-fired electricity generation which remains the largest single greenhouse gas reduction in Canadian history. Ontario's low-emission combination of hydroelectric, nuclear, natural gas and non-hydro renewable generating capacity has enabled the province to avoid up to 30 megatonnes of annual greenhouse gas emissions, equivalent to taking up to seven million vehicles off our roads. In 2017, approximately 96% of the electricity generated in Ontario was emissions-free.

The combination of nuclear, hydro, other renewables and efficient natural gas has given Ontario one of the cleanest energy grids in North America. Ontario's supply of clean electricity is one of its unique strengths. Ontario is currently a net exporter of electricity, with our clean power offsetting a higher emitting mix of coal and natural gas generation in neighbouring states, such as Michigan and New York.

Measured against the same base year of Canada's target under the Paris Agreement (2005), the province's total greenhouse gas emissions have dropped by 22% – even while the rest of Canada saw emissions increase by 3% during that same time.

Doing Canada's heavy lifting on greenhouse gas emission reductions came at a cost that was too high for Ontario families and businesses. In 2017, prior to the introduction of the Fair Hydro Plan Act, 2017, the cost associated with transitioning to Ontario's low emission electricity system was an estimated $33 per month for a typical residential electricity consumer and about $435 per month for a small business, such as a restaurant. Since 2005, about $40 billion has been spent in capital investments to transition the province to an electricity system that is virtually emissions-free. Now is not the time to add further costs to the price of electricity that is already very clean.

We will continue to do our share to address climate change and protect our environment. We will do so in a way that protects our economy and respects the people.

We will hold polluters accountable by ensuring strong enforcement with real consequences and penalties, especially for repeat offenders.

We will also help our urban and rural communities and landscapes become more sustainable and resilient. We will help others do their part, whether it's leveraging private sector investments to drive environmental solutions or making it easier for people and companies to go the extra mile to reduce emissions, clean up their communities, protect waterways, conserve lands and restore habitats.

Ontario has a long history of working cooperatively with other provinces and territories, as well as with the federal government through formal agreements such as the Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health and through intergovernmental forums such as the Canadian Council of Ministers of the Environment. There are also global environmental issues on which Ontario will continue collaborating with the federal government and participating in international meetings and agreements.

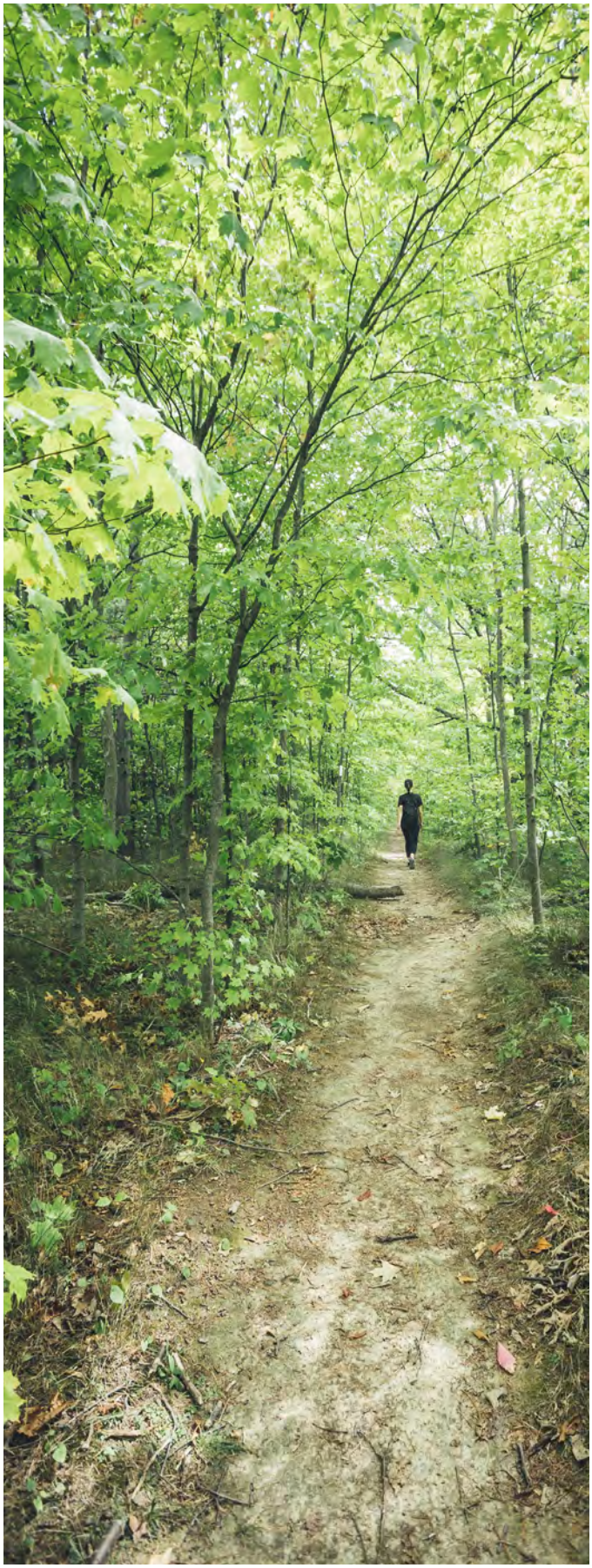
Protecting the environment is a responsibility of all of us who call Ontario home.

We will continue to work in partnership with other provinces, neighbouring jurisdictions, the federal government, municipalities, Indigenous communities, business and local partners to help protect our environment and ensure we pass on a cleaner environment to future generations.

GUIDING PRINCIPLES

Our guiding principles will help us address our most serious environmental challenges in a responsible, effective, measurable and balanced way.

- **Clear Rules and Strong Enforcement:** We will ensure that polluters are held accountable with tougher penalties, while reducing regulatory burden for responsible businesses.
- **Trust and Transparency:** We will provide Ontarians with the information and tools required – with a particular focus on real-time monitoring – to understand the current environmental challenges we face and how these challenges impact individuals, businesses and communities across the province.
- **Resilient Communities and Local Solutions:** We recognize that environmental impacts faced by communities across Ontario may be very different. We will work with these communities and use best scientific practices and other evidence-based methods to develop unique solutions to their challenges.



Protecting our Air, Lakes and Rivers

Ontario's water and air are life support systems for our province and our people. Pollution in our air and water increases healthcare costs, affects the enjoyment of our outdoors and contributes to lost economic opportunity. We will protect these critical systems by keeping our water and air clean while growing our economy.

Our plan will make it easier for people to report pollution that is impacting their lives by developing an online platform for reporting incidents that allows photos or video to be sent in, as well as reporting an incident by e-mail, phone or through an app.

Additionally, we will put in place an improved complaint response system that sets out the services Ontarians can expect from inspectors and investigators when they file a complaint, and new standards on the response time they can expect based on the type of incident they report. We will be transparent about pollution incidents and spills, and provide real-time information where it is available so that people can see if a spill or incident has already been reported, as well as the status of the ministry's response.

CLEAN AIR

Although Ontario's air quality has improved significantly, some areas of the province still experience poorer air quality due to pollution. We are committed to protecting our air, ensuring we have strong environmental standards that are protective of human health and the environment, and taking action to enforce local air quality standards.

Quick Fact: Ontario initiated the first closure of a coal plant in 2001. This action and the subsequent closure of 19 coal-fired units in five plants contributed to reducing the number of smog days in Ontario from a peak of 53 in 2005 to zero in 2017.

Actions

Improve air quality in communities by creating unique solutions to their individual challenges

- Focus on parts of the province that continue to experience air quality challenges due to pollution from transportation, industry and other sources.
- Work in partnership with municipalities, industry, public health units, other community stakeholders and Indigenous communities to address local air quality concerns and achieve clean air objectives.

Reduce emissions from heavy-duty vehicles

- Redesign the emissions testing program for heavy-duty vehicles (e.g. commercial transport trucks) and strengthen on-road enforcement of emissions standards.

Improve understanding of different sources of air pollution and their impact

- Monitor pollutants to evaluate long-term trends so we can gather the information we need to take action on air pollution.
- Increase road-side monitoring of traffic pollution and expand road-side monitoring of pollutants beyond the Greater Toronto Area to other heavily urbanized communities such as Sarnia, Sudbury and Hamilton.

Strengthen collaboration on addressing air pollution that comes from outside of Ontario's borders

- Call on the federal government to proactively address the impacts of air pollution from outside Ontario, including from the United States and international sources, and ensure continued cooperation and commitment to improve air quality.
- Expand collaboration with Michigan and Ohio to reduce the emission of contaminants of concern that impact southern Ontario, Michigan and Ohio airsheds.

Success story: Sarnia's air quality is improving

In partnership with industry, the Clean Air Sarnia and Area (CASA) advisory panel launched the website cleanairsarniaandarea.com so users could view contaminant levels from seven air monitoring stations in the Sarnia community. Air quality information is refreshed every hour on an interactive map so users can find out whether air quality is good, moderate or poor compared to provincial standards. While Ontario and industry have been monitoring air quality in the Sarnia area for decades, the CASA initiative marks the first time that data has been accessible to the public in real-time and in one location.

Ontario is also moving forward with a Sarnia Area Environmental Health Project to help address concerns about air pollution and other environmental stressors from local industries in the Sarnia area. The project will help enhance our understanding of the links between the environment and health in the community, with a focus on assessing exposures to air contaminants.

These projects are great examples of the collaborative efforts of local industry, the municipality, the Aamjiwnaang First Nation and interested community groups.

CLEAN WATER

Our lakes, waterways and groundwater are the foundation of Ontario's economic prosperity and wellbeing – supplying water to our communities, sustaining traditional activities of Indigenous peoples, supporting Ontario's economy, and providing healthy ecosystems for recreation and tourism.

Over past decades, Ontario has seen significant improvements in Great Lakes water quality due to efforts by governments and other partners. These partnerships have achieved a 90% reduction in releases of mercury, dioxins and polychlorinated biphenyls (PCBs), resulting in fish that are safer to eat, clean-up of polluted areas and the restoration of species.

Water resources in Ontario are facing many pressures. Population growth, rapid urban development, aging infrastructure and invasive species are threatening our waterways through pollution and loss of natural heritage. For example, excess road salt can damage roads, cause vehicle corrosion and be harmful to fish in our waterways. The changing climate is compounding these stresses with droughts, floods and extreme storms. Declining ice cover is causing shoreline erosion, warmer water is creating conditions for blooms of harmful algae, and shifting water conditions are changing when and where fish spawn.

Working together, we can help conserve and manage our water resources. Ontario's drinking water, for example, is among the best protected in the world as a result of the province's strong monitoring, reporting and enforcement activities and programs.

We will take strong enforcement action to protect our lakes, waterways and groundwater from pollution.

We will also work with municipalities and other partners to increase transparency through real-time monitoring of the sewage overflows from municipal wastewater systems, which too often flow into Ontario's lakes and rivers. We must step up efforts to ensure the public is aware and that proper monitoring occurs.

Quick Fact: 99.8% of more than 518,000 test results from municipal residential drinking water systems meet Ontario's strict drinking water quality standards.

Our plan focuses on key areas of action to protect our waters and keep our beaches clean for swimming, recreation, enjoyment and traditional use.

Actions

Continue work to restore and protect our Great Lakes

- Build on previous successes and continue efforts to protect water quality and ecosystems of the Great Lakes. This includes keeping coastlines and beaches clean, protecting native species and safeguarding against invasive species such as Asian carp or Phragmites, and reducing harmful algae by continuing partnerships and negotiations with the federal government under agreements and plans such as the Canada-Ontario Great Lakes Agreement (COA) and the Canada-Ontario Lake Erie Action Plan. Since signing the eighth COA in 2014, Ontario has directly invested $15.3 million per year in programs. This includes supporting the Lake Erie Action Plan and restoring geographic areas, known as areas of concern, where significant impairment or contamination has occurred as a result of human activities at the local level.
- Review and update Ontario's Great Lakes Strategy to continue to protect fish, parks, beaches, coastal wetlands and water by reducing plastic litter, excess algae and contaminants along our shorelines, and reducing salt entering waterways to protect our aquatic ecosystems.

Asian Carp:
A threat to the Great Lakes Fisheries and Economy

Asian carp typically weigh two to four kilograms but can weigh up to 50 kilograms and can grow to a length of more than one metre. They consume a significant amount of food and can eat up to 20% of their body weight each day, which harms the Great Lakes ecosystem. Asian carp were introduced to aquaculture facilities in the southern U.S. in the 1970s to remove algae and suspended solids from their ponds. They escaped when the Mississippi River flooded and have spread northward in the Mississippi watershed towards the Great Lakes.

Asian carp pose a significant threat to recreational and commercial fisheries in Ontario which are worth almost $2.5 billion combined. Ontario is working with many partners including the Asian Carp Regional Coordinating Committee, a committee including all Great Lakes states and provinces, U.S. federal agencies, and Fisheries and Oceans Canada to facilitate collaboration on prevention, early detection, response, and monitoring activities.

Quick Fact: Ontario's more than 250,000 lakes, including the Great Lakes, contain about one fifth of the world's fresh water.

Continue to protect and identify vulnerable waterways and inland waters

- Build on previous successes and continue to implement the Lake Simcoe Protection Plan to protect and restore important natural areas and features of the lake. Ontario has invested annually in the implementation of the Lake Simcoe Protection Plan.
- Protect the quality of the Lake of the Woods by continuing to work with partners on reducing phosphorus that, in excessive quantities, can cause toxic blue-green algae.
- Build on the ministry's monitoring and drinking water source protection activities to ensure that environmental impacts from road salt use are minimized. Work with municipalities, conservation authorities, the private sector and other partners to promote best management practices, certification and road salt alternatives.
- Work with Indigenous communities and stakeholders, including the public, on the remediation of mercury contaminated sediments in the St. Clair and English-Wabigoon Rivers, including efforts such as:
  - ensuring clean-up of the remaining mercury contaminated sediments located in three areas downstream of the former Dow Chemical site.
  - participating in the work of the English and Wabigoon Rivers Remediation Panel to fund remediation activities from a trust that was established with $85 million under the *English and Wabigoon Rivers Remediation Funding Act, 2017*.

Action in Progress:
Protecting the Muskoka watershed

Through the Muskoka Watershed Conservation and Management Initiative, the community and province will work together to protect this vital area by identifying the issues facing the region. Ontario will invest $5 million and commit up to an additional $5 million in matching contributions.

Effective watershed management is important to the people in our communities, especially at times when watersheds are facing stresses such as increased development and flooding caused by severe weather events.

This initiative will also help us develop a more comprehensive approach to watershed management, which can inform current actions and future development.

Success story:
Celebrating recovery of freshwater fish in Lake Simcoe

Over the years, many organizations alongside the provincial and federal governments have worked hard to protect and restore the Lake Simcoe watershed against contaminants and excess nutrients like road salt and phosphorus that have had a negative effect on water quality. The Lake Simcoe ecosystem is showing encouraging signs of recovery and demonstrating that efforts to restore and protect the lake are having an impact. For example, populations of sensitive aquatic life such as lake trout, lake whitefish and cisco are trending upward.

Ensure sustainable water use and water security for future generations

- Thoroughly review the province's water taking policies, programs and science tools to ensure that vital water resources are adequately protected and sustainably used.
- Enhance how we manage water takings to ensure we have sustainable water resources in the face of a changing climate and continued population growth. We will do this by examining approaches to assessing and managing multiple water takings, establishing priorities for different water uses, and preparing and responding to drought conditions.
- Ensure the knowledge gained through the drinking water source protection program helps inform our water management programs.

Quick Fact: Thanks to local source protection committees and conservation authorities, Ontario has source protection plans being implemented across 38 watershed-based areas. These locally developed plans identify and protect areas where drinking water is vulnerable to contamination and depletion.

Help people conserve water and save money

- Promote the use of technologies and practices to ensure water is used more efficiently. This includes water conservation planning; water use tracking and reporting; improving standards for household fixtures and appliances, such as dishwashers or washing machines; and profiling provincial and broader public sector leadership in this area.

Improve municipal wastewater and stormwater management and reporting

- Increase transparency through real-time monitoring of sewage overflows from municipal wastewater systems into Ontario's lakes and rivers. Work with municipalities to ensure that proper monitoring occurs, and that the public is aware of overflow incidents.
- Update policies related to municipal wastewater and stormwater to make them easier to understand. We will consider how wastewater and stormwater financing could be updated to improve investment and support new and innovative technologies and practices.
- Encourage targeted investment and innovation in managing wastewater that overflows into our lakes and rivers.

Quick Fact: There were a total of 1,327 bypasses and/or overflows from all municipal wastewater sources in the 2017/18 fiscal year, as reported to the Ministry of the Environment, Conservation and Parks.

Success story: City of Kingston shows environmental leadership

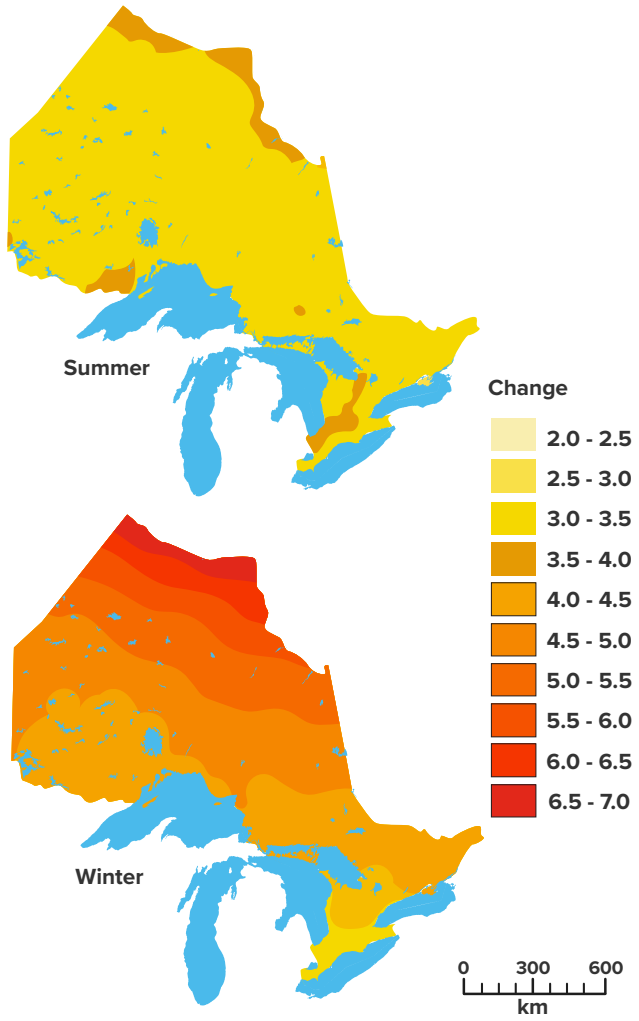
Utilities Kingston and the City of Kingston have shown leadership by providing real-time public reporting of sewage overflows, reducing pollution, and working with partners such as Swim Drink Fish Canada and the W. Garfield Weston Foundation to create the Gord Edgar Downie Pier at Breakwater Park, giving the community a new place to swim and enjoy a cleaner Lake Ontario waterfront.

Addressing Climate Change

Quick Fact: As of 2013, Canada is responsible for 1.6% of global emissions, with Ontario responsible for less than 0.4% of global emissions.

The climate is changing. Severe rain, ice and wind storms, prolonged heat waves and milder winters are much more common. Forests, waters and wildlife across the province are and will continue to be significantly impacted by these changes. People across the province – especially Northern communities – and all sectors of the economy are feeling the impacts of climate change and paying more and more for the costs associated with those impacts.

The following graph shows projected seasonal summer and winter temperature changes in Ontario by the 2050s.



Source: Ontario Climate Data Portal – http://lamps.math.yorku.ca/OntarioClimate/index_v18.htm.
Projected seasonal (summer and winter) temperature changes by the 2050s (relative to the average of 1986-2005), under the Inter-governmental Panel for Climate Change (IPCC) 5th assessment report (AR5) business as usual emission scenario (RCP8.5).

The people of Ontario have already made significant contributions to meaningful climate action. We have played an important role in fighting climate change and mitigating the threats to our prosperity and way of life, implementing significant changes to drastically reduce our greenhouse gas emissions.

The government of the day initiated the first closure of a coal plant in 2001. This action and the subsequent closure of 19 coal fired units in five plants by 2014 led to the largest single reduction of greenhouse gas emissions, not just in Ontario, but across Canada. It was also one of the largest actions to reduce emissions in North America.

Emission-free electricity generation also plays a significant role in Ontario. Nuclear power, along with our hydroelectric fleet, continues to generate the lion's share of our clean electricity.

Today, Ontario has one of North America's cleanest electricity grids. We also have effective natural gas conservation programs, helping homeowners, businesses and industry reduce their carbon footprint.

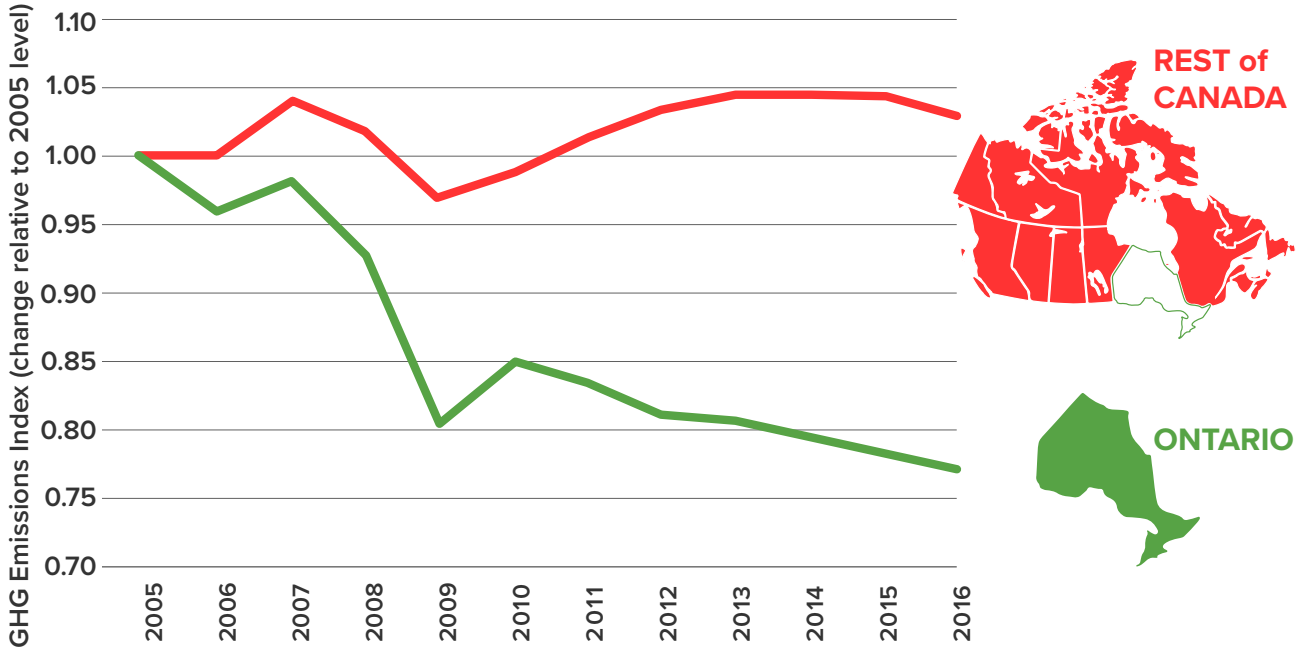
Quick Fact: Almost all of Canada's progress towards its 2030 Paris Agreement targets has been driven by Ontario.

But doing Canada's heavy lifting on greenhouse gas emission reductions has come at a cost to Ontario families. Our government understands the part that Ontarians have played and continue to play in reducing their emissions.

We have already been a leader when it comes to climate. **Indeed, we are on track to meet Canada's commitment under the Copenhagen Accord of 17% below 2005 levels by 2020.**

Now, we must look to find a balanced approach to reducing our emissions and prepare families for the impact of climate change in order to maintain both a healthy economy and healthy environment. This plan is our alternative to a carbon tax. It means finding effective and affordable ways to slow down climate change and build more resilient communities to prepare for its effects.

Ontario and the Rest of Canada's Greenhouse Gas Emissions from 2005 to 2016



We will work to unlock private capital to give Ontario businesses and residents new and more affordable ways to invest in energy efficiency, save money and reduce greenhouse gas emissions. One of the most effective ways we can combat climate change is encouraging innovation and reducing regulatory barriers to climate solutions. Through this plan, our government will focus on smart regulatory and policy approaches to facilitate and enable innovation rather than hindering it.

The following chapter of our environment plan acts as Ontario's climate change plan, which fulfills our commitment under the *Cap and Trade Cancellation Act, 2018*.

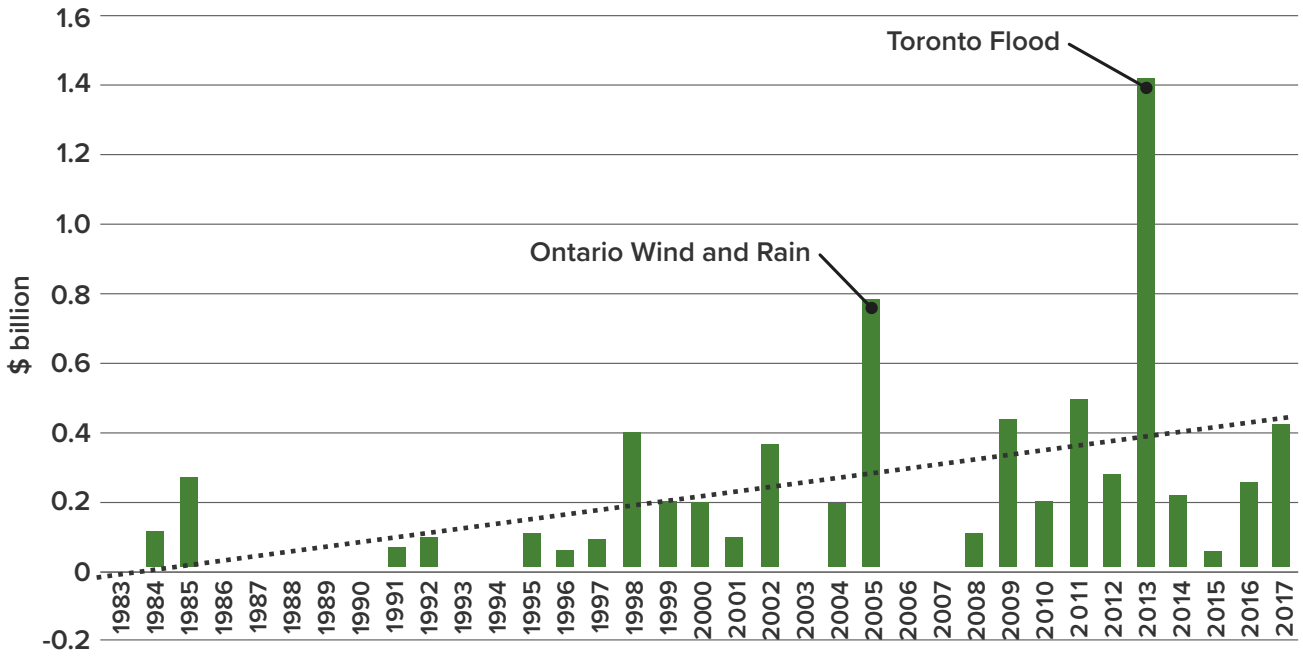
BUILDING RESILIENCE: Helping Families and Communities Prepare

We are committed to preparing families and communities for the costs and impacts of climate change, and to protecting our natural environment, communities, businesses and municipalities.

While our actions are important in the global fight to reduce emissions, we all understand the need to strengthen our resilience to the impacts of climate change such as more frequent extreme weather events.

The following graph shows the rising costs of insured property damage in Ontario between 1983 and 2017, providing an indication of the costs of climate change. The financial costs associated with extreme weather events in Ontario have increased over this period. Chief among factors affecting the increasing costs to Ontarians is the phenomenon of flooding, and more specifically, residential basement flooding.

Costs of Insured Property Damage in Ontario Between 1983 and 2017



Source: Insurance Bureau of Canada.

Building resilience is about having the right information, tools and resources to adapt and respond to our changing climate. We will access the best science and information to better understand where the province is vulnerable and know which regions and economic sectors are most likely to be impacted. Through this enhanced understanding, the province, local communities, businesses, Indigenous communities and the public will be more prepared for the impacts of a changing climate.

Case study:
Climate change impact assessments

Ontario has never completed a provincial-level climate change impact assessment. Since 2008, the United Kingdom has conducted two assessments using best available data and an up-to-date understanding of climate science and future climate impacts. Each assessment provides detailed analysis of the risks, vulnerabilities and impacts of climate change on key economic sectors, infrastructure, the environment and societal health and well-being.

Each assessment gives the government a roadmap to "high" and "low" climate change risks now and in future years.

Actions

Improve our understanding of how climate change will impact Ontario

- Undertake a provincial impact assessment to identify where and how climate change is likely to impact Ontario's communities, critical infrastructure, economies and natural environment. The assessment would provide risk-based evidence to government, municipalities, businesses, Indigenous communities and Ontarians and guide future decision making.
- Undertake impact and vulnerability assessments for key sectors, such as transportation, water, agriculture and energy distribution.

Help Ontarians understand the impacts of climate change

- Develop a user-friendly online tool that makes practical climate change impact information available for the public and private sectors. This tool will help developers, planners, educators, homeowners and others understand the potential impacts of climate change in their communities.
- Work closely with climate science modelling experts, researchers, Indigenous communities, and existing climate service providers to identify and create adaptation solutions.
- Support communities by demonstrating how climate science can be applied in decision making to improve resilience.

The graphics below illustrate practical actions that homeowners can take – simply and affordably – to lower their risk of basement flooding. Home flood protection can include property level initiatives such as disconnecting downspouts from weeping tile systems, placing plastic covers over window wells, outfitting sump pumps with battery back-up supply, and installing back water valves on drain lines.

10 Ways to Prevent Home Basement Floods

Source: Home Flood Protection Program, Intact Centre on Climate Adaptation, University of Waterloo

Ontario will work with the real estate and insurance industries to raise awareness among homeowners about the increasing risk of flooding as we experience more frequent extreme weather events. Flooding damage is the leading cause of insured property damage in Ontario. The risk of home flooding is also increasingly the reason why homeowners are unable to adequately insure their homes.

Flood damages can cost homeowners tens of thousands of dollars to repair. According to the National Flood Insurance Program in the U.S., a 15-centimetre flood in a 2,000-square-foot home is likely to cause about USD $40,000 in flood damage. Once flooding occurs, securing insurance will become more difficult and may become unaffordable for individual homeowners.

However, simple steps, such as removing debris from nearby storm drains, ensuring correct grading around home foundations, clearing eaves troughs, and installing extended downspouts and window well covers can significantly mitigate basement flood risks.

Update government policies and build partnerships to improve local climate resilience

- Modernize the Building Code to better equip homes and buildings to be better able to withstand extreme weather events. This could include affordable adaptation measures such as requiring backwater valves in new homes that are at risk of backflow, which would significantly reduce the impacts of basement flooding.
- Review the Municipal Disaster Recovery Assistance program to encourage municipalities to incorporate climate resilience improvements when repairing or replacing damaged infrastructure after a natural disaster. Since the Municipal Disaster Recovery Assistance program was launched in 2016, over $2.6 million has been provided to 11 municipalities.
- Consult on tax policy options to support homeowners in adopting measures to protect their homes against extreme weather events, such as ice and wind storms and home flooding.

- Review land use planning policies and laws to update policy direction on climate resilience. This will help make the way our communities are planned and designed more responsive and adaptive to changing weather conditions, such as improving the way that stormwater is managed.
- Build resilience in the province's critical infrastructure, through better technology as well as back-up generation and energy storage options, so that our vital services and infrastructure, such as hospitals, can better withstand and remain operational during extreme weather events.
- Support improvements to existing winter roads where they may be required to replace roads that are deteriorating as a result of changing weather conditions and shortened winter seasons, and develop a strategy to enhance all-season road connections to northern communities.
- Continue to support programs and partnerships intended to make the agriculture and food sectors more resilient to current and future climate impacts. We will support on-farm soil and water quality programming and work with partners to improve agricultural management practices.

Lake Erie Action Plan and 4R Nutrient Stewardship

Ontario's farmers continue to demonstrate leadership in environmental stewardship, which is important to their livelihood. Farmers are also embracing and championing innovative farming practices, such as 4R Nutrient Stewardship (Right Source @ the Right Rate, Right Time, and Right Place®), and other initiatives under the Canada-Ontario Lake Erie Action Plan, that are designed to enhance environmental protection and improve sustainability.

CONTINUING TO DO OUR SHARE:

Achieving the Paris Agreement Target

One of the key ways we are defining our vision for climate action in Ontario is by setting an achievable greenhouse gas reduction target. This will help us focus our efforts and provide a benchmark for our province to assess its progress on the climate change mitigation components of our plan.

Ontario will reduce its emissions by 30% below 2005 levels by 2030.

This target aligns Ontario with Canada's 2030 target under the Paris Agreement.

This is Ontario's proposed target for the reduction of greenhouse gas emissions, which fulfills our commitment under the *Cap and Trade Cancellation Act, 2018*.

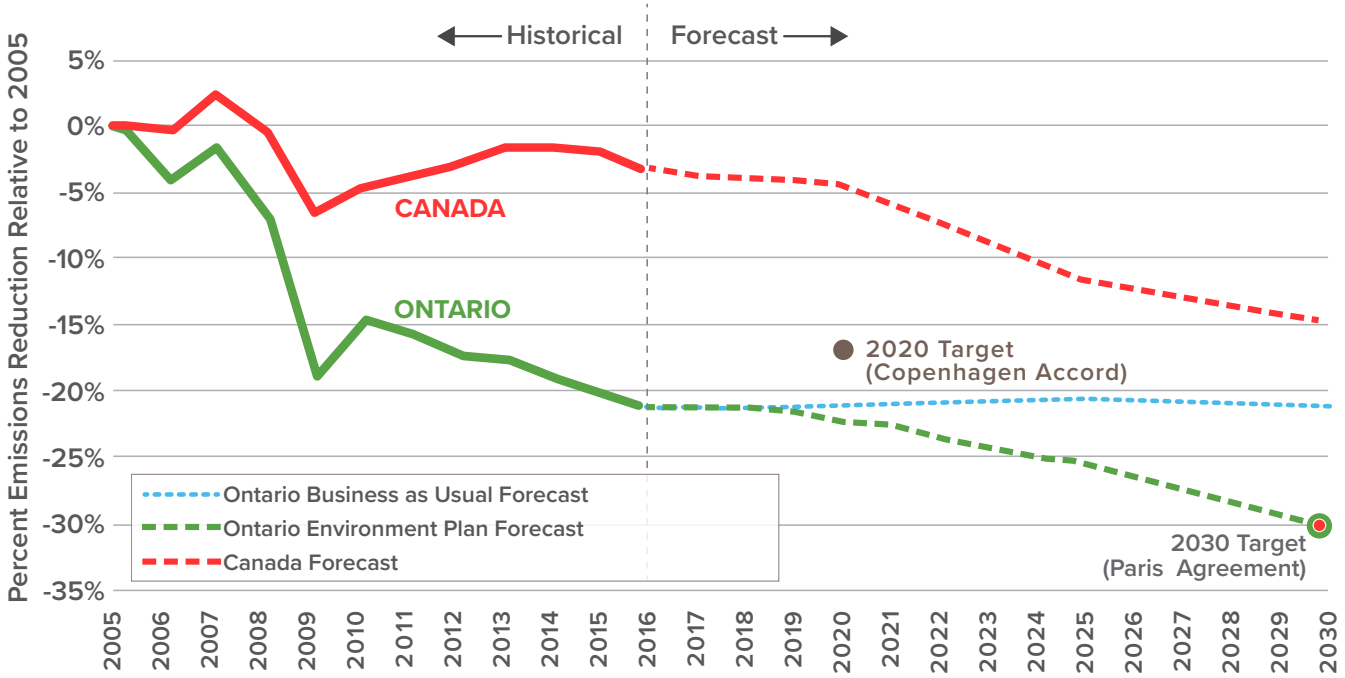
Quick Fact: The Paris Agreement is an agreement within the United Nations Framework Convention on Climate Change. Its goal is to keep the increase in global average temperature to well below 2 °C above pre-industrial levels, and pursue efforts to limit the increase even further to 1.5 °C, in order to reduce the risks and impacts of climate change.

This target takes into consideration the commitment the people of Ontario have already shown in reducing emissions, as well as our commitment to growing Ontario's economy while doing our part to tackle climate change.

There has been a steep decline in emissions from 2005, driven in large part by improvements in the electricity sector, including closing coal-fired electricity generation. As a result, we are on track to do better than the federal 2020 target set under the Copenhagen Accord in 2010.

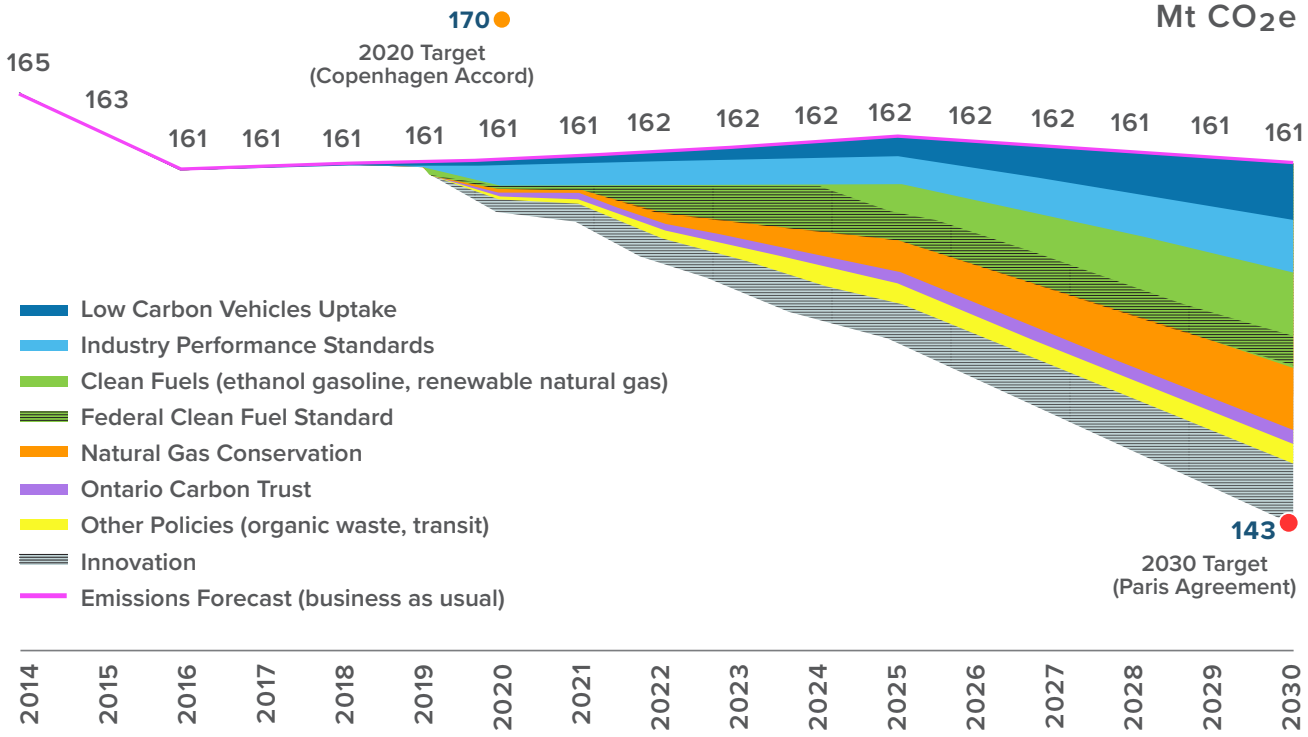
The following graph shows our 2030 target is achievable. The policies within this plan will put us on the path to meet our 2030 target, and we will continue to develop and improve them over the next 12 years. This plan will be reviewed and revised on a four-year basis.

Past and Projected Greenhouse Gas Emission Reductions for Canada and Ontario



Source: Environment and Climate Change Canada (2018) National Inventory Report 1990-2016: Greenhouse Gas Sources and Sinks in Canada. Canada 2017 Biennial Report and internal Ontario modelling.

Path to Meeting Ontario's 2030 Emission Reduction Target



The chart above shows where we expect Ontario's emissions to be if we take no action (161 megatonnes) compared to where we expect our emissions to go if we take actions in specific sectors. Our target is equivalent to 143 megatonnes in 2030 and we will need reductions in key sectors identified in the graph to get there.

The coloured portions of the chart above refer to emissions reductions we expect to see from actions in this plan and the shaded portions represent the potential we have to enhance some of those actions.

The actual reductions achieved will depend on how actions identified in our plan are finalized based on feedback we get from businesses and communities. The estimated reductions are explained in more detail below.

The **Low Carbon Vehicles** uptake portion refers primarily to electric vehicle adoption in Ontario and in small part to the expansion of compressed natural gas in trucking.

Industry Performance Standards refer to our proposed approach to regulate large emitters of greenhouse gas emissions, as described later in this plan. The final impact of this approach will depend on consultation with industry partners.

Clean Fuels refer to increasing the ethanol content of gasoline to 15% as early as 2025, and encouraging uptake of renewable natural gas and the use of lower carbon fuels.

The Federal **Clean Fuel Standard** is an estimate of the additional impact of the proposed federal standards, which could expand the use of a broad range of low-carbon fuels, energy sources and technologies, such as ethanol, renewable natural gas, greener diesel, electricity, and renewable hydrogen.

The Natural Gas Conservation action reflects programs that are well established in Ontario to conserve energy and save people money. This case assumes a gradual expansion of programs delivered by utilities, which would be subject to discussions with the Ontario Energy Board.

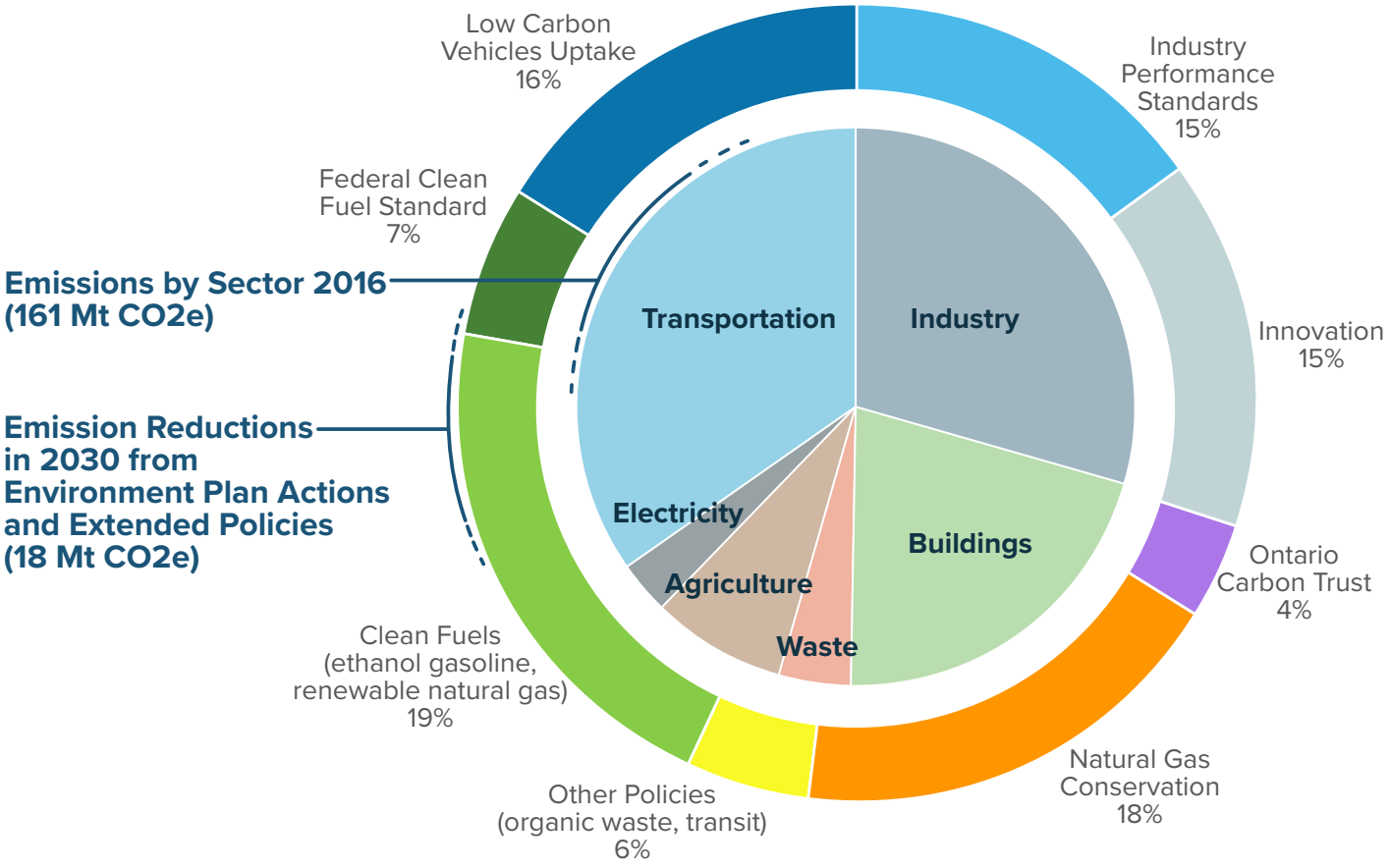
The **Ontario Carbon Trust** is an emission reduction fund that will use public funds to leverage private investment in clean technologies that are commercially viable. For this action we estimate a fund of $350 million will be used to leverage private capital at a 4:1 ratio. Estimates will depend on the final design and mandate of the trust. The estimates also include the potential emission reductions associated with a $50 million Ontario Reverse Auction designed to attract lowest-cost greenhouse gas emission reduction projects.

Other policies include the emission reductions associated with investments in public transit, and our commitment to improve diversion of food and organic waste from landfills, as described later in this plan.

Innovation includes potential advancements in energy storage and cost-effective fuel switching from high intensive fuels in buildings to electricity and lower carbon fuels.

As part of our commitment to transparency, the government is committed to updating and reporting on these estimates once program details are finalized to ensure we are making progress to the 2030 targets.

Planned Emission Reductions in 2030 by Sector



The chart above shows how the plan is tailored to address Ontario's greenhouse gas emissions. The inner pie shows the breakdown of Ontario's 2016 greenhouse gas emissions by sector. The outer ring colours show the policies from the environment plan that are targeted at reducing emissions in each sector.

The government is committed to balancing emissions reductions and economic growth. Ontario's economy has been growing, even as emissions are declining.

Tracking this improvement is an important part of Ontario's climate change plan. In coming months we will consult on the development of an economy wide carbon intensity target as a complementary metric to our absolute emissions target and to ensure that our climate change plan helps us to continue this positive trend.

The below areas are where we will focus our initiatives and actions to tackle and be more resilient to climate change and to meet our balanced target.

MAKE POLLUTERS ACCOUNTABLE

We know job creators in this province have made great strides to reduce greenhouse gas emissions, some leading their industry globally. We will ensure polluters pay their fair share for their greenhouse gas emissions, while also ensuring industry continues to make advances to help Ontario achieve its share of reductions.

Greenhouse gas emissions from the industrial sector, including smaller industrial facilities, accounted for 29% of Ontario's total emissions in 2016. We plan to regulate large emitters with a system that is tough but fair, cost-effective and flexible to the needs and circumstances of our province and its job creators. We will also ensure strong enforcement of these rules.

This system will recognize the unique situation of Canada's manufacturing and industrial heartland. Ontario depends on many industries that compete internationally. Our made-in-Ontario standards will consider factors such as trade-exposure, competitiveness and process-emissions, and allow the province to grant across-the-board exemptions for industries of particular concern, like the auto sector, as needed.

Actions

Implement emission performance standards for large emitters

We will create and establish emission performance standards to achieve greenhouse gas emissions reductions from large emitters. Each large industrial emitter will be required to demonstrate compliance on a regular basis. The program may include compliance flexibility mechanisms such as offset credits and/or payment of an amount to achieve compliance.

An emissions performance standard establishes emission levels that industrial facilities are required to meet and is tied to their level of output or production. This approach does not enforce a blanket cap on emissions across Ontario and takes into consideration specific industry and facility conditions while allowing for economic growth. It also recognizes industries in Ontario that are best-in-class while requiring improvements from sectors that have room to improve.

Case study: Saskatchewan's output-based performance standards (OBPS) system

In December 2017, Saskatchewan introduced a comprehensive Prairie Resilience climate change strategy, which included a plan to implement an OBPS system in 2019. The OBPS will apply to facilities in regulated sectors that emit more than 25,000 tonnes of greenhouse gas emissions per year. The OBPS is expected to be implemented by January 1, 2019, and the Government of Saskatchewan estimates it will cut annual emissions of covered sectors by 10% by 2030.

In addition, Saskatchewan is regulating emissions from electricity generation to achieve a 40% reduction in electricity emissions, and is regulating flared and vented methane emissions in the upstream oil and gas sector, which will lead to additional annual reductions of 40 to 45% in that sector by 2025.

ACTIVATE THE PRIVATE SECTOR

Ontario is home to the hub of the Canadian financial industry – banks, investment firms, pension funds and insurance companies. Ontario hosts the head offices of Canada's five largest banks, three of which rank among the world's largest 25 banks by market capitalization.

We recognize that our private sector has the capital, capability and know-how to transform clean technology markets and transition Ontario to a low-carbon economy. This is why we intend to help facilitate the private sector's best projects and ideas to drive emission reductions at the lowest cost to taxpayers. Our plan will ensure the prudent and responsible use of public resources to drive private sector investment.

We also want to enable consistent disclosure about financial risks associated with climate change so that companies can provide information to investors, lenders, insurers and other stakeholders.

Together, these actions will help improve the capacity of the sustainable finance sector in Ontario and position us as a global leader in this area.

Actions

Launch an emission reduction fund – The Ontario Carbon Trust – and a reverse auction to encourage private investment in clean technology solutions

Ontario will commit to ensuring funding of $400 million over four years. These funds will complement penalties paid into The Ontario Carbon Trust by polluters. This will ensure that over the next four years, The Ontario Carbon Trust should be able to leverage over $400 million to unlock over $1 billion of private capital.

If Canada's federal government returns to the Pan-Canadian Framework agreement with the people of Ontario, The Ontario Carbon Trust could be increased by $420 million through the Low Carbon Economy Leadership Fund. This would increase the fund to $820 million and unlock more than $2 billion of private capital. It would also ensure that the people of Ontario are provided the most cost-effective approach to reducing greenhouse gas emissions. Canada's commitment to partner with the people of Ontario through supporting The Ontario Carbon Trust would allow Ontario to reduce emissions beyond what is forecasted in this plan, and help Canada meet its Paris target.

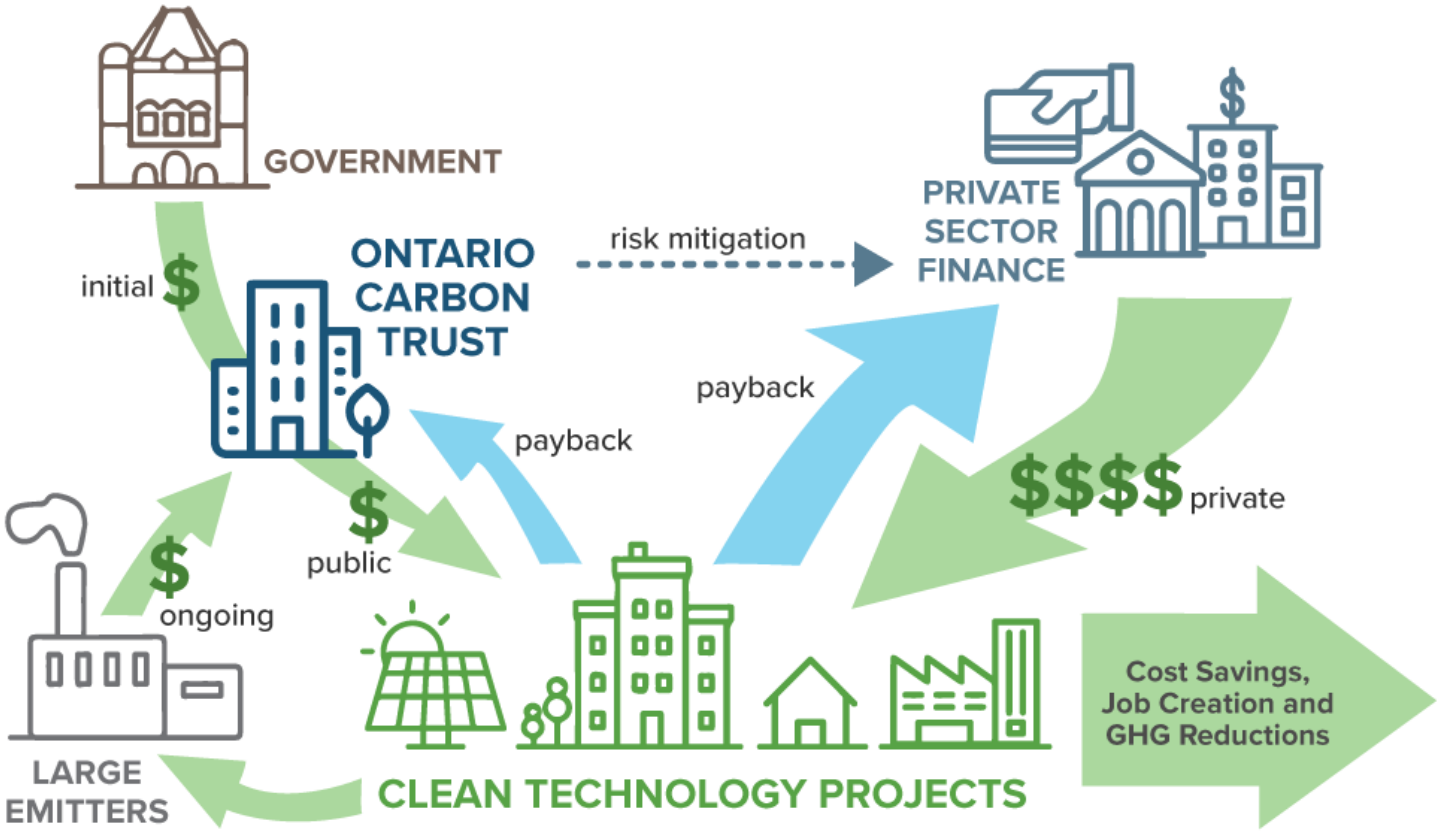
The Ontario Carbon Trust will use innovative financing techniques and market development tools in partnership with the private sector to speed up the deployment of low-carbon solutions. It will use public funds to leverage private investment in clean technologies that are commercially viable and will have a widespread presence. It will also seek to reduce energy costs for ratepayers, stimulate private sector investment and economic activity, and accelerate the transition to a low-carbon economy.

The Ontario Carbon Trust could consider investing in cost-effective projects from various sectors, such as transportation, industry, residential, business and municipal.

We will establish an independent board with the appropriate expertise, with a mandate to form The Ontario Carbon Trust, which will be tasked with working with the private sector to identify projects that will reduce emissions and deliver cost savings. We will:

- Create an emission reduction fund to support and encourage investments across the province for initiatives that reduce greenhouse gas emissions. The fund will leverage an initial investment from the government ($350 million) to attract funds from the private sector in order to drive investment in clean technologies.
- Launch an Ontario Reverse Auction ($50 million), allowing bidders to send proposals for emissions reduction projects and compete for contracts based on the lowest-cost greenhouse gas emission reductions.

The Ontario Carbon Trust



Source: Adapted from Coalition for Green Capital, Growing Clean Energy Markets with Green Bank Financing: White Paper, page 2, http://coalitionforgreencapital.com/wp-content/uploads/2015/08/CGC-Green-Bank-White-Paper.pdf.

Case study:
NY Green Bank

Created as a division of the New York State Energy Research and Development Authority, NY Green Bank is a state-sponsored, specialized financial entity that works with the private sector to increase investments in clean energy markets.

NY Green Bank's flexible approach to clean energy financing helps reduce the need for government support and increase investments into New York's clean energy markets, creating a more efficient, reliable and sustainable energy system.

By investing funds at market rates, NY Green Bank is able to cover its own costs and keep its funding base for future projects. As of September 30, 2018, NY Green Bank has committed $580.1 million to support clean energy projects with a total cost of between $1.44 and $1.68 billion.

What is a reverse auction? The buyer, in this case government, sends out a request for proposals, services or contracts. Bids are assessed and chosen based on the lowest cost, which in this case is the lowest cost per tonne of greenhouse gas emission reductions. The "bidders" in the auction compete to win the project or contract, often underbidding each other, resulting in lower costs for the buyer.

Enhance corporate disclosure and information sharing

- Work with the financial sector to promote climate-related disclosures in Ontario.
- Encourage the Ontario Securities Commission to improve guidance on climate-related disclosures.

Globally, many financial institutions are adopting the recommendations of the Task Force on Climate-Related Financial Disclosures. Ontario's financial sector is also working to improve disclosures.

Encourage private investments in clean technologies and green infrastructure

- Ontario will parallel federal changes to the Accelerated Capital Cost Allowance, which will make technology investments in clean energy generation and energy conservation equipment more attractive.
- Work with the Ontario Financing Authority to issue Green Bonds by the end of the fiscal year, after realigning the Green Bond program to support our approach to addressing environmental challenges. This action was included in the Fall Economic Statement.
- Consider tax policy options to encourage the creation of clean technology manufacturing jobs in Ontario.

Green Bonds serve as an important tool to help finance projects that will help us address our environmental challenges. Project categories include transit initiatives, extreme-weather resistant infrastructure, and energy conservation and efficiency projects (including health and education-related projects). By capitalizing on low interest rates, Ontario's Green Bonds enable the Province to raise funds while respecting the taxpayers of Ontario and without adversely impacting businesses.

Success story:
Algae carbon capture

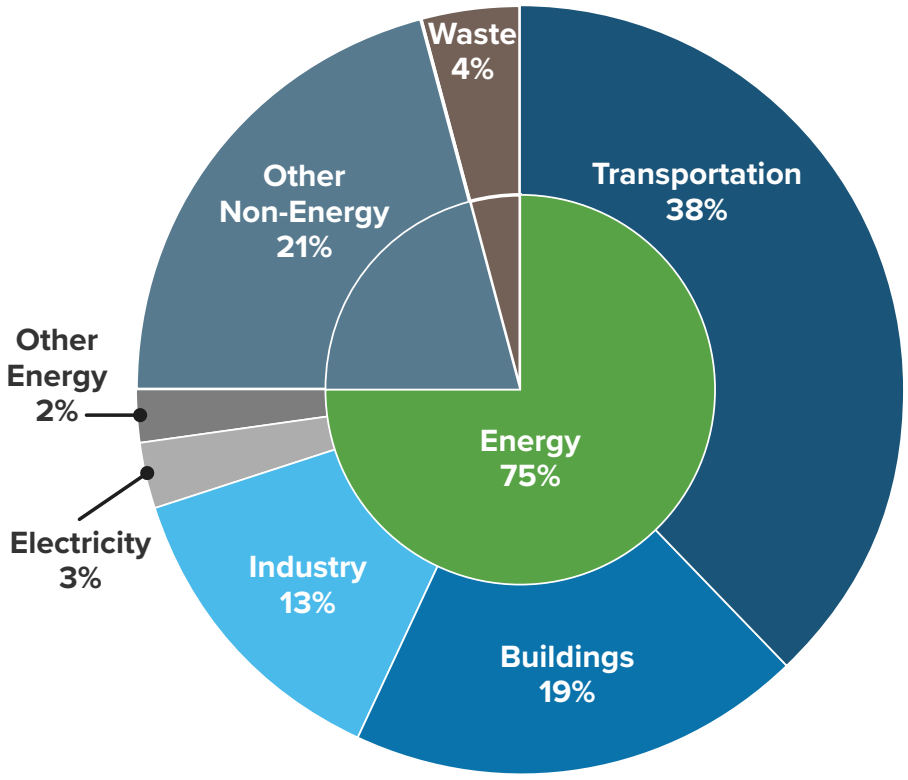
In 2012, Pond Technologies, an Ontario technology company, partnered with St. Marys Cement to run a pilot using CO2 generated by its cement plant to grow algae. Like plants, algae absorb carbon as they grow. Revenue generated from the sale of algae-derived bioproducts provide the economic basis for the adoption of this technology. Pond's pilot proved that reducing greenhouse gas emissions can generate revenue.

USE ENERGY AND RESOURCES WISELY

We will develop climate solutions that will save energy, resources and money.

About 75% of Ontario's greenhouse gas emissions come from using energy in our homes, buildings, vehicles and industry while 4% comes from waste.

Ontario's Energy Use by Sector



Source: Data from Environment and Climate Change Canada, 2018 National Inventory Report

We use gasoline and diesel fuel almost exclusively for transportation, while our main energy source for space and water heating is natural gas. Even though Ontario's vehicles have become more efficient, the number of vehicles on the road has increased.

Today, the transportation sector remains our largest source of emissions. That means we need to focus on using energy more efficiently, including in transportation, on expanding access to cleaner energy.

Our government will ensure the Ontario Energy Board keeps pace with consumer demands and the adoption of innovative energy solutions in this time of unprecedented technological change.

We also know that just over 60% of Ontario's food and organic waste is sent to landfills. In a landfill, it breaks down to create methane, a potent greenhouse gas that contributes to climate change. In fact, methane is 25 times more potent as a greenhouse gas than carbon dioxide. When food and organic waste is sent to landfill, opportunities are lost to preserve valuable resources that could be used to heat our homes, support healthy soils and reduce greenhouse gas emissions.

We will work with partners on ways to make it easier for residents and businesses to waste less food or reuse it for beneficial purposes such as compost.

Quick Fact: About 60% of Ontario's food and organic waste is sent to landfills which emits methane – a potent greenhouse gas – when it decomposes. Efficient diversion of household waste from landfills is an important tool in the fight against climate change. To read more about our plan to fight litter and waste, see page 40.

Actions

Conserve energy in homes and buildings to cut costs and reduce emissions

- Increase the availability and accessibility of information on energy and water consumption so that households, businesses and governments understand their energy use (e.g. collection of data related to electric vehicles, household-level energy and water consumption data). For example, provide customers with access to their energy data by working with electricity and natural gas utilities to implement the Green Button data standard. We will support water utilities to implement Green Button on a voluntary basis.
- Work with the Ontario Real Estate Association to encourage the voluntary display of home energy efficiency information on real estate listings to better inform buyers and encourage energy-efficiency measures.
- Review the Building Code and support the adoption of cost effective energy efficiency measures that can lower the cost of electricity and natural gas needed to operate buildings. Ontario is currently a leading jurisdiction in Canada when it comes to energy efficiency standards in its Building Code. Today, Ontario's Building Code ensures new homes built after 2017 use 50% less energy to heat and cool than houses built before 2005, resulting in a much lower carbon footprint than older homes.
- Work with the Ontario Energy Board and natural gas utilities to increase the cost-effective conservation of natural gas to simultaneously reduce emissions and lower energy bills.
- Ensure Ontario's energy-efficiency standards for appliances and equipment continue to be among the highest in North America.

Quick Fact: Enbridge Gas Distribution and Union Gas offer gas conservation programs that offer incentives for homeowners to complete upgrades that make their homes more energy efficient. Each dollar spent results in up to $2.67 in reduced energy bills for program participants.

Increase access to clean and affordable energy for families

- Continue to support connecting Indigenous communities in Northern Ontario to Ontario's clean electricity grid, to replace local diesel and other types of electricity generation.
- Increase the renewable content requirement (e.g. ethanol) in gasoline to 15% as early as 2025 through the Greener Gasoline regulation, and reduce emissions without increasing the price at the pump, based on current ethanol and gasoline prices.
- Encourage the use of heat pumps for space and water heating where it makes sense, as well as innovative community-based systems like district energy.
- Require natural gas utilities to implement a voluntary renewable natural gas option for customers. We will also consult on the appropriateness of clean content requirements in this space.
- Consult on tax policy options to make it easier for homeowners to increase energy efficiency and save money.
- Streamline and prioritize environmental approvals for businesses that use low-carbon technology, while maintaining high standards for environmental protection.
- Support the integration of emerging smart grid technologies and distributed resources – including energy storage – to harness and make best use of Ontario's clean electricity.
- Improve rules and remove regulatory barriers that block private investors from deploying low-carbon refueling infrastructure that will help increase the uptake of electric, hydrogen, propane, autonomous and other low-carbon vehicles without government subsidies.
- Collaborate with the private sector to remove barriers to expanding 24/7 compressed natural gas refueling stations for trucks along the 400-series highways, and maintain the existing tax exemption (gasoline and fuel tax) on natural gas as a transportation fuel. This will provide heavy-duty vehicles (such as transport trucks) with a cost-effective path to lower on-road transportation emissions.

Quick Fact: Natural gas is exempt from the fuel tax in Ontario, and natural gas trucks have a smaller carbon footprint compared to diesel trucks.

Success story:
Niagara Falls pump generating station produces zero-emissions power

Ontario Power Generation's Sir Adam Beck Pump Generating Station is an important source of flexible zero-emissions power for Ontarians. The station fills a 750-acre reservoir when demand for power is low, storing the equivalent amount of energy as 100,000 electric car batteries. The filled reservoir can then be used to generate hydroelectric power when needed, displacing 600 megawatts of fossil fuel generation for up to eight hours.

Success story:
Partnering to fuel lower-carbon heavy-duty transportation

In April 2018, Union Energy Solutions Limited Partnership, an unregulated affiliate of Union Gas Limited (an Enbridge Company), announced a partnership with Clean Energy to build three compressed natural gas fueling stations along Ontario's Highway 401. The initiative will enable heavy-duty vehicles (such as transport trucks) that use natural gas as a transportation fuel to travel and refuel along the 401, leading to lower on-road transportation emissions.

Case study:
Electrify Canada building an electric vehicle charging network

Electrify Canada is a new company that will build ultra-fast charging networks for electric vehicles across Canada, which are anticipated to be operational starting in 2019. This includes the installation of 32 electric vehicle charging sites near major highways and in major metro areas in British Columbia, Alberta, Ontario and Quebec.

DOING OUR PART: Government Leadership

Ontario is committed to doing its part to address climate change. This includes leading by example. We will encourage local leadership on climate change, including municipal governments, the broader public sector, business associations, community groups, Indigenous communities and voluntary organizations to develop and promote climate solutions for their members and communities. We will continue to engage on international climate issues by providing Ontario's perspective to Canada's international climate negotiations.

As part of the government's commitment to curriculum renewal we will explore changes that embed learning about the environment in the classroom. Learning about protecting our air, land and water, addressing climate change, and reducing the amount of litter and waste in our communities will not only raise awareness in schools, it will also enable students to pass on this knowledge to their families.

Partnering with and enabling people, businesses, municipalities and schools will help us find ways to address local issues and needs, save energy and costs, and minimize climate risks to our schools, hospitals, highways and critical infrastructure.

Actions

Make climate change a cross-government priority

- Improve our ability to consider climate change when we make decisions about government policies and operations by developing a Climate Change Governance Framework that will:
  - Establish clear responsibilities and requirements for ministries to track and report on climate change measures.
  - Consider climate change when we purchase goods and services across government, where it is cost-effective (i.e. low-carbon intensity steel and cement).
  - Explore opportunities to enhance coordination and guidance for municipalities to help them consider climate change in their decision-making.
  - Update Statements of Environmental Values to reflect Ontario's environmental plan.

- Continue to execute a high-performance building automation strategy for government buildings. This strategy uses advanced automation and integration to measure, monitor, and control operations and maintenance at the lowest cost, also reducing greenhouse gas emissions during day-to-day building operations. The strategy includes, but is not limited to, HVAC and lighting controls, security, elevators, fire protection, and life safety systems in order to improve performance and to reduce energy consumption.
- Ensure investments in future renovations of government buildings maximize energy cost savings. For instance, Ontario is building new correctional facilities to meet LEED standards, which ensures high environmental performance and will improve efficiency while saving money.
- Undertake a review of government office space, with an eye to optimizing our physical and carbon footprint. Ontario will reduce its per employee real estate footprint to reduce energy costs and emissions, as recommended in the Auditor General's 2017 Report.
- Support the adoption of low-carbon technologies and climate resilience measures by working to reduce costly and time-consuming regulatory and operational barriers.
- Encourage the federal government to ensure that climate negotiations under Article 6 of the Paris Agreement improve our cleantech sector's access to emerging global markets for low-carbon technologies. Ontario is a leader in clean technology and more access to global markets will help our local companies create new green jobs in Ontario.
- Develop tools to help decision makers understand the climate impacts of government activities. For example, we will identify and report on emissions reductions from school capital investments and enable school boards to access energy efficiency data to inform their investment decisions.
- Provide guidance to public property owners of heritage buildings to help them reduce their energy use and save on operating costs while continuing to conserve these important cultural heritage resources for future generations.
- Continue to support the purchase of electric ferries which will be in service in 2020 and 2021 connecting Wolfe and Amherst Islands to the mainland.

Quick fact: The government's annual procurement budget to purchase goods and services is $6 billion.

Success story: Ontario's private sector leads the country in cleantech

Ontario has the largest and fastest-growing cleantech sector in Canada, with $19.8 billion in annual revenues and over 5,000 companies employing 130,000 people.

Ontario is home to 35% of Canada's innovative cleantech companies.

Ontario is a leading hub for water technologies with over 900 companies and 22,000 employees.

Success story:
Government building renovations to save energy and money

The Queen's Park Reconstruction Project is an eight-year initiative that involves the extensive reconstruction of the Macdonald Block Complex, which is located in downtown Toronto and includes the Macdonald Block Podium, Hearst, Hepburn, Mowat and Ferguson Towers.

The 47-year-old Macdonald Block Complex is home to the largest concentration of political and public service individuals in the province. It has never undergone a major renovation and the building's core systems, including electrical, water, cooling and heating, have reached the end of their useful life.

Following advice from an independent third-party expert panel, the government's Macdonald Block Complex is undergoing extensive reconstruction to achieve significant long-term cost and energy savings for the province over the next 50 years. Those savings will be achieved through reduced operating costs, lower energy and capital maintenance expenditures, and the reduction of costly third-party leases across the downtown Toronto core. The reconstructed Macdonald Block Complex will meet LEED silver certification.

Success story:
City of Toronto Green Fleet

The City of Toronto's Green Fleet Plan focuses on reducing emissions from almost 10,000 vehicles as well as by equipment owned and operated by the city. The consolidated plan, led by the Fleet Services Division, brings together all five major City of Toronto fleets – City of Toronto Fleet Services Division, Emergency Medical Services, Toronto Fire Services, Toronto Police Service, and Toronto Transit Commission – under one plan.

As of 2017, the city had 2,091 green vehicles and pieces of equipment in its fleet, representing 24% of the total number of vehicles in the city's fleet.

Empower effective local leadership on climate change

- Work with municipalities to develop climate and energy plans and initiatives to support building climate resilience and transformation to the low-carbon future.
- Support the efforts of Indigenous communities to integrate climate action into local plans and initiatives for community power, economic development, health and sustainability.
- Encourage local leadership by forming stronger partnerships and sharing best practices with community groups and business associations.

Improve public transportation to expand commuter choices and support communities

Commit $5 billion more for subways and relief lines. Ontario will also invest in a two-way GO transit service to Niagara Falls, as part of the existing plan to build a regional transportation system.

- Establish a public education and awareness program to make people more aware of the environmental, financial and health impacts of their transportation choices.
- Develop a plan to upload the responsibility for Toronto Transit Commission (TTC) subway infrastructure from the City of Toronto to Ontario. An upload would enable the province to implement a more efficient regional transit system, and build transit faster. Moreover, this would allow the province to fund and deliver new transit projects sooner.

Support green infrastructure projects

We're also greening the government's fleet of vehicles. The Ontario Public Service currently has 1,632 hybrid, plug-in hybrid and full battery electric vehicles, which represent 70% of its entire passenger vehicle fleet.

Work with federal and municipal governments through the green stream of the Investing in Canada Infrastructure Program to invest up to $7 billion in federal, provincial and municipal funding over the next 10 years. Funding could be for projects that lower greenhouse gas emissions, reduce pollution, and help make community infrastructure more resilient. Example investments could include improvements to transit and transportation infrastructure and improved local water, wastewater and stormwater systems.

Early actions: GO Train Service Increase

This government is expanding GO service and making it easier for commuters and members of the community to move around the GTHA. More riders in seats relieves congestion on the roads. We're providing more reliable, predictable journeys across the region – greatly improving the daily transit experience. These improvements bring us a step closer to our vision to deliver two-way, all-day GO service.

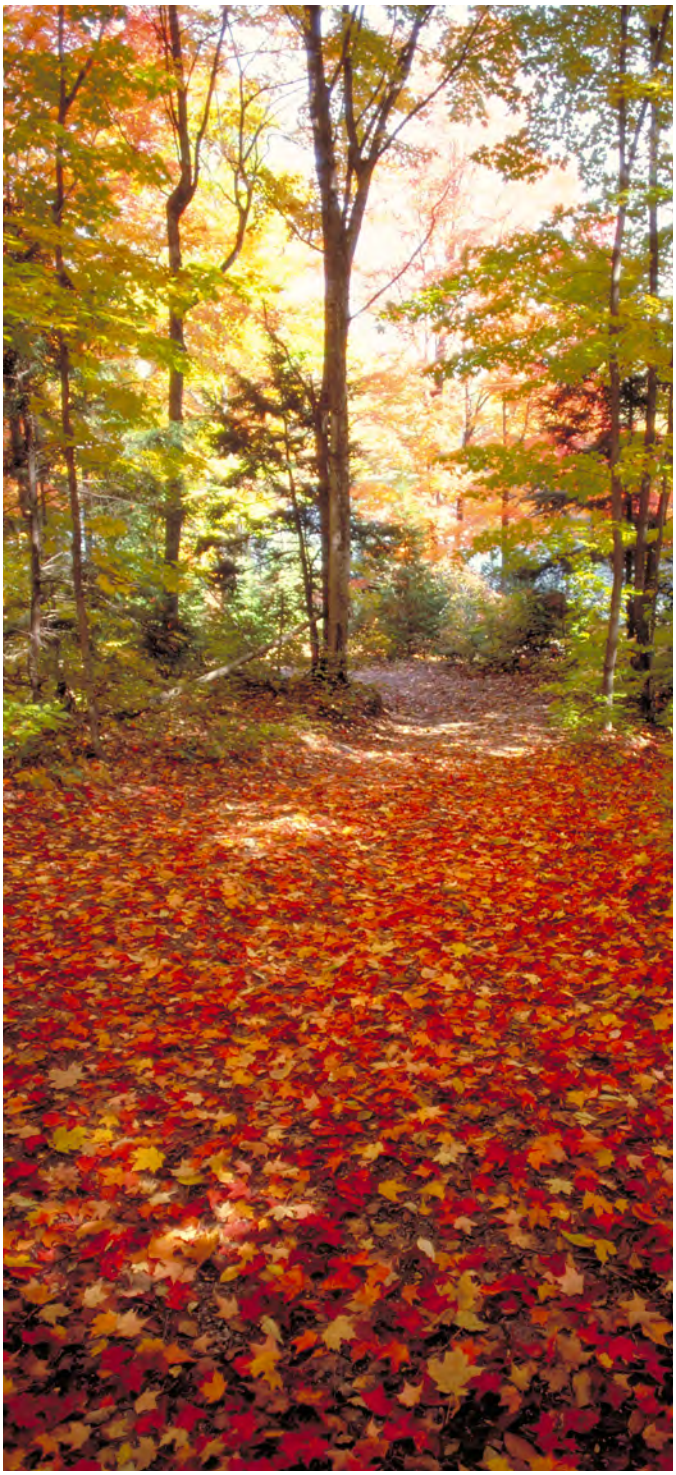
Reducing Litter and Waste in Our Communities & Keeping our Land and Soil Clean

Currently, Ontario generates nearly a tonne of waste per person every year and our overall diversion rate has stalled below 30% over the last 15 years. Ontario needs to reduce the amount of waste we generate and divert more waste from landfill through proven methods like Ontario's curbside Blue Box Program, existing and emerging municipal green bin programs and other waste recovery options. Existing and emerging technologies are increasingly allowing us to recover and recycle materials back into our economy rather than sending them to landfills. This is helping us to better protect our communities and keep our air, land and water clean and healthy.

To keep our land and water clean, we will take strong enforcement action to ensure waste, including hazardous waste, is properly stored, transported, recycled, recovered or disposed.

We are looking at proposed ways to:

- Reduce the amount of waste going to landfills or becoming litter
- Increase opportunities for Ontarians to participate in efforts to reduce waste
- Increase opportunities to use technologies, such as thermal treatment, to recover valuable resources in waste
- Manage excess soil and hauled sewage
- Redevelop brownfield sites to better protect human health and the environment



REDUCE LITTER AND WASTE

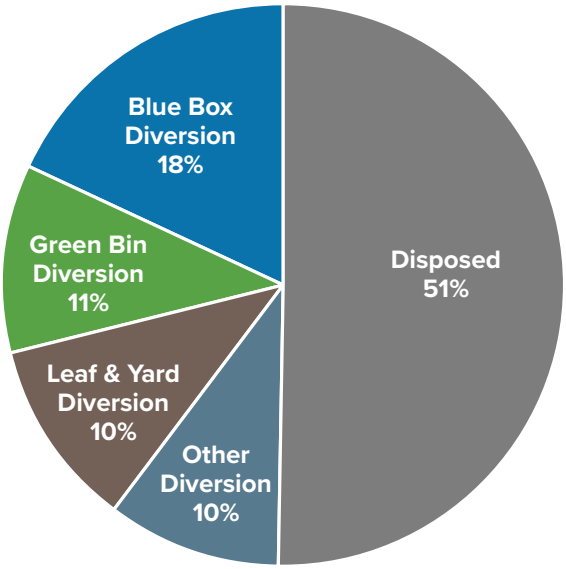
Today, some of the highest waste diversion rates in the province are in our homes. Ontarians divert almost 50% of their own household waste, through sorting what they throw away into their blue bin and, increasingly, their green bin.

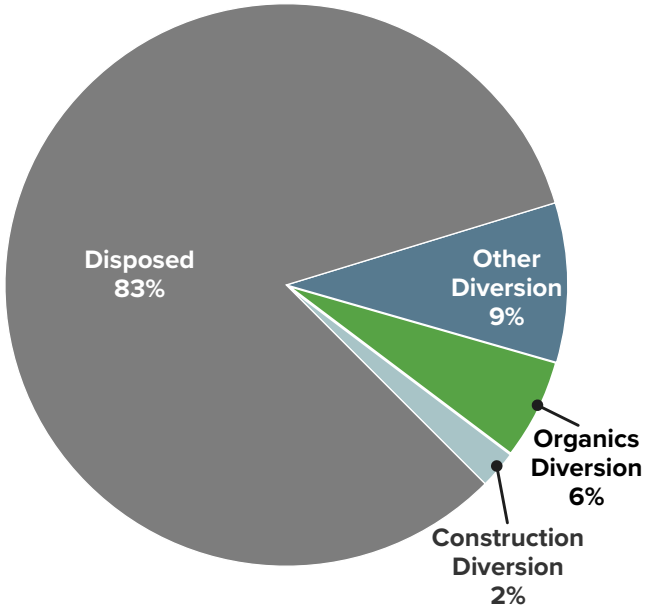
However, Ontario's general waste diversion rate (residential, commercial and industrial) has been stalled at below 30% over the past 15 years – meaning that over 70% of our waste materials continue to end up in landfills. Such heavy reliance on landfills will require the province to either focus on siting new landfills or look for new ways to reduce what we send to them.

While some individual municipalities and businesses have shown leadership, Ontarians know there is still a lot more that can be done to reduce the amount of waste we produce, recover valuable resources from our waste and better manage organics.

We believe that producers should be responsible for managing the waste they produce. Placing responsibility squarely on those who produce the waste will help unleash the creative talents and energies of the private sector. Making producers responsible for the full life-cycle of their products and the waste they produce will help companies to consider what materials they use in and to package their products, and find new and innovative cost-effective ways to recycle them and lower costs for consumers. It can also make recycling easier and more accessible right across the province, keeping it clean and beautiful.

Ontario's Residential and Industrial, Commercial and Institutional Waste Management





Residential Waste: Managed by municipalities. Includes waste generated by residents in single-family homes, some apartments and some small businesses. Mix of mandatory and voluntary diversion programs.

Business Waste: Managed by the private sector. Includes food processing sites, manufacturing facilities, schools, hospitals, offices, restaurants, retail sites and some apartments. Largely voluntary diversion programs.

Sources: Statistics Canada, Waste Management Industry Survey 2016 for non-residential data; Resource Productivity and Recovery Authority, Datacall data and residential diversion rates for residential data. Data on organic waste from 2018 study prepared for MECP by 2cg.

Actions

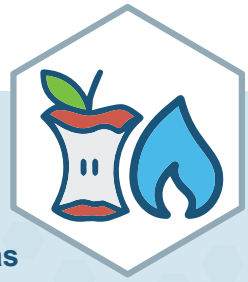
Reduce and divert food and organic waste from households and businesses

- Expand green bin or similar collection systems in large cities and to relevant businesses.
- Develop a proposal to ban food waste from landfill and consult with key partners such as municipalities, businesses and the waste industry.
- Educate the public and business about reducing and diverting food and organic waste.
- Develop best practices for safe food donation.

Success story: Farmers receive support for food donations

The rescue of surplus food helps ensure food does not go to waste. Ontario supports these efforts through the following mechanisms:

- The Ontario Community Food Program Donation Tax Credit for Farmers provides tax credits up to 25% to farmers who recover and donate agricultural products to eligible programs.
- The Ontario Donation of Food Act, 1994, encourages donations, with certain limitations, and protects food donors from liability as a result of injuries caused by the consumption of donated food.



Success story: City of Stratford turning organic waste into natural gas

Stratford, Ontario, is improving its wastewater treatment infrastructure to produce renewable natural gas from organic waste and feed it back into the local gas distribution system. Renewable natural gas is a clean, carbon-neutral energy source.

Reduce plastic waste

- Work with other provinces, territories and the federal government to develop a plastics strategy to reduce plastic waste and limit micro-plastics that can end up in our lakes and rivers.
- Seek federal commitment to implement national standards that address recyclability and labelling for plastic products and packaging to reduce the cost of recycling in Ontario.
- Work to ensure the Great Lakes and other inland waters are included in national and international agreements, charters and strategies that deal with plastic waste in the environment.

Reduce litter in our neighbourhoods and parks

Our environment plan reflects our government's commitment to keep our neighbourhoods, parks and waterways clean and free of litter and waste. When Ontarians walk their dog or take their children to the park they expect their time outdoors to be litter-free.

Ontario will establish an official day focused on cleanup of litter in Ontario, coordinated with schools, municipalities and businesses, to raise awareness about the impacts of waste in our neighbourhoods, in our waterways and in our green spaces.

- Work with municipal partners to take strong action against those who illegally dump waste or litter in our neighbourhoods, parks and coastal areas.

- Develop future conservation leaders through supporting programs that will actively clean up litter in Ontario's green spaces, including provincial parks, conservation areas and municipalities.
- Connect students with recognized organizations that encourage environmental stewardship so they could earn volunteer hours by cleaning up parks, planting trees and participating in other conservation initiatives.

Increase opportunities for Ontarians to participate in waste reduction efforts

- Work with municipalities and producers to provide more consistency across the province regarding what can and cannot be accepted in the Blue Box program.
- Explore additional opportunities to reduce and recycle waste in our businesses and institutions.

Make producers responsible for the waste generated from their products and packaging

- Move Ontario's existing waste diversion programs to the producer responsibility model. This will provide relief for taxpayers and make producers of packaging and products more efficient by better connecting them with the markets that recycle what they produce.

Explore opportunities to recover the value of resources in waste

- Investigate options to recover resources from waste, such as chemical recycling or thermal treatment, which have an important role – along with reduction, reuse and recycling – in ensuring that the valuable resources in waste do not end up in landfills.
- Encourage increased recycling and new projects or technologies that recover the value of waste (such as hard to recycle materials).

Provide clear rules for compostable products and packaging

- Ensure new compostable packaging materials in Ontario are accepted by existing and emerging green bin programs across the province, by working with municipalities and private composting facilities to build a consensus around requirements for emerging compostable materials.
- Consider making producers responsible for the end of life management of their products and packaging.

Success story: Making products compostable to reduce waste

Club Coffee makes a compostable coffee pod used by brands including Loblaw Companies Limited (President's Choice), Ethical Bean, Muskoka Roastery, Melitta Canada and Jumping Bean. Club Coffee works with municipalities so coffee drinkers can put these pods in their green bins; however they are not yet accepted in every program. We will work to support businesses that are trying to do the right thing and with leading municipalities that are working to reduce waste going to landfills. This will include working with industry and municipal partners to help ensure contamination of the Blue Box and green bin programs is minimized and that the public is provided with accurate information on how to properly manage compostable products and packaging.

Support competitive and sustainable end-markets for Ontario's waste

- Cut regulatory red tape and modernize environmental approvals to support sustainable end markets for waste and new waste processing infrastructure.
- Provide municipalities and the communities they represent with a say in landfill siting approvals. While we work to reduce the amount of waste we produce, it is recognized that there will be a need for landfills in the future. The province will look for opportunities to enhance municipal say while continuing to ensure that proposals for new and expanded landfills are subject to rigorous assessment processes and strict requirements for design, operation, closure, post-closure care and financial assurance.

CLEAN SOIL

Rural and urban communities benefit from healthy soil and land. Soils with contaminants need to be cleaned up to ensure new home owners or property users are safe, and contaminated soils are not relocated to farms where our food is grown. Having clear rules and standards around how extra soil from construction projects is managed, relocated and reused makes it easier for construction businesses to know what soils they can reuse and what soils need to be disposed of or treated before reusing.

Proper management of excess soil can reduce construction costs and unnecessary landfilling while ensuring soil from construction projects is safe for the environment and human health. By clarifying what soil can be reused locally, we can also reduce greenhouse gas emissions generated by trucking soil from place to place unnecessarily.

Redevelopment of underused, often contaminated sites (brownfields) also provides an opportunity to clean up historical contamination and put vacant prime land back into good use.

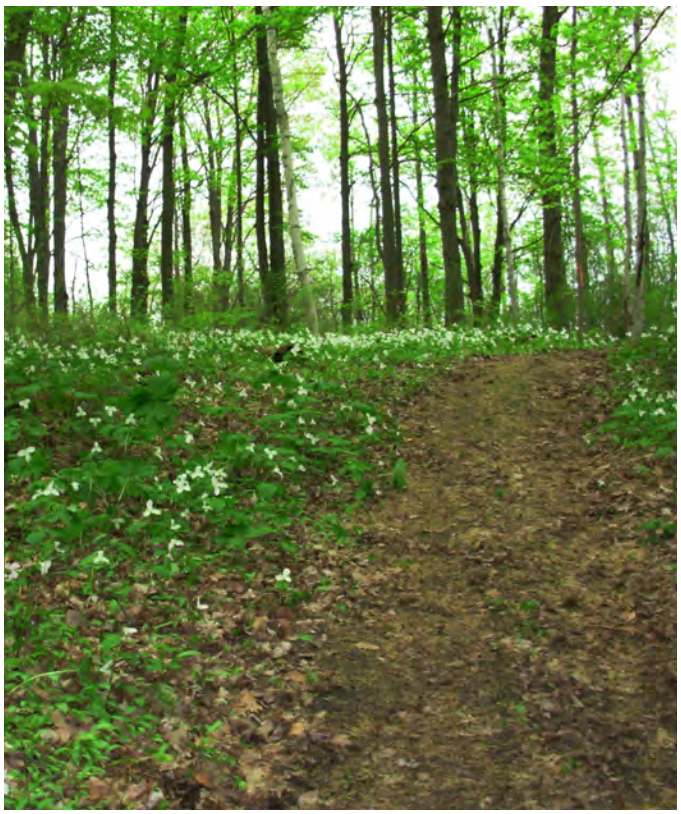
Actions

Increase the redevelopment and clean-up of contaminated lands in Ontario to put land back into good use

- Revise the brownfields regulation and the record of site condition guide to reduce barriers to redevelop and revitalize historically contaminated lands, putting vacant prime land back to good use.

Make it easier and safer to reuse excess soil

- Recognize that excess soil is often a resource that can be reused. Set clear rules to allow industry to reduce construction costs, limit soil being sent to landfill and lower greenhouse gas emissions from trucking by supporting beneficial reuses of safe soils.



- Work with municipalities, conservation authorities, other law enforcement agencies and stakeholders to increase enforcement on illegal dumping of excess soil.

Economic benefits of reusing soil

Traditional excess soil management using "dig and dump" approaches is substantially more expensive than using best practices for reusing soil from construction. According to a recent industry study, projects that use excess soil management best practices for reuse experienced an average of 9% in cost savings (Ontario Society of Professional Engineers, Greater Toronto Sewer and Watermain Contractors Association, Residential and Civil Construction Alliance of Ontario). Savings are due to reduced hauling distances and diverting soils away from landfills.

Improve management of hauled sewage

- Consider approaches for the management and spreading of hauled sewage to better protect human health and the environment (including land and waterways) from the impacts of nutrients and pathogens.

Conserving Land and Greenspace

People travel from around the world to experience the natural wonders that we often take for granted in the province of Ontario. The natural spaces across Ontario, such as forests, wetlands and parks purify our air and water, protect biodiversity and natural heritage, provide recreational opportunities and support Indigenous traditional practices.

We as Ontarians have a long history of putting a strong focus on expanding Ontario's parks and protected areas. In 1999, Ontario's Living Legacy Land Use Strategy was announced. A clear and major goal of this plan was to complete Ontario's system of parks and protected areas. Our government remains dedicated to maintaining the natural beauty of our province.

As mentioned earlier in the plan, we know that climate change poses a serious threat to Ontario's natural areas and that conservation of these areas can play an important role in mitigating and adapting to climate change. We will protect and enhance our natural areas, support conservation efforts, continue to conserve species at risk, develop adaptation strategies, and promote the importance of healthy natural spaces for future generations to use and enjoy.

Quick Fact: Ontario's Living Legacy commitment was one of the greatest expansions of Ontario's provincial parks and conservation reserves in recent history. Over the immediate years that followed, the commitment resulted in the creation of 58 new provincial parks and 268 new conservation reserves, a total area of 1,996,214 hectares.

Action Areas

Improve the resilience of natural ecosystems

- Collaborate with partners to conserve and restore natural ecosystems such as wetlands, and ensure that climate change impacts are considered when developing plans for their protection.
- Strengthen and expand grassland habitats by implementing the province's Grassland Stewardship Initiative that supports on-farm conservation activities to benefit grassland birds at risk.
- Protect against wildland fire incidents through the ongoing development of Community Wildfire Protection Plans and update technical guidance to protect people and property from flooding and water-related hazards.
- Work with leaders in land and water conservation, like Ducks Unlimited Canada and the Nature Conservancy of Canada, to preserve areas of significant environmental and ecological importance.

Success story:
Innovative Wetland in Middlesex County protects Lake Erie

Ducks Unlimited Canada, the Municipality of Southwest Middlesex, Ontario NativeScape and the Ministry of Natural Resources and Forestry built three retention ponds to capture water draining from more than 200 acres of farmland. The wetland acts as a filter to reduce excess nutrients (such as phosphorus that can create harmful algal blooms in water) reaching the Thames River and eventually Lake Erie.

Forest fires increase in Ontario in 2018

Prolonged dry conditions throughout Ontario made 2018 one of the most active forest fire seasons in recent years, with more than 1,300 forest fires burning over 265,000 hectares of forest, nearly double the 10-year average. While the number and intensity of fires varies greatly from year to year and it is difficult to connect any given forest fire to the effects of climate change, most research suggests that Ontario will experience more fires and longer fire seasons in the years ahead. While forest fires pose a serious threat to public safety, communities, and infrastructure, they are also an important natural process in Ontario's forest ecosystems. Managing forest fires in Ontario is about balancing the benefits of forest fires, and protecting public safety and communities.

Support conservation and environmental planning

- Work in collaboration with municipalities and stakeholders to ensure that conservation authorities focus and deliver on their core mandate of protecting people and property from flooding and other natural hazards, and conserving natural resources.
- Look to modernize Ontario's environmental assessment process, which dates back to the 1970s, to address duplication, streamline processes, improve service standards to reduce delays, and better recognize other planning processes.
- Protect vulnerable or sensitive natural areas such as wetlands and other important habitats through good policy, strong science, stewardship and partnerships.
- Improve coordination of land use planning and environmental approval processes by updating ministry guidelines to help municipalities avoid the impacts of conflicting land uses.

The Ontario government is committed to protecting the Greenbelt for future generations. The Greenbelt consists of over two million acres of land in the Greater Golden Horseshoe including farmland, forests, wetlands and watersheds. It includes the Oak Ridges Moraine and the Niagara Escarpment, and provides resilience to extreme weather events by protecting its natural systems and features.

Promote parks and increase recreational opportunities

- Support the creation of new trails across the province.
- Provide Ontario families with more opportunities to enjoy provincial parks and increase the number of Ontarians taking advantage of parks by 10% or approximately one million more visitors while protecting the natural environment.
- Look for opportunities to expand access to parks throughout the province, but ensure Ontario Parks has the tools it needs to conduct its business and create a world-class parks experience.
- Work to ensure that all fish and wildlife licence fees, fines and royalties collected in the Special Purpose Account go towards its stated purpose of conservation, with transparency for hunters and anglers in Ontario.
- Promote the link between nature and human health by supporting the worldwide movement for Healthy Parks Healthy People through Ontario Parks' events, education, and the development of a discussion paper to engage the public.
- Review management of provincial parks and conservation reserves to ensure effectiveness by exploring internationally recognized tools and best practices.
- Share the responsibility of conserving Ontario's protected lands by continuing to partner with municipalities, conservation authorities, Indigenous communities, conservation organizations and other community groups such as trail groups.

Conservation of Ontario's rich biodiversity and natural resources is a shared responsibility - success relies on Ontario working together with First Nation and Métis communities, hunters and anglers, conservation groups and other partners to achieve positive outcomes for our environment.

Quick Fact: Ontario manages and protects 340 provincial parks and 295 conservation reserves totalling 9.8 million hectares or 9% of the province – an area larger than the entire province of New Brunswick. In 2018, Ontario celebrated the 125th anniversary of the provincial parks system and of Algonquin Provincial Park.

Sustainable Forest Management

- Work with Indigenous organizations, the forestry industry and communities involved in managing Ontario's forests under sustainable forest management plans. Ontario will support forest managers to further reduce emissions and increase carbon storage in forests and harvested wood products. Ontario's sustainable forest management provides for the long-term health of Ontario's forests by providing potential opportunities to reduce and store greenhouse gases as trees capture and store carbon dioxide.
- Promote the use of renewable forest biomass, for example, in the steel industry and as heating fuel for northern, rural and Indigenous communities.
- Improve data and information, informed by Indigenous Traditional Knowledge where offered, on greenhouse gas emissions and carbon storage from forests, the changing landscape and permafrost.
- Increase the use of Ontario timber in building, construction and renovation to reduce emissions and increase long-term carbon storage.

What is carbon storage? Carbon storage refers to capturing carbon dioxide – and other greenhouse gases in the atmosphere – through vegetation and soils. Practices that remove carbon dioxide from the atmosphere include sustainable forest management, conserving and restoring natural ecosystems, and enhancing soil carbon in agriculture.

Forests begin to emit greenhouse gases as the trees age and die, while younger forests that are growing vigorously sequester carbon from the atmosphere. Sustainable forestry practices can encourage forests to grow and to increase carbon stored in forests and harvested wood products.

Quick Fact: Sandbanks Provincial Park is one of the busiest parks in the province, welcoming over 750,000 visitors every summer. To meet a growing demand for camping, Ontario Parks opened a new campground in Sandbanks Provincial Park in May 2017, featuring 75 campsites.

Protect species at risk and respond to invasive species

- Reaffirm our commitment to protect species at risk and their habitats, as we mark the 10th anniversary of Ontario's Endangered Species Act. We are committed to ensuring that the legislation provides stringent protections for species at risk, while continuing to work with stakeholders to improve the effectiveness of the program.
- Protect our natural environment from invasive species by working with partners and other governments and using tools to prevent, detect and respond to invasions.

Invasive species impact fish and wildlife, and hurt Ontario's economy

Invasive species like the emerald ash borer are killing our trees, phragmites (a type of grass) are taking over wetlands, and zebra mussels are clogging water intakes for industry and cottagers. Second to habitat loss, invasive species are recognized as the second leading global cause to the loss of biodiversity. In addition, invasive species are impacting our recreational opportunities such as boating, swimming, angling, and hunting, and their economic costs are staggering. A recent study estimated impacts of invasive species in Ontario at $3.6 billion annually with municipalities spending at least $38 million in 2017/18.

Preventing invasive species from arriving and establishing themselves is the single most effective and least costly method to manage invasive species. Ontario is working with a number of conservation partners to coordinate prevention, control, research and management activities to help address this serious threat. Raising public awareness and engaging individuals in taking preventive action is key in preventing new species from arriving and surviving.

Next Steps

IMPLEMENTING OUR PLAN

Ontario's environment plan presents new direction for addressing the pressing challenges we face to protect our air, land and water, clean up litter and waste, build resiliency and reduce our greenhouse gas emissions.

Our plan includes proposed incentives to stimulate growth in clean technologies, enhance leadership and collaboration to build a province-wide commitment to protecting the environment, and take action on climate change.

Our plan will help people and businesses across Ontario take actions that will save money, enhance communities, create new jobs and grow the economy.

Next steps

As part of our work on this plan, we are also undertaking several important steps to finalize our environment actions for Ontario. Over the coming months, we will:

- **Continue to consult with the public and engage with Indigenous communities** Throughout the environment plan we have identified areas of action and key initiatives. These are areas where we are engaging with stakeholders and Indigenous communities to develop new approaches that support our common goals for environmental and climate leadership.

- **Establish an advisory panel on climate change**
  An advisory panel on climate change will be established to provide advice to the Minister on implementation and further development of actions and activities in our plan specific to climate change.
- **Begin implementing priority initiatives**
  In the plan we have identified a number of priority initiatives. Some of these initiatives are already underway and we will begin implementation of the remaining initiatives following consultation.
- **Measure and report on progress**
  We want Ontarians to see how our plan is helping them save money and improve the quality of their lives and communities. We are committed to reporting regularly on the progress we make on our plan and to developing key indicators of progress because we believe that transparency is important to the success of this plan. We are also committed to reviewing the environment plan every four years.

Our consultations and engagement with various stakeholders, Indigenous communities and the public will help refine our environment initiatives by incorporating valuable insights that ensure the actions we adopt reflect the needs of Ontarians.

Comments, ideas and suggestions on the actions and initiatives in Ontario's plan to protect the environment can be made on the Environmental Registry.

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RIDER: L	Voluntary RNG Program Charge

APPLICABILITY:

This rider is applicable to System Sales Service customers in the below rate classes who elect to participate in the Company's Voluntary RNG Program to fund the incremental cost of the Company's purchase of renewable natural gas ("RNG") as part of System Supply. The charge is a fixed monthly amount that applies (i) to the customer and not to the terminal location or address; and (ii) whether or not the customer consumes gas within the month.

RATE:

Rate Class	Monthly Charge per Customer
Rate 1	$2.00
Rate 6	$2.00

MINIMUM TERM:

The minimum term available is one complete billing month renewing automatically monthly until terminated by the customer or until the Company terminates the Voluntary RNG Program, whichever occurs earlier. Any termination will be effective as of the the next billing cycle for the customer.

Effective
2021-01-01
Schedule "A"

ENBRIDGE GAS INC.
UNION SOUTH
GAS SUPPLY CHARGES

(A) Availability:

Available to customers in Union's Southern Delivery Zone.

(B) Applicability:

To all sales customers served under Rate M1, Rate M2, Rate M4, Rate M5A, Rate M7, Rate M9, Rate M10 and storage and transportation customers taking supplemental services under Rate T1, Rate T2 and Rate T3.

(C) Rates:

	cents / m^3	
Utility Sales		
Commodity and Fuel	11.7312	(1)
Commodity and Fuel - Price Adjustment	1.6728	(2)
Transportation	-	
Total Gas Supply Commodity Charge	13.4040	
Voluntary RNG Program Charge (if applicable) (3)		
Monthly Charge - Rate M1 and Rate M2	$ 2.00	
Minimum Annual Gas Supply Commodity Charge		
Rate M4 Firm and Rate M5A Interruptible Contract	0.1949	

Storage and Transportation Supplemental Services - Rate T1, Rate T2 & Rate T3	$/GJ
Monthly demand charges:	
Firm gas supply service	45.493
Firm backstop gas	1.381
Commodity charges:	
Gas supply	3.032
Backstop gas	3.492
Reasonable Efforts Backstop Gas	4.585
Supplemental Inventory	Note (4)
Supplemental Gas Sales Service (cents / m^3)	14.6736
Failure to Deliver: Applied to quantities not delivered to Union in the event the customer's supply fails	2.902
Discretionary Gas Supply Service (DGSS)	Note (5)

Notes:

(1) The Commodity and Fuel rate includes a gas supply administration charge of 0.1949 cents/m^3.

(2) Prospective recovery of gas supply deferral accounts.

(3) The Voluntary RNG Program Charge is a fixed monthly charge applicable to customers who elect to participate in the Company's Voluntary RNG Program to fund the incremental cost of purchasing renewable natural gas as part of system supply. The charge will be applicable for a minimum term of one billing month, renewing automatically monthly until terminated by the customer or until the Company terminates the Voluntary RNG Program, whichever occurs earlier. The fixed monthly charge will apply to applicable customers whether or not they consume natural gas within the billing period.

(4) The charge for banked gas purchases shall be the higher of the daily spot gas cost at Dawn in the month of or the month following the month in which gas is sold under this rate and shall not be less than Union's approved weighted average cost of gas.

(5) Reflects the "back to back" price plus a gas supply administration charge.

Effective January 1, 2021
Implemented January 1, 2021
O.E.B. Order # EB-2020-0066

Supersedes EB-2019-0273 Rate Schedule effective January 1, 2020.

ENBRIDGE GAS INC.
UNION NORTH
GAS SUPPLY CHARGES

(A) Availability

Available to customers in Union's North West and North East Delivery Zones.

(B) Applicability:

To all sales customers served under Rate 01A, Rate 10, Rate 20, Rate 100 and Rate 25.

(C) Rates

Utility Sales	Union North West	Union North East
Rate 01A (cents / m^3)		
Storage	2.0254	5.0178
Storage - Price Adjustment	-	-
Commodity and Fuel (1)	10.0062	12.0136
Commodity and Fuel - Price Adjustment (2)	(0.6648)	1.9403
Transportation	5.4952	2.0844
Transportation - Price Adjustment (2)	(0.0728)	(0.8279)
Total Gas Supply Charge	16.7892	20.2282
Rate 10 (cents / m^3)		
Storage	1.4993	3.5211
Storage - Price Adjustment	-	-
Commodity and Fuel (1)	10.0062	12.0136
Commodity and Fuel - Price Adjustment (2)	(0.6648)	1.9403
Transportation	4.8105	1.9065
Transportation - Price Adjustment (2)	(0.0728)	(0.8279)
Total Gas Supply Charge	15.5784	18.5536
Voluntary RNG Program Charge (if applicable) (3)		
Monthly Charge - Rate 01 and Rate 10	$ 2.00	$ 2.00

Notes:

(1) The Commodity and Fuel rate includes a gas supply administration charge of 0.19490 cents/m^3.
(2) Prospective recovery of gas supply deferral accounts.
(3) The Voluntary RNG Program Charge is a fixed monthly charge applicable to customers who elect to participate in the Company's Voluntary RNG Program to fund the incremental cost of purchasing renewable natural gas as part of system supply. The charge will be applicable for a minimum term of one billing month, renewing automatically monthly until terminated by the customer or until the Company terminates the Voluntary RNG Program, whichever occurs earlier. The fixed monthly charge will apply to applicable customers whether or not they consume natural gas within the billing period.

ENBRIDGE GAS INC.
UNION NORTH
GAS SUPPLY CHARGES

Utility Sales

Rate 20 (cents / m^3)	Union North West	Union North East
Commodity and Fuel (1)	9.7318	11.6831
Commodity and Fuel - Price Adjustment (2)	(0.6648)	1.9403
Commodity Transportation - Charge 1	2.9312	1.3017
Transportation 1 - Price Adjustment (3)	(0.0728)	(0.8279)
Commodity Transportation - Charge 2	-	-
Monthly Gas Supply Demand	47.9856	39.7668
Gas Supply Demand - Price Adjustment	-	-
Commissioning and Decommissioning Rate	5.4419	2.9938

Rate 100 (cents / m^3)		
Commodity and Fuel (1)	9.7318	11.6831
Commodity and Fuel - Price Adjustment (2)	(0.6648)	1.9403
Commodity Transportation - Charge 1	5.0873	7.1488
Commodity Transportation - Charge 2	-	-
Monthly Gas Supply Demand	90.8460	125.2211
Commissioning and Decommissioning Rate	6.4470	8.9450

Rate 25 (cents / m^3)		
Gas Supply Charge:		
Interruptible Service		
Minimum	1.4848	1.4848
Maximum	675.9484	675.9484

Natural Gas Liquefaction Service ($ / GJ) (3)		
Gas Supply Charge:		
Interruptible Service		
Minimum		0.3919
Maximum		178.3976

Notes:
(1) The Commodity and Fuel rate includes a gas supply administration charge of 0.19490 cents/m^3.
(2) Prospective recovery of gas supply deferral accounts.
(3) Billing in energy ($/GJ) will only apply to the Natural Gas Liquefaction Service.

Effective January 1, 2021
Implemented January 1, 2021
O.E.B. Order # EB-2020-0066

Supersedes EB-2019-0273 Rate Schedule effective January 1, 2020.