

COURT OF APPEAL FOR ONTARIO

IN THE MATTER OF A REFERENCE to the Court of Appeal pursuant to section 8 of the *Courts of Justice Act*, RSO 1990, c. C.34, by Order-in-Council 1014/2018 respecting the constitutionality of the *Greenhouse Gas Pollution Pricing Act*, Part 5 of the *Budget Implementation Act, 2018, No. 1*, SC 2018, c. 12

**REPLY RECORD OF THE
ATTORNEY GENERAL OF ONTARIO**

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HOT

**JEFFREY SIMPSON,
MARK JACCARD,
and
NIC RIVERS**

AIR

MEETING CANADA'S CLIMATE CHANGE CHALLENGE

[A DOUGLAS GIBSON BOOK]



McCLELLAND & STEWART

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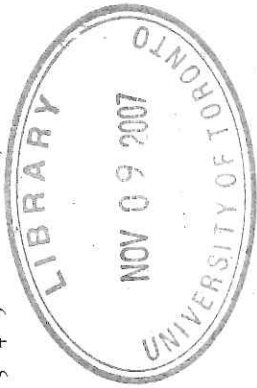
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*From Jeffrey: To Tait, Danielle, Brook, and Wendy, sine qua non
From Mark: To Ingram, Kjarstan, Torsten, and Sigbrit
From Nic: To Simone*

storage – but say nothing about economic policies to force these actions, assume failure.

5. If politicians complain about jurisdictional constraints, assume failure.
6. If politicians crisscross the country or their province handing out subsidies and offering photo opportunities of themselves in front of wind turbines, research laboratories, or corn fields, assume failure.
7. If politicians make a big deal for ideological or other reasons about ruling out all forms of GHG taxes, and don't substitute for those tax policies ones that rely on market-oriented regulations such as emissions caps with tradable permits, assume failure.
8. If politicians insist that Canada can meet its Kyoto commitment, offer the benefit of the doubt that they are not lying, just being disingenuous.

We need to add some general comments to this list of political small tests. Effective GHG emissions reduction policy must apply to the entire economy. Industry cannot be the target of serious economic policies while consumers are exempt, and vice versa. The challenge of climate change is such that all parts of Canadian society need to contribute. So, too, all regions have to contribute. Although producers of fossil fuels are concentrated in a few provinces, consumers are everywhere, as are businesses and utilities. In a country such as Canada, debates will flare about which industry or region must do what, and which formula for sharing adjustments should be applied to consumers and industry. Some of this debate is normal democratic dialogue; some of it will be particularly Canadian. That there will be debate and disagreement about internal obligations should not be a deterrent to act, because they come with the territory, as it were.

Canadians need to become realistic after years of failure and fantasy. We have to choose among four policy options. Each can be made to work. We need to combine what we might call quantity restraints on the total of GHGs emitted with price signals to deter or prevent those emissions.

We can use a GHG tax. We can use an upstream carbon cap-and-tradable-permit system that restricts the carbon flow of industries by requiring them to acquire permits for the carbon they process into refined petroleum products for consumers or electricity generation plants. This approach will ripple through the economy, pushing along decarbonization, because the resulting higher prices will induce some fuel switching.

We can use a downstream cap-and-tradable-permit system, akin to the large final emitters system toyed with by Conservatives and Liberals. It can be based on emissions per unit of industrial output (intensity) or absolute quantity of emissions. The stringency of the cap counts. Intensity policy can work, but not if the intensity target becomes overwhelmed by a surge in units of output, as in the oil sands. A policy that targets only large final emitters allows half the country's emissions off the hook. For this downstream system to work, it has to be accompanied by a similar emissions cap-and-permit system for final energy consumption in vehicles, homes, offices, and small industries, or a GHG tax for these energy consumers.

Finally, we can use a carbon management standard. It works its way down through the economy because it is imposed on producers that are obligated to provide certain low- or zero-emissions products. It could also apply as a carbon portfolio standard for large emitters of GHGs. And we will need command-and-control policies and targeted market-oriented regulations for such areas as vehicle emissions requirements, appliance regulations, and building codes.

Canadians wanting serious action can choose from the four main policy options, or blend some of them. The specific combination is less important than getting Canadians to understand that this basket of policies – *and only this basket of policies* – will produce significant GHG reductions in future decades. Modalities are important, even critical, but nothing is more essential at this point than understanding which are the serious policies and which ones are certain to keep failing. Each of these serious policies can be made to work, and the sooner we put them in place the better. We have lost so much time; we can ill afford to dither any more. And remember that even if we begin implementing serious policies tomorrow, their impact will not be felt for another decade or so. The longer we delay, the later we will see results, because there are no quick fixes to our climate change challenge.

We need to implement serious policies quickly but tighten them gradually. It would be stupid to trigger an economic recession, or grievously hurt particular industrial sectors, because we are rushing to meet a short-term Kyoto target. Most scientists are telling us that although the hour is late, if countries can make substantial changes so that emissions are in rapid decline in a few decades, then we will have acted in time to slow down, and eventually reverse, GHG buildup in the atmosphere. Technological changes and breakthroughs take time to invent, refine, and deploy in the market. When they hit the market and are disseminated, they make an impact quite rapidly and can then be transferred or sold to developing countries.

We cannot predict what technological changes will reshape the future. We have shown that this basket of policies will drive us toward low- and zero-emissions technologies, but a variety of possible actions can come out of these policies. Thinking well down the road, people could dramatically reduce their car use, although not with the ones they own today. They could drive much smaller

cars. They could drive hydrogen cars, probably using a fuel cell but perhaps combusting the hydrogen. They could drive biofuel cars. They could drive plug-in hybrids that use a small amount of diesel, gasoline, or biofuel, but are mostly powered by electricity from the grid. We don't know the exact technologies and the energy sources that will feed the grid in the low- and zero-emissions future. And we don't need to know. Provided we put the right policies in place that send the unmistakable signals to businesses and consumers, with the necessary lead times for adapting, then markets will figure out the technologies and fuel sources. Markets, after all, are businesses and consumers making choices that work best, given their own preferences and budgets – and given the laws imposed by governments, including the policies Canadians should enact to protect the atmosphere for others and themselves.

Nor can we predict how much energy Canadians will use in the future. Certainly those who favour energy efficiency as the prime answer to our emissions challenge believe that therein lies the key to decarbonization. The likelihood of energy efficiency holding the key, however, is quite low. New energy-efficient equipment is often more expensive, and consumers will not necessarily and voluntarily lay out more money for it. We live in a free-market, consumer-driven society that has brought us many advantages and is unlikely to change fundamentally. Underlying market economics are impulses that drive humans everywhere – for mobility, comfort, food, status, leisure, entertainment, and gift-giving. Yes, it is possible that we could consume less, but this, too, is highly unlikely in a modern, industrialized economy – to say nothing of the developing world where the bulk of the population lives and where people would like to enjoy some of the benefits we do. In other words, the prospect of Canadians returning to a simpler, Arcadian, smaller-footprint life is as unlikely as people in the developing world being content for their children to remain


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Population and Dwelling Count Highlight Tables, 2016 Census

Population and dwelling counts, for Canada, provinces and territories, 2016 and 2011 censuses – 100% data

▼ About

This table presents the 2016 and 2011 population counts and the 2016 dwelling counts, land area and population density for Canada, the provinces and the territories. It also shows the percentage change in the population counts between 2011 and 2016.

[Learn more about the data](#)

▼ Data table

Geographic name	Population			Private dwellings, 2016		Land area in square kilometres, 2016	Population density per square kilometre, 2016
	2016	2011	% change	Total	Occupied by usual residents		
Canada ¹	35,151,728	33,476,688	5.0	15,412,443	14,072,079	8,965,588.85	3.9
Newfoundland and Labrador	519,716	514,536	1.0	265,739	218,673	370,514.08	1.4
Prince Edward Island	142,907	140,204	1.9	71,119	59,472	5,686.03	25.1
Nova Scotia	923,598	921,727	0.2	458,568	401,990	52,942.27	17.4
New Brunswick	747,101	751,171	-0.5	359,721	319,773	71,388.81	10.5
Quebec ¹	8,164,361	7,903,001	3.3	3,858,943	3,531,663	1,356,625.27	6.0
Ontario ¹	13,448,494	12,851,821	4.6	5,598,391	5,169,174	908,699.33	14.8
Manitoba	1,278,365	1,208,268	5.8	539,748	489,050	552,370.99	2.3
Saskatchewan	1,098,352	1,033,381	6.3	495,582	432,622	588,243.54	1.9
Alberta ¹	4,067,175	3,645,257	11.6	1,654,129	1,527,678	640,330.46	6.4
British Columbia ¹	4,648,055	4,400,057	5.6	2,063,417	1,881,969	922,503.01	5.0
Yukon	35,874	33,897	5.8	17,987	15,215	474,712.68	0.1
Northwest Territories	41,786	41,462	0.8	17,666	14,981	1,143,793.86	0.0
Nunavut	35,944	31,906	12.7	11,433	9,819	1,877,778.53	0.0

Note(s):

6

- 1 Excludes census data for one or more incompletely enumerated Indian reserves or Indian settlements

▼ Related data

- [Population estimates and projections by year, by province and territory](#)
- [Population and dwelling counts, 2011 Census](#)
- [Population and dwelling counts, 2006 Census](#) | **Archived**
- [Population and dwelling counts, 2001 Census](#) | **Archived**
- [Population and dwelling counts, 1996 Census](#) | **Archived**

Date modified:

2019-02-20

Enbridge Gas Inc. has applied to raise its natural gas rates effective January 1, 2019.

Learn more. Have your say.

The Ontario Energy Board approved the amalgamation of Enbridge Gas Distribution Inc. and Union Gas Limited in August 2018. The companies have amalgamated to form Enbridge Gas Inc.

Enbridge Gas Inc. has applied to the Ontario Energy Board to raise its natural gas rates effective January 1, 2019. If the application is approved as filed, the yearly bill of a typical residential customer within the former Enbridge Gas Distribution Inc. and Union Gas Limited rate zones will increase by the following amounts:

Rate Zones	Residential Annual Bill Increase
Enbridge Gas	\$ 5.74
Union South	\$ 9.98
Union North East	\$ 4.88
Union North West	\$ 6.81

The rates are based on a rate-setting framework and other adjustments previously approved by the Ontario Energy Board for the period 2019-2023. The rates are set using a formula that is tied to inflation and other factors intended to promote efficiency.

Enbridge Gas Inc. is also asking the Ontario Energy Board to approve its rate design proposal and the costs of certain capital projects that are not part of their regular capital expenditures.

Other customers of Enbridge Gas Inc. may be affected. It is important to review the application carefully to determine whether you will be affected by the changes.

THE ONTARIO ENERGY BOARD IS HOLDING A PUBLIC HEARING

The Ontario Energy Board (OEB) will hold a public hearing to consider the application filed by Enbridge Gas Inc. We will question Enbridge Gas Inc. on the case. We will also hear questions and arguments from individual customers and from groups that represent the customers of Enbridge Gas Inc. At the end of this hearing, the OEB will decide whether the rate increase requested in the application will be approved.

The OEB is an independent and impartial public agency. We make decisions that serve the public interest. Our goal is to promote a financially viable and efficient energy sector that provides you with reliable energy services at a reasonable cost.

BE INFORMED AND HAVE YOUR SAY

You have the right to information regarding this application and to be involved in the process.

- You can review the application filed by Enbridge Gas Inc. on the OEB's website now.
- You can file a letter with your comments, which will be considered during the hearing.
- You can become an active participant (called an intervenor). Apply by **February 5, 2019** or the hearing will go ahead without you and you will not receive any further notice of the proceeding.
- At the end of the process, you can review the OEB's decision and its reasons on our website.

LEARN MORE

Our file number for this case is **EB-2018-0305**. To learn more about this hearing, find instructions on how to file letters or become an intervenor, or to access any document related to this case, please enter the file number **EB-2018-0305** on the OEB website: www.oeb.ca/participate. You can also phone our Consumer Relations Centre at 1-877-632-2727 with any questions.

ORAL VS. WRITTEN HEARINGS

There are two types of OEB hearings – oral and written. The OEB will determine at a later date whether to proceed by way of a written or oral hearing. If you think an oral hearing is needed, you can write to the OEB to explain why by **February 5, 2019**.

PRIVACY

If you write a letter of comment, your name and the content of your letter will be put on the public record and the OEB website. However, your personal telephone number, home address and e-mail address will be removed. If you are a business, all your information will remain public. If you apply to become an intervenor, all information will be public.

This hearing will be held under section 36 of the Ontario Energy Board Act, S.O. 1998 c.15 (Schedule B).



Ontario

Ontario Energy Board / Commission de l'énergie de l'Ontario

Enbridge Gas Inc. has applied to raise its natural gas rates effective April 1, 2019 to recover costs associated with the Federal *Greenhouse Gas Pollution Pricing Act*.

Learn more. Have your say.

The Ontario Energy Board approved the amalgamation of Enbridge Gas Distribution Inc. and Union Gas Limited in August 2018. The companies have amalgamated to form Enbridge Gas Inc. (Enbridge Gas).

Enbridge Gas has applied to the Ontario Energy Board for approval to increase rates to recover costs associated with meeting its obligations under the Federal *Greenhouse Gas Pollution Pricing Act* (Act). The Act establishes a carbon pricing program under which Enbridge Gas is required to pay a carbon charge to the federal government for volumes of natural gas that Enbridge Gas delivers to customers starting April 1, 2019. The Act also imposes other obligations on Enbridge Gas related to emissions from the operation of its natural gas distribution system starting January 1, 2019.

If the application is approved as filed, the bill of a typical residential customer within the former Enbridge Gas Distribution Inc. and Union Gas Limited rate zones will increase by the following amounts per year:

Rate Zone	Residential Annual Bill Increase
Enbridge Gas	\$93.93
Union South	\$86.21
Union North	\$86.18

Other customers, including small businesses, would also be affected.

THE ONTARIO ENERGY BOARD IS HOLDING A PUBLIC HEARING

The Ontario Energy Board (OEB) will hold a public hearing to consider Enbridge Gas' request. We will also hear questions and arguments from individual customers and from groups that represent Enbridge Gas' customers. At the end of this hearing, the OEB will decide what rate change will be allowed.

The OEB is an independent and impartial public agency. We make decisions that serve the public interest. Our goal is to promote a financially viable and efficient energy sector that provides you with reliable energy services at a reasonable cost.

BE INFORMED AND HAVE YOUR SAY

You have the right to information regarding this application and to be involved in the process.

- You can review Enbridge Gas' application on the OEB's website now.
- You can file a letter with your comments, which will be considered during the hearing.
- You can become an active participant (called an intervenor). Apply by **March 13, 2019** or the hearing will go ahead without you and you will not receive any further notice of the proceeding.
- At the end of the process, you can review the OEB's decision and its reasons on our website.

LEARN MORE

Our file number for this case is **EB-2018-0205**. To learn more about this hearing, find instructions on how to file letters or become an intervenor, or to access any document related to this case, please enter the file number **EB-2018-0205** on the OEB website: www.oeb.ca/notice. You can also phone our Consumer Relations Centre at 1-877-632-2727 with any questions.

ORAL VS. WRITTEN HEARINGS

There are two types of OEB hearings – oral and written. The OEB will determine at a later date whether to proceed by way of a written or oral hearing. If you think an oral hearing is needed, you can write to the OEB to explain why by **March 13, 2019**.

PRIVACY

If you write a letter of comment, your name and the content of your letter will be put on the public record and the OEB website. However, your personal telephone number, home address and email address will be removed. If you are a business, all your information will remain public. If you apply to become an intervenor, all information will be public.

This rate hearing will be held under section 36 of the Ontario Energy Board Act, 1998, S.O. 1998, c.15 (Schedule B).



Ontario

Ontario Energy Board / Commission de l'énergie de l'Ontario



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INTERIM DECISION AND ACCOUNTING ORDERS

EB-2018-0205

Enbridge Gas Inc.

2019 Federal Carbon Pricing Program Application

BEFORE: Lynne Anderson
Presiding Member

Michael Janigan
Member

Susan Frank
Member

February 28, 2019

1 INTRODUCTION

Enbridge Gas Inc. (Enbridge Gas) has applied to the Ontario Energy Board (OEB) for approval under section 36(1) of the *Ontario Energy Board Act, 1998* to increase rates to recover costs associated with meeting its obligations under the Federal *Greenhouse Gas Pollution Pricing Act* (FGGPP Act). The FGGPP Act establishes a carbon pricing program under which Enbridge Gas is required to pay a carbon charge to the federal government for volumes of natural gas that Enbridge Gas delivers to customers starting April 1, 2019. The FGGPP Act also imposes other obligations on Enbridge Gas related to emissions from the operation of its natural gas distribution system starting January 1, 2019.

Pending a final determination of its application, Enbridge Gas seeks OEB approval for (i) rates on an interim basis effective April 1, 2019, and (ii) the establishment of five accounts to record its costs/cost variances associated with compliance with the FGGPP Act.

The OEB does not approve the request for interim rates. The OEB will consider the comments of stakeholders and submissions of parties prior to making a determination on any new charges and related bill presentation issues.

However, to allow Enbridge Gas to record its costs for potential future recovery, the OEB does approve the establishment of three new accounts: one for Enbridge Gas's administrative costs related to the FGGPP Act and two for the carbon charges for natural gas that Enbridge Gas delivers to customers. The OEB further directs that costs related to the operation of Enbridge Gas's distribution system should continue to be recorded in the two deferral accounts¹ established on an interim basis for facility-related costs.

¹ Interim Decision and Accounting Order - December 14, 2018

2 PROCESS

Enbridge Gas Distribution Inc. and Union Gas Limited (as they then were) filed applications with the OEB on October 9, 2018 and October 10, 2018, respectively, seeking approval to increase rates to recover costs associated with meeting its obligations under the FGGPP Act.

On December 11, 2018, Enbridge Gas Distribution Inc. and Union Gas Limited requested interim accounting orders for their facility-related costs.

On December 14, 2018, the OEB issued an interim Decision and Accounting Order approving the establishment of the facility-related deferral accounts.

Effective January 1, 2019, Enbridge Gas Distribution Inc. and Union Gas Limited amalgamated to become Enbridge Gas. On January 11, 2019, Enbridge Gas filed an updated application. The updated evidence was consolidated into one application that covers the service territories of the former Enbridge Gas Distribution Inc. and Union Gas Limited.

On February 13, 2019, the OEB issued a Notice of Hearing for this proceeding. Service and publication of the Notice of Hearing are proceeding, and the period for requesting intervenor status in the proceeding will close on March 13, 2019.

On February 20, 2019, the Minister of Energy, Northern Development and Mines wrote a letter² to the OEB encouraging the OEB to:

...have regard to the government's objective of transparency for natural gas bills in any proceeding related to the implementation of the federal carbon tax, and to ensure that stakeholders have an opportunity to present their views to the OEB on the appearance of this new charge on natural gas bills.

² Letter – February 20, 2019

3 INTERIM ORDER SOUGHT

In its updated application, Enbridge Gas is seeking interim approval of rates effective April 1, 2019 for all rate zones.³ This would include a customer-related federal carbon charge proposed to be shown as a separate line item on each customer's bill and a facility-related carbon charge to be included in the delivery charge. Enbridge Gas states that interim rates will prevent the accumulation of unbilled amounts that would have a larger impact on future customer bills.

In its updated application, Enbridge Gas is also requesting OEB approval to establish the following five deferral and variance accounts to ensure compliance with the FGGPP Act in 2019 and beyond:

- 1) Greenhouse Gas Emissions Administration Deferral Account:
to record the administration costs for all rate zones (effective January 1, 2019)
- 2) Federal Carbon Charge – Customer Variance Account for the Enbridge Gas Distribution (EGD) rate zone:
to record cost variances between the actual costs incurred for customer gas usage and the amount collected through rates related to the volumes delivered by Enbridge Gas for the EGD rate zone (effective April 1, 2019)
- 3) Federal Carbon Charge – Customer Variance Account for the Union rate zones:
to record cost variances between the actual costs incurred for customer gas usage and the amount collected through rates related to the volumes delivered by Enbridge Gas for the Union Gas rate zones (effective April 1, 2019)
- 4) Federal Carbon Charge – Facility Variance Account for the EGD rate zone:
to record the variance between actual facility carbon costs and facility carbon costs collected through rates within the EGD rate zone (effective January 1, 2019)
- 5) Federal Carbon Charge – Facility Variance Account for the Union rate zones:
to record the variance between actual facility carbon costs and facility carbon costs collected through rates within the Union Gas rate zones (effective January 1, 2019)

³ This includes the rate zone to cover the service territory of the former Enbridge Gas Distribution Inc. and the two rates zones (Union South and Union North) to cover the service territory of the former Union Gas Limited.

4 DECISION

The OEB approves the following accounts on an interim basis:

- 1) Greenhouse Gas Emissions Administration Deferral Account effective January 1, 2019
- 2) Federal Carbon Charge – Customer Variance Account for the EGD rate zone effective April 1, 2019
- 3) Federal Carbon Charge – Customer Variance Account for the Union rate zones effective April 1, 2019

The OEB also approves, on an interim basis, the Accounting Orders associated with each of the above accounts. The approved Accounting Orders are attached as Appendix A.

On December 14, 2018, the OEB approved the establishment of the Federal Carbon Charge – Facility Deferral Account for each of the EGD and Union rate zones, effective January 1, 2019. Those accounts remain in effect and should be used to record costs for operating Enbridge Gas's facilities under the FGGPP Act.

The OEB will make a determination on final deferral and variance accounts in its Decision and Order for this proceeding.

The OEB is not approving interim rates to be effective April 1, 2019. The OEB will consider the comments of stakeholders and submissions of parties prior to making a determination on any new charges and related bill presentation issues. The OEB will establish further procedural steps for this proceeding once the intervention period ends on March 13, 2019. As a result of this determination, there will be no revenue to record in the Federal Carbon Charge – Customer Variance Accounts at this time.

Enbridge Gas expressed concern in its application that if charges are not added to bills when amounts become payable to the Government of Canada “the resulting buildup of unbilled and uncollected amounts from customers may have an unnecessarily large impact on rates when such amounts are added to bills and recovered in the future”⁴.

The OEB acknowledges this concern, but notes that most of the payments to the Government of Canada are in respect of the period starting April 1, 2019. This is a time period in which gas usage is much lower than what it would have been in January. Any

⁴ October 10, 2018 Application – Exhibit A, Tab 2, Schedule 2, Page 5

accumulated unbilled amounts would therefore be expected to be commensurately lower.

The OEB has made amendments to the draft accounting orders filed by Enbridge Gas. The amendments include removal of the reference to provincial regulations for the Greenhouse Gas Emissions Administration Deferral Account. This account is to be used only for costs incurred as a result of the federal program.

The OEB notes that the accounting orders for the Federal Carbon Charge – Customer Variance Accounts are inconsistent between the EGD and Union rate zones. The OEB expects the accounting orders to be consistent for any final approval.

5 ORDER

THE ONTARIO ENERGY BOARD ORDERS THAT:

The OEB approves, on an interim basis, the establishment of the:

- 1) Greenhouse Gas Emissions Administration Deferral Account effective January 1, 2019
- 2) Federal Carbon Charge – Customer Variance Account for the EGD rate zone effective April 1, 2019
- 3) Federal Carbon Charge – Customer Variance Account for the Union rate zones effective April 1, 2019

The Accounting Orders attached as Appendix A to this Interim Decision and Accounting Orders are approved on an interim basis.

DATED at Toronto February 28, 2019

ONTARIO ENERGY BOARD

Original Signed By

Kirsten Walli
Board Secretary

APPENDIX A
INTERIM DECISION AND ACCOUNTING ORDER
EB-2018-0205
FEBRUARY 28, 2019

ENBRIDGE GAS INC

Accounting Entries for
Greenhouse Gas Emissions Administration Deferral Account
Deferral Account No. 179-XXX

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the *Ontario Energy Board Act, 1998*.

Debit - Account No.179-XXX
 Other Deferral Charges – Greenhouse Gas Emissions
 Administration Deferral Account

Credit - Account No 728
 General Expense

To record, as a debit (credit) in Deferral Account No. 179-XXX, the administration costs associated with the impacts of federal regulations related to greenhouse gas emission requirements.

Debit - Account No.179-XXX
 Other Deferral Charges – Greenhouse Gas Emissions
 Administration Deferral Account

Credit - Account No 323
 Other Interest Expense

To record, as a debit (credit) in Deferral Account No. 179-XXX, interest on the balance in Deferral Account No-179-XXX. Simple interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the OEB in EB-2006-0117.

ACCOUNTING TREATMENT FOR A
FEDERAL CARBON CHARGE-CUSTOMER VARIANCE ACCOUNT
("FCCFVA") EGD RATE ZONE

The purpose of the FCCFVA is to record the variance between actual customer carbon costs and customer carbon costs recovered in rates as approved by the OEB.

Simple interest is to be calculated on the opening monthly balance of this account using the OEB-approved EB-2006-0117 interest rate methodology. The balance of this account, together with carrying charges, will be disposed of in a manner designated by the OEB in a future rate hearing.

Accounting Entries

1. To record the variance in facility related charges:

Debit/Credit:	FCCFVA	(Account 179.____)
Credit/Debit:	Miscellaneous Operating Revenue	(Account 579. 000)

To record the variance between actual customer charges and the customer carbon costs recovered in rates as approved by the OEB.

2. Interest accrual:

Debit/Credit:	Interest on FCCFVA	(Account 179.____)
Credit/Debit:	Interest expense	(Account 323. 000)

To record simple interest on the opening monthly balance of the FCCFVA using the OEB-approved EB-2006-0117 interest rate methodology.

UNION RATE ZONESAccounting Entries for
Federal Carbon Charge – Customer Variance Account
Variance Account No. 179-XXX

Account numbers are from the Uniform System of Accounts for Gas Utilities, Class A prescribed under the *Ontario Energy Board Act, 1998*.

Debit - Account No. 179-XXX
Other Deferred Charges – Federal Carbon – Customer

Credit - Account No. 579
Miscellaneous Operating Revenue

To record, as a debit (credit) in Variance Account No. 179-XXX, the variance between actual customer carbon costs and customer carbon costs recovered in rates as approved by the OEB.

Debit - Account No. 179-XXX
Other Deferred Charges – Federal Carbon – Customer

Credit - Accounts No. 323
Other Interest Expense

To record, as a debit (credit) in Variance Account No. 179-XXX, interest on the balance in Variance Account No. 179-XXX. Simple Interest will be computed monthly on the opening balance in the said account in accordance with the methodology approved by the OEB in EB-2006-0117.

Ontario Announces Next Stage in Environment Plan

Proposed Actions Fight Climate Change, Protect Environment Without a Carbon Tax

February 12, 2019 11:52 A.M.

Ontario's government for the people today announced the next stage in its commitment to protect the environment and fight climate change without imposing a carbon tax.

In particular, Ontario's [proposed regulatory approach](#) combines emissions reductions standards while recognizing the unique circumstances of Ontario's economy and its manufacturing sector. These made-in-Ontario emissions standards will consider factors such as trade exposure, competitiveness and process emissions. Similar to approved systems in Saskatchewan and Alberta, the proposed approach would set sector or facility-level greenhouse gas emissions performance standards that industrial facilities are required to meet and tie emissions to the level of output or production from these facilities, rather than an absolute cap on emissions for the province. Each industrial facility would be required to demonstrate compliance annually.

"Performance standards are a key part of the government's Made-in-Ontario Environment Plan that puts Ontario on a path to achieve our 30% emissions reduction target, which is aligned with the federal government's target," said Rod Phillips, Minister of the Environment, Conservation and Parks. "Our proposed approach to reduce emissions from industry would help us achieve our emissions reduction targets without imposing a carbon tax, which would kill jobs, negatively impact the province's economy and make life more expensive for workers, seniors and families."

In addition to the proposed standards for large emitters, Ontario recently released a [proposal to increase the renewable content](#) in gasoline to 15 per cent as early as 2025, encouraging the uptake of lower carbon fuels and helping to reduce emissions from the transportation sector.

"Our environment plan put forward responsible, tangible solutions that take into consideration the unique circumstances of our economy and the environment," said Phillips. "We are already making progress with our emissions reduction proposals to fight climate change and will ensure Ontario continues to protect the environment."

Consultation on the [Made-in-Ontario Environment Plan](#) through the Environmental Registry closed on January 28. Over 1,400 comments and ideas were received and will be considered as the government completes consultations with stakeholders and works toward finalizing the environment plan in the coming weeks and months.

QUICK FACTS

- The [emissions performance standards proposal](#) is on the Environmental Registry for a 45-day public comment period.
- As part of the consultation, the government intends to consider ways to recycle any funding that is collected to finance further greenhouse gas reductions.
- Ontario is considering including additional sectors in the program such as institutions, thermal energy supply and greenhouses starting with the 2020 emissions year.
- Like other provinces, the government plans to have the standards in place by summer 2019 and will work closely with the federal government to ensure Ontario industry is not double regulated.
- Ontario remains committed to meeting our share of Canada's 2030 target. We have already made significant reductions: from 2005 to 2016, we reduced our emissions by about 22 per cent.

LEARN MORE

- [Ontario Takes Next Steps to Regulate Large Emitters](#)
- [Made-in-Ontario Environment Plan](#)

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MAKING POLLUTERS ACCOUNTABLE: INDUSTRIAL EMISSION PERFORMANCE STANDARDS

February 2019

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1.0 Introduction

This proposal seeks feedback on Ontario's proposed Emissions Performance Standard (EPS) approach for the industrial sector.

The federal government intends to regulate greenhouse gas emissions through a federal backstop, the *Greenhouse Gas Pollution Pricing Act* (GGPPA) enacted in 2018. The Act is comprised of two parts; Part 1 applies a charge to fuels used by households and businesses and Part 2 applies an Output-Based Pricing System (OBPS) (industrial charge) to electricity and industrial sectors. The backstop applies to any province or territory that does not have a carbon pricing system that meets the federal benchmark. On October 19, 2018, Ontario was added to Part 2 of Schedule I for the OBPS under the GGPPA. Part 1 will result in higher costs to households and businesses for heating their homes and businesses and driving their cars or moving their products to market.

Ontario has developed this regulatory proposal as an alternative to the federal OBPS set out in Part 2 of the Act. Ontario is best suited to develop a made-in Ontario approach that will reduce greenhouse gas emissions from industry while addressing the unique circumstances of Ontario's industrial sectors. Ontario will continue to refine this proposal through consultation with stakeholders and will work with the federal government to remove Ontario from Part 2 of Schedule I while Ontario's constitutional reference regarding the GGPPA is pending, so Ontario can address industrial emissions under its program.

A key step in this direction was taken on November 29, 2018, when Ontario released a made-in-Ontario Environment Plan to help protect our air, land and water, address litter and reduce waste, support Ontarians to continue to do their share to reduce greenhouse gas emissions, and help communities and families prepare for climate change. The plan, that was the subject of consultation, reflects the government's continued commitment to addressing Ontario's environmental challenges, including climate change, in a way that considers our province's specific priorities, region-based challenges and opportunities, and respect for our hardworking taxpayers.

The climate change plan that is part of Ontario's Environment Plan includes a proposal for an Emissions Performance Standard (EPS) approach for the industrial sector. At 30% of the total provincial GHG emissions in 2016, industry remains a significant source of provincial GHG emissions and hence will need to contribute towards the province's proposed GHG reduction target of 30% below 2005 emissions by 2030.

The EPS is one potential approach to achieve cost effective reductions for large emitters. Industry GHG emissions are comprised of some large manufacturing sectors such as iron and steel, petroleum refineries, cement, lime and chemicals. These industries have the technical expertise and the ability to identify and implement cost effective GHG emissions reduction projects.

The EPS is a regulatory approach that would establish greenhouse gas emissions performance standards that facilities would be required to meet. The objective of these standards would be to drive GHG emission reductions from large emitters while maintaining competitiveness of

Ontario businesses and minimizing carbon leakage¹. Any industries that do not meet the standard will have to pay. This proposal sets out an approach that is tough but fair, cost-effective and flexible to the needs and circumstances of our province. Several Canadian jurisdictions have put in place or are working towards performance standards for their large industrial emitters with compliance mechanisms (e.g., Saskatchewan, Alberta).

At the same time, we intend to support industry and the business climate by removing existing policy or regulatory barriers that hinder their ability to reduce their emissions with new technologies or processes. As part of this effort, we will use payments for compliance units from industries that do not meet the standards to contribute to an emissions reduction fund that industry can access to invest in new reduction technologies and to drive compliance with the standards.

The Ontario government is also actively challenging the federal government's "backstop" as an unconstitutional disguised tax in two reference proceedings. On November 30, 2018, Ontario filed its factum with the Ontario Court of Appeal questioning the constitutionality of the federal GGPPA. On January 25, 2019, Ontario filed a similar factum with the Saskatchewan Court of Appeal in the parallel legal proceeding occurring there.

¹ Carbon leakage occurs when production moves from a jurisdiction with stringent climate policies to a jurisdiction with no or lower cost climate policies. In this situation, the economy of the jurisdiction with stringent climate policies could suffer while overall emissions either stay the same or increase.

2.0 Program Scope

2.1 Regulated Sectors

At a minimum, Ontario proposes to regulate the same sectors to be covered by the federal OBPS in order to facilitate reporting and compliance and to provide clarity for Ontario businesses while Ontario's constitutional reference regarding the GGPPA is pending. The federal government OBPS currently covers the following sectors in Ontario:

- cement;
- chemical sectors (specifically ammonia, hydrogen, nylon, carbon black, citric acid; MPMD, petrochemical, vaccines);
- electricity generation;
- food sectors (specifically sugar, corn milling);
- industrial, food and fuel ethanol;
- metal tubes and steel (from scrap or ores);
- lime;
- metal from mining or milling of ore;
- mineral products (brick, gypsum, mineral wool, glass);
- natural gas liquids;
- natural gas transmissions pipelines;
- non-ferrous metal smelting, refining (e.g., nickel, copper);
- petroleum refineries;
- oilseeds processing;
- pulp and paper;
- upstream oil extract and upgrading;
- vehicle manufacturing

Ontario is also considering including additional sectors in Ontario's program that are not covered by Part 2 of the federal GGPPA but would incur fuel charges under Part 1 of the federal legislation while Ontario's constitutional reference regarding the GGPPA is pending. These include:

- Institutions
 - Institutions would incur costs under the federal fuel carbon charge (Part 1) and are proposed to be compensated by the federal government through the return of some proceeds.²
- Greenhouse operators:
 - Fuel used by greenhouses will be subject to 20% of the federal carbon fuel charge.
- Thermal Energy Supply
 - Providers of steam and other thermal energy to industry and commercial/institutional users would incur costs under the fuel charge (Part 1) of the federal backstop.

² See https://www.fin.gc.ca/n18/data/18-097_4-eng.asp for more details

2.2 Type of Emissions

There are different types of greenhouse gas emissions that can occur from industrial processes. These include fixed process emissions and non-fixed process emissions. Fixed process emissions are generally the result of chemical or physical reactions (that are not related to combustion). Non-fixed process emissions include combustion, fugitive and on-site mobile sources. Combustion emissions include greenhouse gases from the burning of fuel. Fugitive emissions result from equipment leaks and unintentional losses. Ontario is proposing to cover both fixed process and non-fixed process emissions of facilities in the program.

2.3 Emissions Threshold

Threshold refers to the smallest size of in-scope facilities covered by the program, usually based on the amount of annual emissions in tonnes of CO₂e per year and sometimes on a production or capacity threshold such as megawatt hour of electricity produced.

For the start of the program, Ontario is considering whether to either establish a mandatory emissions threshold at 25,000 or at 50,000 tonnes/year and allowing smaller facilities with emissions between 10,000 tonnes per year and the mandatory threshold to voluntarily participate (opt-in) to the program beginning in 2019. A lower threshold on a megawatt hour basis is also being considered for the electricity sector. Complementary amendments would be made to the Greenhouse Gas Emissions: Quantification, Reporting and Verification regulation (O. Reg. 390/18) to align the verification threshold with the mandatory threshold for the EPS program.

3.0 Emission Performance Standards

An EPS establishes a limit (e.g., annual emission limit) on the amount of emissions that can be released from a source of pollution (on a facility, process or equipment basis) over a period of time. This limit can be applied in different ways using different methods - it can be a reduction requirement from a historical average of emissions (i.e., 95% of average emissions from 2015 to 2017 by 2022) or from an average of emissions intensity (i.e. 95% of average emissions per tonne of cement over 2014 to 2016 by 2022). The standard can also be established on a facility basis or on a sector average basis if there are multiple facilities making the same product.

3.1 Performance Standard Methods

Most commonly, a performance standard for greenhouse gases ties emissions to the level of output or production from a regulated facility. The emissions standard can be derived from emissions on a per facility basis or on a sector average basis if there are multiple regulated facilities making similar products. Performance standards can also be applied to utilities generating electricity, heat or steam.

Performance standards may also include the application of a stringency factor to incent industry to be energy efficient by encouraging emission reductions. The stringency factor generally considers competitiveness impacts for industry in order to minimize carbon leakage. Separate stringency factors can be applied to non fixed process emissions and fixed process emissions in recognition that fixed process emissions are harder to reduce. See Section 6 for further information on considerations for setting the stringency factor and approaches to assessing competitiveness impacts (leakage risk).

Table 1: Proposed Stringency Factors

EITE Level	Emission Type	2019 SF	2020 SF	2021 SF	2022 SF
High	Fixed Process	100%	100%	100%	100%
High	Non-Fixed Process	98%	96%	94%	92%
Medium/Low	Fixed Process	100%	100%	100%	100%
Medium/Low	Non-fixed Process	95%	90%	85%	80%

3.1.1 Sector-Based Performance Standard

Sector based performance standards are average greenhouse gas emissions standards based on weighted average emission intensity for historical years (e.g., 2015 to 2017). It includes direct emissions (non-fixed and fixed process) related to the industrial operations and potentially attributed (indirect) emissions (e.g., imported steam). See detailed equation in Appendix C.

A sector average performance standard typically has two components: a stringency factor (SF) and a sector average emission intensity.

$$PS = EI \times SF$$

Where,

PS = Performance Standard for Sector

EI = Average Emission Intensity of the Sector in tonnes of CO₂e per unit of production

SF = Stringency Factor expressed as a fraction, e.g. 0.95.

Production units may be final manufactured goods, intermediate products/material for use in other parts of the regulated facility, material input, energy input or energy outputs.

Establishing an emissions intensity for a sector requires detailed annual emissions and production data. MECP is proposing to establish performance standards on a sector basis where there are multiple facilities making similar products and where there is sufficiently detailed emissions and production data. This applies to the grey cement, refining and steel sectors.

Additionally, MECP is proposing to establish separate standards for fixed process and non-fixed process emissions to allow for the application of different stringency factors. Fixed process emissions are generally the result of chemical or physical reaction (that are not related to combustion). Non-fixed process emissions include combustion, fugitive and mobile sources. See Table 1 in Appendix A for the proposed approaches to sector average intensity calculations.

3.1.2 Performance Standards for Fossil Based Electricity, Thermal Energy Supply and Cogeneration

For utilities such as electricity generation, cogeneration and thermal energy supply, the ministry is proposing the following approaches to setting the performance standards:

1. Electricity generation:

Ontario has phased out coal and 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. . The emissions from electricity generation are predominantly from natural gas-fired generators. The performance standard for this sector would be based on what is achievable by natural gas fired electricity generators. In recognition of the significant reductions made in the electricity sector, a stringency factor may not be applied.

2. Thermal energy supply:

Under this category, the generation of thermal energy (e.g., steam) takes place outside of a regulated facility and the thermal energy is supplied to industrial or residential customers. The performance standard for thermal energy supply would take into consideration what is achievable with a natural gas-fired boiler operating at a high level of efficiency (e.g., 90%).

3. Cogeneration:

A facility with cogeneration generates both electricity and heat for use in mostly industrial processes. The performance standard for cogeneration would take into consideration the performance of an efficient natural gas-fired cogeneration system (e.g., 90% overall efficiency).

See Table 2 in Appendix A for proposed standards for electricity generation, thermal energy supply and cogeneration.

3.1.3 Alternatives to Sector Based Performance Standards

Other approaches to performance standards are necessary in instances where there is only one regulated facility or where it is difficult to establish a product-based performance standard (e.g., it is difficult to determine the applicable production metric for a sector based performance standard), MECP is proposing the following alternative approaches to incenting greenhouse gas reductions for these situations. See Table 1 in Appendix B for a list of sectors for which MECP is considering using alternative standards.

1. Facility specific emission intensity

Facility specific emission intensity is based on recent historical emissions and production information, if readily available, for the facility (e.g., 2015-2017). It will be the preferred approach where feasible, especially when a sector contains two or less facilities.

A facility-specific emission intensity is based on the emissions intensity of a single facility rather than the average emissions intensity of multiple facilities. A stringency factor will be applied to the facility average to determine the annual emissions limit.

2. Energy Use intensity

Energy use intensity is an alternative approach to product output standards, and is based on the amount of fuel (e.g., natural gas, fuel oils) used at the facility. An energy use intensity method may apply to facilities if product based approaches are not feasible (e.g., it is difficult to determine the applicable production metric for a sector based performance standard), the facility is anticipating changes in operations, or to supplement other methods. The energy-use intensity method is flexible and can accommodate a larger number of potential facilities; however it does not recognize onsite emission reductions.

MECP is proposing to establish a process where a regulated facility may apply to switch from an energy-use intensity method to a facility-specific emissions intensity method that adjusts the limit based on a comparison of the current emissions intensity to the historical emissions intensity. A regulated facility would need to apply to the Ministry in the year before the compliance deadline and would need to identify a suitable product(s) for the emissions intensity. Similar to the sector-average performance standards, a stringency factor would also be applied to facilities regulated under this method. See detailed equation in Appendix C.

3. Historical Facility Average Emission Limits

Unlike performance standards discussed above, emission limits based on a facility's historical emissions are not tied to facility production changes or energy use.

The limits will be based on recent average historical emissions for the regulated facility (e.g., 2015-2017), and will be used only in situations where it is difficult to determine the applicable production metric or facilities have process emissions making the energy use intensity method unsuitable. A stringency factor would also be applied to facilities regulated under this method. Since a facility's emissions limits is not tied to production changes or energy use, if compliance units are provided for overachieving the annual emission limit, it is proposed that a limit be imposed on the number of these units that a regulated facility under this method is able to obtain. (e.g., maximum of 5% of the facility's verified emissions for the compliance year).

4.0 Compliance Flexibility

Compliance flexibility is an important feature of the EPS design, as it reduces overall costs of compliance for facilities covered by the EPS. It can also broaden the GHG emissions reduction incentive across the economy and support investment in GHG emissions reduction solutions.

The EPS could be met by a regulated facility either by reducing their GHG emission intensity or by using compliance units for voluntary reductions made by others, overachieving the standard, or payments made for excess emissions.

The possible compliance flexibility mechanisms commonly used with emission performance standard approaches for greenhouse gases include:

1. **Compliance units – payment:**

With this option, facilities covered by the EPS receive compliance units by making payments for any emissions in excess of the performance standard. Payments collected by the program could go into a fund that would support greenhouse gas emissions reductions in industry. The price for these compliance units will start at \$20 per tonne in 2019 and increase \$10 per year to a maximum of \$50 per tonne in 2022.

2. **Compliance units for Emissions Below a Facility's AEL:**

Facilities with emissions below the facility's AEL can receive compliance units for the portion of their emissions that are below the standard. A regulated facility may be able to bank these compliance units to use in meeting future compliance obligations or, alternatively, trade them to other regulated facilities in the program, creating an incentive for facilities to reduce emissions below their limit when it is cost effective to do so. As noted above, there may be a limit on the number of these compliance units that could be obtained under some methods (e.g., for historical average emission limits).

3. **Compliance units for voluntary carbon emission reductions or removals:**

A compliance unit that recognizes voluntary emission reductions or removals undertaken for greenhouse gas emissions not regulated by the EPS will be subject to a number of rules set out in protocols designed to ensure the legitimacy of the offset credit.

5.0 Compliance Obligation

To avoid the implementation of the federal OBPS while Ontario's constitutional reference regarding the GGPPA is pending, the government is aiming to have the program in place by Summer 2019 and to have it apply to emissions as of January 1, 2019. Facilities regulated under the Ontario EPS would be required to submit an annual compliance report in June, in respect of the GHG emissions for the previous year (emissions from Jan 1 to Dec 31). The report will include the GHG emissions, production data, annual emission limits (AEL), and compliance obligations for the facility for the previous year. Verification will also be required for the compliance report, potentially by September 1 in the initial year to allow time for facilities to implement the new requirements.

A regulated facility will have a compliance obligation due in December 2020 if the facility's total verified emissions exceed the AEL for the facility. In this case, the compliance obligation will be the difference between the regulated facility's total verified emissions and its AEL. If the total verified emissions is less than the AEL, compliance units could be provided for the amount of the difference.

Under the EPS, the AEL will be determined for each regulated facility. AEL is the tonnes of CO₂e a regulated facility can emit and still be in compliance and would be calculated based on one or more of the following methods discussed earlier in Section 3.1 along with the applicable stringency factor:

1. Sector average performance standard:

The AEL under this method would be the sum of all the applicable performance standard(s) times the applicable production unit(s) and the stringency factor.

2. Fossil fuel based electricity generation, thermal energy (e.g., steam) supply and cogeneration performance standard:

The AEL under these methods would be the performance standard of the energy output times the amount of energy output in the year and the stringency factor, if applicable.

3. Facility specific emission intensity:

The AEL under this method would be the facility specific emission intensity times the applicable production value and the stringency factor.

4. Energy use intensity (with optional adjustments for emissions intensities):

The AEL under this method would be the annual energy use (expressed in gigajoules) times the emission factor for natural gas and the stringency factor.

5. Historical absolute facility average emissions:

The AEL under this method is the facility specific average historical emissions times the stringency factor.

6.0 Competitiveness and Carbon Leakage Assessment

The stringency of the standards generally considers their effect on business competitiveness, with the goal of minimizing the risk of carbon leakage. The competitiveness of a sector can be defined as its ability to maintain profits and market share. Competitiveness pressures can arise if regulated entities in a jurisdiction face compliance with a stringent climate change policy that increases their production costs.

Carbon leakage occurs when production moves from a jurisdiction with stringent climate policies to a jurisdiction with no or lower cost climate policies. In this situation, the economy of the jurisdiction with stringent climate policies could suffer while overall emissions either stay the same or increase.

Conditions that lead to competitiveness pressures and carbon leakage include:

- Sector is emissions intensive and faces high compliance costs due to absence of low cost abatement opportunities, including low carbon fuels
- Inability or constrained ability to pass on the compliance costs (carbon cost) due to high trade exposure
- Competitors in other jurisdictions do not face the same level of climate change policy costs
 - Inconsistency between the stringency of policies can have both economic and environmental implications as companies compete across jurisdictions in national and international markets.

6.1 Assessment Metrics

Competitiveness and carbon leakage risk assessments usually require an understanding of exposure to carbon cost increases and the ability of entities in a sector to pass-through increased costs to customers.

Jurisdictions generally use two indicators of carbon leakage risk: emissions intensity and trade exposure (EITE). Sectors most vulnerable to competitiveness concerns and carbon leakage are both emissions-intensive and trade-exposed (EITE). The more emissions intensive a sector is, the greater compliance cost it would face. The greater a sector's trade exposure, the lower is its ability to pass on costs.

Emissions Intensity:

Emissions intensity is the level of GHG emissions per unit of economic activity. Emission intensity can be calculated as the amount of GHG emissions (tonnes of CO₂e) produced per unit of gross value added or gross domestic product. This approach is used by Quebec and California.

Emissions intensity can also be calculated as the proportion of carbon cost (without any assistance or free allocations to sectors) relative to gross value added. Alberta, the Government of Canada and the European Union have adopted this approach.

Trade Exposure:

Trade exposure can be expressed as the sum of a sector's imports and exports divided by the sum of its domestic production and imports. This measures how vulnerable a sector is to regional or international competition. If a sector produces goods for a highly exposed competitive market, it would not be able to pass on compliance costs to consumers without losing market share. These sectors are either exporters or importers competing with producers in jurisdictions with less stringent climate change policies.

6.2 Ontario's Proposed Competitiveness and Carbon Leakage Assessment Methodology

The risk of carbon leakage can be determined based on the results of the emissions intensity (EI) and trade exposure (TE) assessments. The tables below provide proposed formulas and thresholds for emissions intensity and trade exposure. These would form the basis of a method to rank Ontario sectors according to risk of competitiveness and carbon leakage impacts.

EITE Indicators:

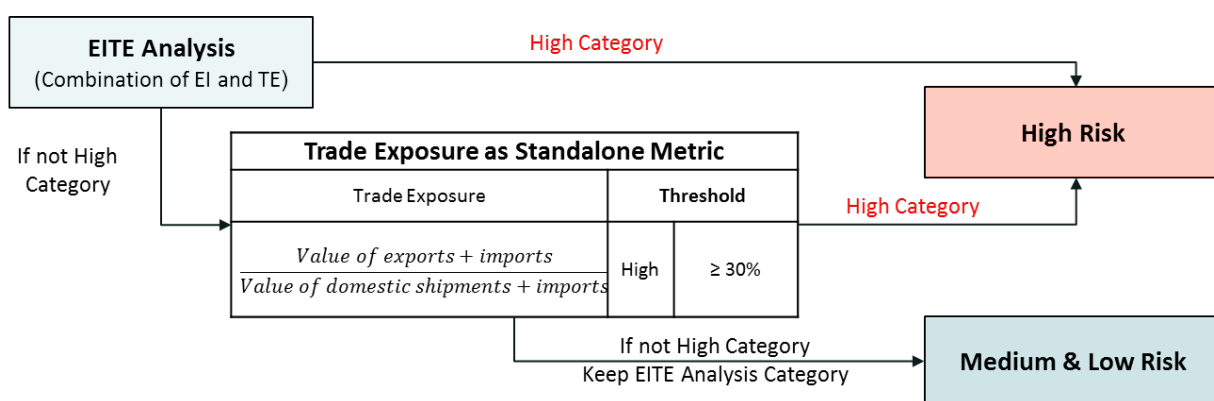
Emissions Intensity	Trade Exposure
$\frac{\textit{Emissions}}{\textit{Value added}}$	$\frac{\textit{Value of exports + imports}}{\textit{Value of domestic shipments + imports}}$

Thresholds:

Carbon Leakage Risk Category	Step 1 Emissions Intensity and Trade Exposure Combination		Step 2 Trade Exposure metric
	High	≥ 1000	≥ 10%
Medium	< 1000	≥ 10%	< 30%
Low	< 1000	<10%	<30%

The proposed approach uses a two-step process to determine if a sector is at risk of carbon leakage and to classify the risk as high, medium or low.

Ontario's proposed approach is explained in the schema below:



Step 1 of the process uses a combination of emissions intensity and trade exposure (see thresholds in the table above) to determine the carbon leakage risk category. Step 2 of the process recognizes that for industry in Ontario, trade exposure is higher, broader and of greater importance. Step 2 employs trade exposure as a standalone metric (see thresholds in the table above) to determine carbon leakage risk for sectors that do not fall into the high category in step 1. The European Union also uses trade exposure as a standalone metric for determining carbon leakage risk attributable to its emissions trading system.

7.0 Next Steps

Ontario will continue to refine this proposal through consultation with stakeholders and will work with the federal government to accept our made-in-Ontario program while Ontario's constitutional reference regarding the GGPPA is pending.

The government is intending to have the program in place by Summer 2019 to provide industry with regulatory certainty on their compliance obligations, well in advance of the requirement to submit compliance units or pay the fuel charge under the federal GGPPA in December 2020 while Ontario's constitutional reference regarding the GGPPA is pending.

8.0 Questions for Discussion

- Q1.** How can the EPS be designed to optimize GHG emission reductions while minimizing carbon leakage?
- Q2.** What compliance options should industrial facilities have under the program (e.g. use of compliance units for payments for excess emissions that go into a fund that could be used to support greenhouse gas emissions projects in industry, voluntary emission reductions or removals or overachieving the EPS, other)?
- Q3.** If facilities receive compliance units for GHG emission reductions beyond the standard for the facility, should they be eligible to trade or bank them indefinitely?
- Q4.** Which industrial facilities should be covered by the program (e.g. industrial facilities with GHG emissions greater than 10,000 or 25,000 or 50,000 tonnes CO₂e per year)?
- Q5.** Should Ontario harmonize with the federal reporting under the federal Production Order (which sets out reporting and verification requirements) and the federal OBPS (output based pricing system) (e.g., methods, threshold, verification)?
- Q6.** Should different stringency factors apply to fixed process and non-fixed process emissions?

APPENDIX A
Table 1: Sector Average Emission Intensities

Item	Specified GHG activity or component of a specified GHG activity	Product produced or process parameter	Units	Sector Average Emission Intensity for fixed process emissions (BM _{p.i})	Sector Average Emission Intensity for Non-fixed process emissions (BM _{c.i})	Intensity units
1	Cement production - grey cement Production	Grey cement	Tonnes	0.505	0.311	Tonnes CO2e per tonne of grey cement produced
2	Iron and steel production	Liquid iron	Tonnes	1.034	0.324	Tonnes CO2e per tonne of liquid iron produced
3	Iron and steel production	BOF steel	Tonnes	0.149	-	Tonnes CO2e per tonne of BOF Steel produced
4	Iron and steel production	EAF steel	Tonnes	0.0844	-	Tonnes CO2e per tonne of EAF Steel produced
5	Iron and steel production	Coke	Tonnes	-	0.491	Tonnes CO2e per tonne of coke produced
6	Petroleum refining	CAN-CWB			0.0046	Emission allowances per Complexity-Weighted Barrel

Table 2: Performance Standards for Fossil Based Electricity, Thermal Energy Supply and Cogeneration

Item	Activity	Performance Standard	Units
1	Electricity production	420	Tonnes / GWh
2	Cogeneration	0.054897	Tonnes of CO2 / GJ of total energy output)
3	Thermal Energy	0.054897	Tonnes of CO2 / GJ of thermal energy output

APPENDIX B

Table 1: Proposed Methods for Other Covered Sectors

Method	Sector	Sector Description
Facility-Specific Emission Intensity	Chemical - Ammonia	Subsector of the chemical sector. Produces ammonia.
	Chemical - Carbon black	Subsector of the chemical sector. Produces carbon black.
	Chemical - Citric acid	Subsector of the chemical sector. Produces citric acid.
	Chemical - Hydrogen	Subsector of the chemical sector. Produces hydrogen. Separate from refining hydrogen producers.
	Chemical - MPMD	Subsector of the chemical sector. Produces 2-Methylpentamethylenediamine (MPMD), a compound used in the production of plastics, adhesives, and as an additive in many other products.
	Chemical - Nylon	Subsector of the chemical sector. Produces nylon.
	Chemical - Petrochemical	Subsector of the chemical sector. Produces (poly)ethylene, styrene, lubricants and other products from petroleum feedstocks.
	Chemical - Vaccine	Subsector of the chemical sector. Produces vaccines.
	Food - Sugar	Subsector of the food sector. Produces refined white sugar.
	Industrial, Food, and Fuel Ethanol	Produces ethanol for use in industrial, food, and fuel applications.
	Lime	Production of lime products.
	Metal - Tubes and Steel (From Scrap)	Production of tubes and steel products from scrap metal.
	Mineral - Glass	Produces glass containers such as jars.
	Mineral - Gypsum	Produces gypsum panels.
	Mineral - Mineral and Glass Wool	Produces insulation products made of mineral wool or glass fibers.
	Mineral - Salt	Produces salt products such as ice melters or culinary salt.
Mineral Products - Brick	Produces bricks and masonry products.	
Natural Gas Liquids	Fractionation of natural gas to product liquid fuels.	
Pulp & Paper	Produces pulp and or paper products.	
White Cement	Produces white cement.	

Method	Sector	Sector Description	
Energy Use Intensity	Automotive and Vehicle	Automotive or vehicle parts and assembly.	
	Chemical - Other	Subsectors of the chemical sector which are not already named.	
	Food and Beverage - Other	Food and beverage product manufacturers which are not already named.	
	Greenhouses	Production of food and crops within covered structures.	
	Institutions	Various institutions such as schools, hospitals, government organizations.	
	Metal - Other	Treating, processing, and manufacturing of various metals and metal products for aerospace, automotive, and other applications.	
	Mining	Mineral and metal mining.	
	Oil Seeds	Processing of oil seeds such as soybeans and canola for use in various food ingredients and animal feeds.	
	Natural Gas Transmission Pipelines	Transmission of natural gas	
	Historical Facility Average Emission Limits	Non-Ferrous Metal Smelting, Refining (e.g. Nickel, Copper)	Smelting and refining of non-ferrous metals such as nickel and copper.
		District Heating	Produces heat and steam for commercial, residential, institutional, industrial process or any other uses.
	Specified Performance Standards	Electricity	Generates electricity from fossil fuels.

APPENDIX C: Details of Proposed Methods for Covered Sectors

Annual Emissions Limit for Sectors with Sector Based Performance Standard

$$A_{OBS} = (\sum_{i=1}^n PS_i \times Product_i) - (steam\ import \times 0.054897)$$

Where:

A_{obs} is the annual emission limit based on the sector based performance standards alone

$$PS_i = [(Direct\ Emission + Steam\ Import \times 0.054897) \div Product] \times SF$$

- **PS** is sector average performance standard (e.g., tonnes per unit of product) for product “i”
- **Direct Emission** (t CO2e): based on average of several years (e.g., 2015-2017)
- **Steam Import** (GJ): only when needed
- **0.054897** (t CO2e/GJ steam) – based on a 90% efficient steam boiler
- **Product**: average production for historical years (e.g., 2015-2017)
 - units of mass (e.g., tonnes, kg),
 - unit of volume (m3, litre, barrels),
 - unit of area (e.g., m2 of boards),
 - counts of products (e.g., vehicles, engines),
 - other possible metrics.
- **SF**: stringency factor

Note the historical years that are used in determination of the performance standard will be the more recent years based on data availability

Annual Emission Limit Based on Energy use Intensity

$$A_{energy\ j} = (EI_j + NBF \times 0.049317) \times (Intensity_{base} / Intensity_j)_{opt-in} \times SF$$

Where:

- **A_{energy_j}** is the energy related emissions for the regulated facility for the year “j”
- **EI_j** is the eligible energy input (GJ) not used for electricity generation or district heating at the facility in year “j” (GJ).
- **0.049317** is the emission factor for natural gas
- **Intensity_{base}** is the average direct fossil fuel emissions intensity in the base year (t CO₂e/tonne product for 2015-2017)
- **Intensity_j** is the direct fossil fuel emissions intensity in year “j”
- **opt-in** means optional application of this term for regulated facility that chooses to opt-in to transition to a historical facility intensity
- **SF** Stringency Factor for non-fixed process emissions
- **j** is the year for which the limit is being determined

Ontario's Plan to Regulate Large Emitters

Made-in-Ontario Emission Standards Would Achieve Greenhouse Gas Emission Reductions Without a Carbon Tax

December 18, 2018 4:40 P.M.

Ontario's Government for the People is releasing its plan to reduce industrial greenhouse gas emissions for public comment in January 2019. The proposal would regulate industry without imposing the federal government's carbon tax, which threatens Ontario jobs and the ability of our industries to compete internationally.

"Ontario industry is calling for a made-in-Ontario emission performance standard that recognizes the unique circumstances of our province's diverse economy. There is no justification to punish them with a carbon tax," said Rod Phillips, Minister of the Environment, Conservation and Parks. "Our proposed standard would consider factors such as trade-exposure, competitiveness and process-emissions."

Industry remains a significant source of provincial greenhouse gas emissions, accounting for 29 per cent of Ontario's total emissions in 2016. An emission performance standard approach would help reduce greenhouse gas emissions from industry while allowing for economic growth.

The proposal would set emission performance standards 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. As part of the consultation, the government intends to explore ways to recycle any funding that is collected back to industry to finance further greenhouse gas reduction technologies.

The emission performance standard is a key part of the province's new, made-in-Ontario [environment plan](#) that was released for consultation on November 29, 2018. The standard would help Ontario reduce greenhouse gas emissions from large emitters and meet its target under the Paris Agreement.

"We believe the onus of funding greenhouse gas reduction efforts should be on polluters, not on hard-working people who deserve to be able to use their own money for themselves and their families," said Phillips. "Regulating large emitters with a system that is tough but fair will ensure

we meet our commitments to the Paris targets, while ensuring that costs are not being downloaded to consumers."

The province's approach will be similar to that taken in Saskatchewan. Ontario will work with the federal government to accept our made-in-Ontario emission performance standards and not apply the federal system to Ontario industry, as has occurred in Saskatchewan.

Key industry stakeholders will be consulted through webinars and in-person meetings on the emission performance standard both before and after the proposal is posted on the Environmental Registry in January 2019.

Emily Hogeveen Minister's Office
416-314-6790
Gary Wheeler Communications Branch
416-314-6666

[Available Online](#)
[Disponible en Français](#)

Increasing renewable content in fuels

ERO (Environmental Registry of Ontario) number	013-4598
Notice type	Regulation
Act	Environmental Protection Act, R.S.O. 1990
Posted by	Ministry of the Environment, Conservation and Parks
Notice stage	Proposal
Proposal posted	February 12, 2019
Comment period	February 12, 2019 - March 29, 2019 (45 days) Closed

This consultation was open from:

**February 12, 2019
to March 29, 2019**

Proposal summary

We are proposing to increase the renewable content (e.g. (for example) ethanol) in gasoline to 15% as early as 2025 through amendments to Ontario fuel regulations, and reduce greenhouse gas emissions without increasing the price at the pump.

Proposal details

Proposal details

The purpose of these proposed amendments is to support Ontario's goal to achieve its share of Canada's 2030 emissions reduction target, as proposed in the made-in-Ontario environment plan.

Historically, ethanol prices have generally been lower than gasoline prices on a volume basis and blending ethanol in gasoline has been a more cost-effective way to enhance fuel performance compared to other octane enhancers (such as benzene, toluene, and xylene).

Proposed regulation amendments

We are proposing the following amendments to *O. Reg. (Ontario Regulation) 535/05 (Ethanol in Gasoline)* under the *Environmental Protection Act, R.S.O. (Revised Statutes of Ontario) 1990, c. (chapter) E.19*:

1. require gasoline fuel suppliers to maintain an average of 15% renewable content (e.g. (for example) ethanol) in regular grade gasoline, by volume per calendar year as early as 2025
2. require renewable content (e.g. (for example) ethanol) used for compliance to emit significantly fewer greenhouse gas emissions than petroleum gasoline, on a lifecycle basis, concurrently
3. other potential updates related to a new lifecycle assessment model, e.g. (for example) updating the compliance formula.

We are also considering updates to ensure that *O. Reg. (Ontario Regulation) 97/14 (Greener Diesel – Renewable Fuel Content Requirements for Petroleum Diesel)* is consistent with the Ethanol in Gasoline regulation.

For both regulations, we will consider opportunities to:

- clarify requirements
- support innovation for Ontario businesses.

Purpose of regulation

The purpose of these proposed amendments is to support Ontario's goal to achieve its share of Canada's 2030 emissions reduction target (reduce its emissions by 30% below 2005 levels by 2030), as proposed in the made-in-Ontario environment plan.

The environment plan was released for public consultation on November 29, 2018, for a 60-day period. It will help protect our air, land and water and reduce litter and waste while lowering greenhouse gas emissions and helping communities protect themselves from climate change.

The plan includes a proposal to increase the renewable content (e.g. (for example) ethanol) in gasoline to 15% as early as 2025 through amendments to Ontario fuel regulations.

We will work with stakeholders to support the implementation of these amendments.

Other information

Ontario's Ethanol in Gasoline regulation currently requires an average of 5% ethanol in gasoline.

In 2020, amendments will come into effect requiring 10% bio-based content in regular gasoline. The bio-based content will be required to have an average of 45% fewer greenhouse gas emissions than petroleum gasoline, assessed across the fuel's lifecycle. Lifecycle greenhouse gas emissions refer to emissions across the fuel's production, delivery and use stages.

By increasing use of renewable content such as ethanol we will reduce emissions without raising costs at the pump.⁴⁹ This is based on current ethanol and gasoline prices, and experiences in other jurisdictions with similar policies.

Other public consultation opportunities

Comments received through the Environmental Registry on the made-in-Ontario environment plan will also be considered in relation to this proposal.

We are interested in your feedback on this proposal within the broader framework of the proposed federal carbon tax.

Regulatory impact statement

If Ontario were to increase and implement the renewable content in regular grade gasoline from 10% to 15% in 2025, it could result in 1.2 megatonnes of greenhouse gas emission reductions.

We expect there will be no increase in the retail price of gasoline as a result of the proposed amendments. Historically, ethanol prices have generally been lower than gasoline prices on a volume basis and blending ethanol in gasoline has been a more cost-effective way to enhance fuel performance compared to other octane enhancers (such as benzene, toluene, and xylene).

Ontario's fossil fuel suppliers may incur costs to comply with the proposed requirements. However, overall cost impacts to fuel suppliers will depend on the price difference between ethanol and gasoline and the cost of other octane substitutes, as well as the cost impacts of any distribution or retail upgrades that have to be made.

Based on comparing retail pricing before and after implementing renewable fuel policies, experience in Ontario and other provinces (British Columbia, Alberta, Saskatchewan; Manitoba) indicates no observable price impact from the implementation of similar policies.

The proposed federal carbon tax would provide a credit to ethanol when gasoline contains more than 10% ethanol. If the federal carbon tax is applied in Ontario, increasing ethanol blending from 10% to 15% would save gasoline consumers 1.2 cents per litre in carbon tax at full implementation. These savings would be additional to other cost benefits that ethanol provides.

The emission systems of more than 90% of the current passenger vehicle fleet is compatible with gasoline that has 15% ethanol, and this proportion is expected to be close to 99% in 2025 as older vehicles are replaced with newer models. No vehicle or equipment issues are associated with advanced biofuel technologies, like renewable gasoline, which are chemically similar to fossil gasoline.

Ethanol-free gasoline and lower ethanol blends can still be offered for vehicles or equipment that cannot accept higher blends. Marine, aviation, off-road and classic vehicle uses are exempt from the requirements of the regulation. Under the requirements for 2020 and beyond, premium grade gasoline will not have a renewable content requirement.

The price of diesel fuel is not anticipated to increase as a result of the proposed amendments to the Greener Diesel regulation.

Supporting materials

Related links

[O. Reg. 535/05 Ethanol in Gasoline Regulation \(https://www.ontario.ca/laws/regulation/050535\)](https://www.ontario.ca/laws/regulation/050535)

[O. Reg. 97/14 Greener Diesel Regulation \(https://www.ontario.ca/laws/regulation/140097\)](https://www.ontario.ca/laws/regulation/140097)

Related ERO (Environmental Registry of Ontario) notices

[Preserving and Protecting our Environment for Future Generations: A Made-in-Ontario Environment Plan \(/notice/013-4208\)](#)

View materials in person

Some supporting materials may not be available online. If this is the case, you can request to view the materials in person.

Get in touch with the office listed below to find out if materials are available.

Climate Change Programs Branch

77 Wellesley Street West

10th floor

Toronto ON M7A 2T5

Canada

[416-314-3923](tel:416-314-3923)

Comment

Commenting is now closed.

The comment period was from February 12, 2019
to March 29, 2019

Connect with us

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COURT OF APPEAL FOR ONTARIO

Proceedings commenced at Toronto

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