

Proposed Regulatory Amendments for Emissions Performance Standards Program 2023-2030

Summer 2022

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1.0 Introduction

1.1. Overview of Ontario's Emissions Performance Standards Program

Ontario's Emissions Performance Standards (EPS) program regulates greenhouse gas (GHG) emissions from large industrial facilities by setting emissions limits that are the basis for the compliance obligations of those facilities. The program was developed as an alternative to the federal Output-based Pricing System (OBPS) and helps Ontario achieve GHG emissions reductions. The EPS program came into full effect on January 1, 2022.

The regulatory framework for the EPS program is set out in:

- [Ontario Regulation 241/19: Greenhouse Gas Emissions Performance Standards regulation](#) (O. Reg. 241/19 or EPS Regulation)
- [GHG Emissions Performance Standards and Methodology for the Determination of the Total Annual Emissions Limit](#) (the EPS Methodology) which sets out the methods for determining the Total Annual Emissions Limit (TAEL)

The EPS program is supported by Ontario's GHG Emissions Reporting program, which provides the required verified emissions, production and emissions limit data for all registrants in the EPS program. These are needed to determine a facility's compliance obligation under the EPS program.

The regulatory framework for the GHG Emissions Reporting program is set out in:

- [Ontario Regulation 390/18: Greenhouse Gas Emissions: Quantification, Reporting and Verification regulation](#) (O. Reg. 390/18 or the Reporting Regulation)
- [Guideline for Quantification, Reporting and Verification of Greenhouse Gas Emissions](#) (the Guideline) which sets out the methods for quantifying and reporting GHG emissions from various activities as well as the supporting monitoring and measurement requirements

The EPS program applies to a number of facilities in primary and manufacturing industries (such as iron and steel, cement, auto manufacturing, etc.) and fossil fuel electricity generators. The full list of covered industrial activities is set out in Schedule 2 of the EPS Regulation.

Ontario facilities are required to register in the EPS program if they reported GHG emissions of 50,000 tonnes carbon dioxide equivalent (tCO_{2e}) or more to the Ministry of the Environment, Conservation and Parks (the ministry) for any year since 2014 and the

primary industrial activity engaged in at the facility is listed in paragraphs 1 to 38 of Schedule 2 of the EPS Regulation. Facilities that reported GHG emissions of 10,000 tCO_{2e} or more to the ministry for any year since 2014 and that are engaged in any covered industrial activity, may choose to opt-in to the program. A new facility that is engaged in any covered industrial activity and that is expected to emit 10,000 tCO_{2e} or more per year within three years of starting production may also opt-in as soon as production has begun.

Emissions performance standards are used to determine the emissions limit that these regulated facilities must meet each year. Compliance mechanisms include:

- reducing GHG emissions
- obtaining compliance instruments, which include:
 - excess emissions units (EEUs): non-tradeable units purchased from the Government of Ontario that must be used in the year in which they are purchased
 - emissions performance units (EPUs): tradeable units that are distributed to facilities whose emissions are below their limits. EPUs are bankable (i.e., can be used for compliance or traded) for up to five years

To comply with the EPS program and the related GHG Emissions Reporting Program requirements, facilities are required to:

- submit to the ministry a GHG report for the previous year (i.e., compliance period) with their GHG emissions, production and emissions limit data by June 1
- submit to the ministry a verification statement and verification report regarding the GHG report by September 1 of the same year the GHG report is required to be submitted
- have the number of compliance instruments in their EPS account equal to their compliance obligation (the amount GHG emissions exceed the emissions limit), if applicable, by December 15 of the same year the GHG report is required to be submitted
 - if there is a shortfall, an additional compliance obligation is required to be met by the following February 15 (three instruments for every shortfall instrument).

To provide more clarity regarding compliance deadlines, an example covering two compliance periods – 2022 and 2023 – is shown below.

Table 1: Deadlines for the 2022 and 2023 compliance periods

Compliance Period	Reporting Deadline	Verification Deadline	Compliance Deadline	Additional Compliance Deadline
2022	Jun 1, 2023	Sep 1, 2023	Dec 15, 2023	Feb 15, 2024
2023	Jun 1, 2024	Sep 1, 2024	Dec 15, 2024	Feb 15, 2025

1.2. Updated Federal Benchmark

Under the *Greenhouse Gas Pollution Pricing Act* (GGPPA), the federal government assesses provincial and territorial carbon pricing programs against a benchmark. In 2016, the federal government published the [Pan-Canadian Approach to Pricing Carbon Pollution](#), known as the federal benchmark, for the 2018-2022 period and provided additional guidance in 2017^{1,2}.

On August 5, 2021 the Government of Canada published its [Update to the Pan-Canadian Approach to Carbon Pollution Pricing 2023-2030](#) (the updated federal benchmark).

The updated federal benchmark specifies that carbon pollution pricing systems must have a minimum carbon pollution price of \$65 per tCO_{2e} in 2023 rising by \$15 per year to \$170 per tCO_{2e} in 2030. It also states that provinces and territories must not implement measures that directly offset, reduce or negate the price signal sent by the carbon price (e.g., carbon price rebates at the gas pump or on utility bills, performance standards that negate the price signal).

Additionally, the updated federal benchmark includes new criteria and tests that are particularly relevant to:

- Stringency of provincial and territorial programs
- GHG emissions coverage (e.g., proportion of GHG emissions covered)
- program scope (e.g., sectors covered)
- public reporting

¹ <https://www.canada.ca/en/services/environment/weather/climatechange/pan-canadian-framework/guidance-carbon-pollution-pricing-benchmark.html>

² <https://www.canada.ca/en/services/environment/weather/climatechange/pan-canadian-framework/guidance-carbon-pollution-pricing-benchmark/supplemental-benchmark-guidance.html>

The federal government has indicated it will assess proposed provincial and territorial carbon pricing programs for the 2023-2030 period in 2022 against the updated federal benchmark.

1.3. This Proposal

As Ontario's EPS program currently only applies to emissions in 2022, regulatory amendments are required to:

- implement the program for the 2023-2030 period
- meet the updated federal benchmark so the EPS program can remain in effect in Ontario, providing continuity and predictability for Ontario businesses
- continue incenting GHG emissions reductions while minimizing the risk for carbon leakage³ and related competitiveness impacts to Ontario industry

Most of the proposed changes would be made in EPS program regulatory framework. However, several of the proposed changes would also require complementary changes to the GHG Emissions Reporting program regulatory framework.

The updated program will continue to be fair, cost-effective and flexible to the needs and circumstances of Ontario industries, while reducing emissions and allowing for economic growth.

This document outlines our proposed regulatory amendments. Feedback is being sought on the following:

- carbon price
- program scope
- registration and cessation of coverage
- emissions performance standards
- electricity generation and cogeneration
- stringency factors
- compliance
- other administrative and technical changes
- carbon leakage and related competitiveness assessment
- public reporting

³ The risk of production leaving the province for other jurisdictions with less stringent climate policies.

2.0 Carbon Price

We are proposing that the EPS program align with the minimum carbon price set out in the updated federal benchmark. This means the price of EEU's set out in the EPS Regulation would be \$65 in 2024 (e.g., for the 2023 compliance period), and would increase by \$15 per year to \$170 in 2031 (e.g., for the 2030 compliance period)).

3.0 Program Scope

Under the updated federal benchmark, the EPS program must only apply to sectors that are assessed by the jurisdiction as being at risk of carbon leakage and competitiveness impacts from carbon pollution pricing.

Based on preliminary results from our carbon leakage and competitiveness assessment process (detailed in section 11 of this proposal), we are proposing to add sectors represented by the following North American Industrial Classification System (NAICS) codes to the list of covered industrial activities.

Table 2: NAICS Codes Proposed to be Added to the List of Industrial Activities

NAICS Code	NAICS Industry Group Description
High Risk	
3114	Fruit and vegetable preserving and specialty food manufacturing
3116	Meat product manufacturing
3121	Beverage manufacturing
3222	Converted paper product manufacturing
3261	Plastic product manufacturing
3262	Rubber product manufacturing
3321	Forging and stamping
3326	Spring and wire product manufacturing
3327	Machine shops, turned product, and screw, nut, and bolt manufacturing
3336	Engine, turbine and power transmission equipment manufacturing
3339	Other general-purpose machinery manufacturing
3363	Motor vehicle parts manufacturing
3364	Aerospace product and parts manufacturing
3372	Office furniture (including fixtures) manufacturing
3399	Other miscellaneous manufacturing
Medium Risk	
3115	Dairy product manufacturing

4.0 Registration and Cessation of Coverage

4.1. Registration Eligibility for Retrofits or Expansions

To support Ontario businesses in a dynamic economy, we are proposing to allow EPS facilities that expect to emit 10,000 tCO₂e or more per year within three years following a major retrofit or expansion to apply to register in the EPS program as soon as production has started to increase. The registration application would include a report prepared and signed by a professional engineer, similar to the one currently required under section 4.1 of the EPS Regulation. For example, the report would include:

- Estimates of projected emissions
- A list of what was taken into account in determining the emissions (e.g., equipment, processes, activities)
- Details of what informed the emissions estimates (e.g., assumptions, material usage, production values)

This would allow such facilities to be eligible to be covered under the EPS program up to three years before having to report emissions of 10,000 tCO₂e or more. As a result, such facilities would be eligible for an exemption from the federal fuel charge for that period.

We are also proposing the following principles when developing the applicable definitions that would apply to both the EPS and GHG Emissions Reporting programs:

- **a major retrofit** would occur when an EPS facility has undertaken or will undertake a modification in operations resulting in any of the following:
 - the primary or secondary industrial activity engaged in at the facility at the time of registration changes
 - the facility begins to engage in an additional industrial activity
 - the facility adds a new operation to carry out its industrial activity (e.g., addition of a new product)
- **an expansion** would occur when an EPS facility has undertaken or will undertake a modification in operations that is expected to increase output and net GHG emissions from historical levels (e.g., increase in production)
- a modification in operations would **not** include:
 - maintenance
 - routine replacement
 - switch to use of another fuel
 - switch in use of raw material
 - change in ownership
 - removal of equipment that leads to an increase in GHG emissions

4.2. Changes to Registration

Under section 8 of the EPS Regulation, an owner or operator of a covered facility is required to notify the ministry of any changes to the facility's registration. This includes cases where a new site has been added to a covered facility.

We are proposing to use the following principles when developing the applicable definition of a new site that would apply to both the EPS and GHG Emissions Reporting programs:

- **adding a new site to a covered facility's** operations would occur if all of the following apply:
 - the new site forms part of the EPS facility (e.g., it is operated in an integrated manner to carry out an industrial activity and has at least one common owner or operator, etc.) as defined in section 1.1 of the EPS Regulation
 - the new site was transferred from a different owner or operator
 - the new site was not previously engaged in, or used in conjunction with, an industrial activity by the owner or operator of the covered facility
 - the industrial activity that is to be engaged in at the new site is not one that a previous owner or operator engaged in at the covered facility
 - the new site was not previously registered in the EPS program either as a separate covered facility or as site that formed part of a different covered facility

We are also proposing, as described under section 8.1 of this proposal, to align the treatment of new sites with the treatment of most new facilities.

4.3. Ceasing to be a Covered Facility

To further support Ontario businesses in being responsive to their operational needs, we are proposing to implement a process where an EPS facility could cease being covered under the EPS program under the following circumstances:

- the owner or operator of the covered facility submits a request to the Director to cancel the registration because the facility is expected to cease carrying out any industrial activity for at least one calendar year
- the covered facility closes permanently
- the Director notifies the owner or operator of the covered facility that five consecutive GHG reports have been submitted under the Reporting Regulation with a value of zero production for all industrial activities
- the covered facility that applied as a new facility or under the proposed retrofit or expansion registration criteria, fails to meet the registration criteria related to

expected emissions (e.g., a new facility, retrofit or expansion does not emit 10,000 tCO₂e or more within three years)

- the covered facility's TAEI is zero due to adjustment(s) for outstanding compliance obligations (see section 8.3 of this proposal)

In situations where the EPS facility ceases to be a covered facility before the end of a compliance period, the owner or operator of the EPS facility would continue to have a compliance obligation for the portion of the compliance period the EPS facility was a covered facility.

An EPS facility that ceases to be covered under the EPS program would no longer be eligible for exemption from the federal fuel charge.

4.4. Voluntary Exit from the Program

We are also proposing to facilitate a pathway for an owner or operator of a covered facility that opted into the EPS program to voluntarily exit. This pathway would apply if the EPS facility's reported GHG emissions (the *Reporting Amount* in its GHG report) are less than 10,000 tCO₂e for three consecutive years.

The owner or operator that chooses to have a covered facility exit the EPS program would not be eligible to opt-in to the program (i.e., apply to register that EPS facility again) at a later date. However, if the EPS facility emits 50,000 tCO₂e or more in any subsequent year, the owner or operator would be required under section 2 of the EPS Regulation to register the EPS facility.

Owners or operators of EPS facilities that meet the criteria to exit the program and submit a request to do so would continue to have a compliance obligation for the compliance period ending on December 31 of the year their request.

An EPS facility that exits the EPS program would no longer be eligible for an exemption from the federal fuel charge starting on January 1 of the year following the ministry removing the facility from the EPS program.

4.5. Closure of Accounts

The EPS Regulation requires the Director to establish a facility account for every facility registered in the EPS program. We are proposing to provide the Director the authority to close a facility account where the:

- facility ceases to be a covered facility
- owner or operator of the covered facility chooses to have the facility exit the program
- account remains inactive for a specified period of time (e.g., seven years)

Accounts would only be closed once all compliance obligations have been met. This includes fulfilling:

- the requirement to submit GHG reports and verification statements for the period the EPS facility is covered
- any compliance obligation, compliance obligation shortfall and additional compliance obligation
- requirements under sections 15 and 23.1 of the Reporting Regulation related to submitting revised GHG reports and verification statements
- requirements proposed in section 8.4 of this proposal related to implications of a revised GHG report

While accounts remain open, the owner or operator of the EPS facility will continue to be required to notify the ministry of any changes in its information, including account and authorized representatives.

If compliance instruments remain in the account after all compliance obligations have been met and the account has been inactive for a specified period of time, the compliance instruments would be retired and the account closed.

5.0 Emissions Performance Standards

5.1. Replacing Energy-Based Methods

The federal government has indicated its position that energy-based standards negate a program's price signal, and that it will not consider GHG emissions covered by these standards to be covered by provincial and territorial programs. This means that Ontario's EPS program will not meet the updated federal benchmark without taking action to remove energy-based standards from its program and replace them with alternate performance standards.

Energy-based standards are currently set out in the EPS Methodology and include Method G (Energy-Use Standard) and Method H (Mobile Equipment Operation Standard).

As a result, all facilities that use these standards⁴ will need to work with the ministry to develop alternate performance standards that would apply starting with the 2023 compliance period. To address this, we are proposing to:

- remove these standards (Methods G and H) from the EPS Methodology

⁴ Except those that are expected to use Method H but not Method G in the determination the TAEI for the 2022 compliance period, where the emissions reported for mobile equipment operation were less than 0.5% of the total emissions reported for the facility in the 2020 GHG report.

- work with affected facilities to develop output-based methods (e.g., sector-wide or facility-specific emissions performance standards) per sections 5.2 and 5.3 of this proposal

Additionally, because of the updated federal benchmark (specifically the criteria noted here and in Section 3 of this proposal), starting in 2023 some facilities, such as institutions, will no longer be eligible to calculate Annual Activity Emissions Limits (AAELs) for GHG emissions that are not related to a covered industrial activity.

For example, covered facilities engaged only in the industrial activity, *Generating Electricity Using Fossil Fuels* will be eligible to calculate an AAEL using the:

- electricity generation performance standard
- proposed *Cogeneration Thermal Energy Sector Performance Standard* (as described in section 6.2 of this proposal) (if applicable)

These facilities will no longer be eligible to calculate an AAEL for GHG emissions from other sources (e.g., equipment used only for comfort heating) since the energy-based standards will be removed.

5.2. Developing New or Adjusting Existing Performance Standards

We are proposing to work with facilities to develop new and to adjust existing performance standards in certain circumstances, including:

- New performance standards would be developed for facilities that:
 - register under section 4.1 of the EPS Regulation (i.e., new EPS facilities)
 - register following a retrofit or expansion (as described in section 4.1 of this proposal)
 - add a new site (as described in section 4.2 of this proposal)
 - will use an energy-based standard for the 2022 compliance period
 - produce a new product for which there is no existing sector-wide standard
- Performance standards may be adjusted for facilities that:
 - undertake a major retrofit (as described in section 4.1 of this proposal) or update their registration to include another site where the existing production metric no longer applies
 - demonstrate there were errors or anomalies in the data used to develop the existing performance standard

Facility-Specific Performance Standards

Facility-specific performance standards would either be developed or adjusted using data from a specified three-year period (as described in section 5.3 of this proposal).

Sector-Wide Performance Standards

Sector-wide performance standards will be developed or adjusted based on consultation with applicable sectors using the most appropriate historical years or other data. Additionally, we may consider adopting certain federal OBPS performance standards.

For example, the current iron and steel standards for several processes are adjusted to account for energy use. Some facilities are also transitioning from existing production processes to the next generation of low carbon technologies (e.g., direct reduced iron) and as a result, will need new standards. We will consider the use of facility-specific approaches and sector-wide standards as applicable.

Fixed Historical Performance Standards

Where a sector-wide or facility-specific performance standard either is not or cannot be developed for some or all of a facility's GHG emissions, it is proposed that a fixed historical emissions approach may be considered.

5.3. Process to Request a New or Adjusted Performance Standard

Facility-specific performance standards are currently set out in Method E of the EPS Methodology. The standards are set based on data for the covered facility which are used to determine an appropriate baseline emissions intensity. The facility-specific performance standard is then published in Table E of a revised EPS Methodology and the baseline emissions intensity is then communicated to the facility. The standard comes into effect once the EPS Methodology is revised and published.

We are proposing a new, complementary process where the owner or operator of a covered facility that is eligible per section 5.2 of this proposal (if implemented), could apply for a new or adjusted performance standard using specified formulas (see appendix). The ministry would review the application and determine if it meets the applicable criteria, which we proposed would include:

- a suitable production metric(s) has been identified for the determination of the emissions intensity, for example:
 - the majority of GHG emissions result directly from the processes related to the production metric(s)
 - there is no applicable sector-wide performance standard for the production metric(s)
 - the production metric(s) is not energy/fuel use, energy output (e.g., electricity, steam) or administrative/financial parameters (e.g., sales, salary, staff numbers, floor areas, etc.)
- GHG emissions and production data that represent current operations are available and meet one of the following criteria:

- where the performance standard will replace an energy-based standard, the three years of data are from 2015-2017, except where data anomalies exist (e.g., facility shut-down for a significant portion of the year), in which case, 2014 and/or 2018 may be considered. This is to align with the approach taken to develop the sector-wide and facility-specific performance standards set out in the current EPS Methodology
- where historical data do not exist (e.g., in the first few years of operation, after a major retrofit has occurred, etc.), a phased approach is proposed to be used for the data. For example, the performance standards for a facility that undertakes a major retrofit would be developed using data from the:
 - current year for the year the major retrofit was completed
 - current and prior year for the year after the major retrofit was completed
 - current and prior two years for the second year after the major retrofit was completed and all subsequent years
- in all other circumstances, the data from the three previous years will be used
- the primary activity engaged in at the covered facility is not *Generating Electricity from Fossil Fuels* (Item 38, Schedule 2 of the Regulation)

If the application meets the criteria, then the facility may be authorized to use the new or adjusted standard(s). These performance standard(s) would be applied in all GHG reports submitted by the covered facility following the authorization to use the standard(s). This process would provide greater clarity and certainty for facilities on their performance standard(s).

6.0 Electricity Generation and Cogeneration

6.1. Fossil Fuel Electricity Generation Performance Standard

Ontario's world-class clean electricity system was over 90 per cent emissions-free in 2021, with emissions predominantly from the use of natural gas-fired generators. The performance standard that currently applies to electricity generation using fossil fuels in Ontario's program is 370 tCO_{2e} per gigawatt hour (GWh) which does not have a stringency factor applied to it. Stringency factors reduce a facility's emissions limits by a specified amount (see section 7 of this proposal). This approach recognizes the significant reductions already made in the electricity sector.

We are proposing to strengthen this performance standard in the EPS Methodology to 310 tCO_{2e}/GWh and continue to exclude it from application of a stringency factor.

6.2. Cogeneration Performance Standard

Method D (Cogeneration Sector Performance Standard) in the EPS Methodology applies to cogeneration systems in Ontario and is used to determine the AAEL based on the total energy (electricity plus thermal energy) generated from the cogeneration system. We are proposing to combine this method with Method C (Thermal Energy Sector Performance Standard) in the EPS Methodology. This would mean that:

- Method B (Electricity Generation Sector Performance Standard) would be used to calculate the AAEL for the portion of GHG emissions related to electricity generation from fossil fuels
- the revised Method C (Cogeneration Thermal Energy Sector Performance Standard) would be used only to calculate the AAEL for the portion of GHG emissions related to the generation of useful thermal energy:
 - from a cogeneration system, or
 - from a non-cogeneration system that is transferring useful thermal energy to another covered facility, or a non-covered facility that is undertaking an industrial activity.

7.0 Stringency Factors

The EPS program covers different types of GHG emissions that can occur from industrial processes, including fixed process and non-fixed process emissions (see section 9.2 of this proposal for more details).

The stringency factors applied to performance standards generally consider their effect on business competitiveness, with the goal of minimizing the risk of carbon leakage.

Section 4 of the EPS Methodology sets out the stringency factors for 2022. These include a stringency factor of either 0.92 or 0.8, which apply to a facility's non-fixed process emissions depending on the categorization of its sector's risk of competitiveness impacts from carbon pollution pricing. These stringency factors may be further adjusted to account for biomass use. A stringency factor of 1.00 applies to fixed process emissions.

The updated federal benchmark includes new tests regarding stringency that assess whether:

- the marginal price signal is maintained at the regulated price
- the sum of compliance obligations is greater than the projected sum of available credits

These federal benchmark requirements must be met for each year within the 2023-2030 period. Given these parameters, Ontario must increase the annual emissions reduction requirements, in combination with the strengthened performance standard for generating electricity using fossil fuels (as described in section 6.1 of this proposal), to meet the updated federal benchmark.

Furthermore, federal modelling indicates that we will need to implement stringency factors that apply to both fixed process and non-fixed process emissions, along with a higher annual reduction requirement in 2023 than in subsequent years. As such, we are proposing to apply a decline rate of 2.4% in 2023 from the stringency factors in 2022, and 1.5% per year from 2024-2030. The stringency factors set out in the table below reflect these decline rates and continue to consider a sector's risk of carbon leakage and competitiveness impacts from carbon pollution pricing.

Table 3: Proposed Stringency Factors for the 2023-2030 period

Compliance Period/ Emissions Type	2023	2024	2025	2026	2027	2028	2029	2030
Fixed Process Emissions								
All Sectors	0.976	0.961	0.946	0.931	0.916	0.901	0.886	0.871
Non-fixed Process Emissions								
High Risk Sectors	0.896	0.881	0.866	0.851	0.836	0.821	0.806	0.791
Medium Risk Sectors	0.776	0.761	0.746	0.731	0.716	0.701	0.686	0.671

Additionally, we are proposing to discontinue the biomass use adjustment to the stringency factors starting in 2023. However, the 2023-2030 stringency factor will be based on applying the decline rate noted above to the biomass adjusted stringency factor of the facility in 2022, thus providing some recognition for historical biomass use.

These proposed stringency factors are expected to:

- maintain the ongoing incentive to reduce greenhouse gas emissions
- minimize carbon leakage by imposing lower costs compared to the federal OBPS
- meet the updated federal benchmark

A significant portion of the steel sector is expected to make a transition to clean steel production in the coming years, with significant emission reductions. In consideration of

the transformative changes at these facilities, it is proposed that the stringency factors be considered differently (e.g., leading to a smaller reduction requirement). This is to recognize the significant emissions reductions expected to be achieved by this transition.

8.0 Compliance

8.1. Compliance Relief for New Sites

Where a new site, as described in section 4.2 of this proposal, has been added to a covered facility, we are proposing to align the policy for these sites with the policy for most new EPS facilities by providing some compliance relief in relation to the first three years of the site's operation. This is to recognize that it often takes a few years for production to stabilize in new operations. To implement this proposed policy, the sum of AAELs attributable to the new site would be determined using the intensity of the site for the first three years (thus the portion of the TAEL for the new site equals the emissions from that site for the first three years).

8.2. Adjustment to Compliance Obligations for a Modified Facility

To ensure covered facilities are not charged twice for the same GHG emissions and that there is no gap in pricing for GHG emissions, we are proposing changes to both the EPS program and GHG Emissions Reporting program regulatory frameworks that will adjust compliance obligations to account for partial year coverage. It will apply to facilities that undergo modifications (e.g., covered facilities that sell a site that forms part of the EPS facility). This would be similar to the current partial year adjustment to AAELs described in section 5 of the EPS Methodology and to emissions described in section 7 of the Guideline for EPS facilities that become covered part way through a year.

8.3. Adjustment to TAEL for Outstanding Additional Compliance Obligation

We are proposing to adjust the calculation of a covered facility's TAEL when the required number of compliance instruments are not in the facility's account by the February 15 deadline. This adjustment would affect the determination of either a compliance obligation or the distribution of EPU for the compliance period following the compliance period the shortfall applies to.

For example, if a facility has an additional compliance obligation for the 2022 compliance period and does not have the required number of compliance instruments in

its account by February 15, 2024, the facility's TAEI for the 2023 compliance period would be reduced by the amount of GHG emissions equivalent to the number of compliance instruments that are outstanding, meaning a facility would require more compliance instruments than it otherwise would have needed to meet its obligation.

8.4. Implications of a Revised GHG Report

Sections 15 and 23.1 of the Reporting Regulation set out the circumstances under which an owner or operator of a covered facility is required to submit a revised GHG report and related verification statement. For example, there was an error, omission or misstatement in the GHG report. We are proposing that if the owner or operator of a covered facility submits a revised GHG report, and related verification statement, that includes changes to the verified GHG emissions or verified TAEI, the covered facility may be subject to a new or revised compliance obligation or may receive additional EPU's. These changes would apply:

- to the compliance period for which the revised GHG report has been submitted
- only in such circumstances as described below

Revised Compliance Obligation

It is proposed that if a revised GHG report results in a greater compliance obligation than was previously determined, the required number of compliance instruments to reflect this change in the compliance obligation would be required to be in the facility's account no later than 60 days from the submission of the related verification statement.

If the required number of instruments are not in the account after 60 days, an additional compliance obligation, in the amount equal to three times this shortfall, would be required to be in the facility's account within 120 days of the submission of the related verification statement.

If a covered facility purchases EEU's to satisfy these obligations, it is proposed that the price that would apply would be the price set out in the regulation for the year during which the purchase is made. For example, if a revised report for the 2023 compliance period was submitted in 2026 and the EEU's are purchased in 2026, the price in the regulation for 2026 units would apply.

Eligible for Additional EPU's

If the revised GHG report means that more EPU's should have been distributed to the covered facility the Director will distribute additional EPU's to the facility's account. These EPU's would have the same vintage as the compliance period for which the revised GHG report has been submitted. EPU's have a year (vintage) associated with them per subsection 11 (5) of the EPS Regulation, which also only allows them to be

used for compliance within five years of that vintage. Only EPU's that are still eligible to be used for compliance will be distributed.

New Compliance Obligation

If the revised GHG report means that too many EPU's were distributed to the covered facility it is proposed that the covered facility would have a compliance obligation equal to the excess number of EPU's distributed

The compliance instruments to satisfy this obligation would be required to be in the facility's account no later than 60 days from the submission of the related verification statement.

If the required number of instruments are not in the account after 60 days, an additional compliance obligation, in the amount equal to three times this shortfall, would be required to be in the facility's account within 120 days of the submission of the revised verification statement.

As with the case of a revised compliance obligation above, it is proposed that the EEU price in the regulation for the year in which the purchase is made would apply.

8.5. Ability for Director to Extend Compliance Deadlines

The Reporting Regulation allows for the Director to extend reporting and verification deadlines under certain circumstances. Similarly, we are proposing to provide the Director with the same authority to adjust the deadlines in the EPS Regulation (e.g., the December 15 compliance deadline, February 15 additional compliance deadline). Applicable circumstances include:

- emergency situations (such as the COVID-19 outbreak)
- technical issues with the reporting platform or the compliance instrument tracking platform
- corresponding changes to relevant federal GHG reporting deadlines

9.0 Other Administrative and Technical Changes

Other administrative, technical and clarifying changes may be made to the EPS program and GHG Emissions Reporting program regulatory frameworks to support program implementation and burden reduction initiatives (e.g., maintaining harmonization with federal GHG reporting requirements). These could include, but are not limited to, the ones identified in the following subsections.

9.1. Carbon Capture Utilization and Storage (CCUS)

We are proposing to recognize CO₂ emissions that are captured at a covered facility and stored permanently in a storage project (e.g., geological storage) during a compliance period, as GHG emissions reductions at the covered facility. Eligible quantities of CO₂ captured and stored (CCS) would be deducted from the covered facility's reported emissions to determine verified GHG emissions. To support the implementation of this policy, we will amend the GHG Emissions Reporting program requirements such that facilities are required to report on the amount of GHG transferred and stored. Additional quantifications and monitoring may be required.

We recognize stakeholders are interested in the development of a policy to recognize emissions reductions from carbon capture and utilization (CCU) within the EPS program. We intend to monitor national and international developments on CCU and consider our policy options in the future.

9.2. Definitions

We are proposing to define the following terms in either the EPS program or GHG Emissions Reporting program regulatory framework as applicable:

Fixed process emissions: these are the result of chemical or physical reactions that are not related to combustion. They are one of the following:

- Stoichiometric CO₂ emissions from the use of reductants in steel, nickel, copper and other metal processing
- Process emissions from the use of limestone in the processing of metals
- Process emissions as reported in carbonate use
- Process emissions as reported in glass production
- Process emissions from electric arc furnaces reported under iron, steel and ferro-alloy method
- stoichiometric CO₂ emissions from the steam methane reforming process to produce hydrogen
- process emissions as reported in adipic acid, nitric acid, soda ash
- stoichiometric CO₂ emissions from the production of ammonia
- process emissions as reported in the production of cement from the calcination of limestone
- process emissions as reported in the production of lime, from the calcination of limestone

Non-fixed process emissions are all other GHG emissions, for example:

- combustion emissions (e.g., burning of fuel in stationary equipment, pollution control devices, furnaces, ovens, boilers, heaters)
- certain fugitive emissions (equipment leaks and unintentional losses)
- covered gas used in certain processes (e.g., magnesium production)
- mobile equipment operation emissions (burning of fuel in on-site vehicles)
- emissions from combustion of material derived from the decomposition of carbon material (e.g., tail gases, process gases, process liquids/solids, syngas, pyrolysis byproducts, offgas, etc.)

9.3. Clarifications

Subsection 17(6), paragraph 1 of the EPS Regulation requires the Director to remove compliance instruments as they are placed into the facility account in the event of a compliance obligation shortfall. subsection 19 (5.1) further requires that compliance instruments be placed into the facility account no later than the following February 15, where the request for the transfer was received by the Director after December 1 in any year.

We are proposing to clarify that compliance instruments may be placed into the facility account at any time after January 1 and no later than February 15, where the request is:

1. subject to section 19 (5.1), covering transfer requests for EPU received between December 2-31; or
2. for the transfer of compliance instruments or purchase of EEU received by the Director after January 1 and no later than February 1.

After all compliance instruments are placed into the facility account on a given day, the compliance instruments would be removed, later that same day, in the order prescribed in subsection 17(6), paragraph 2, (e.g., removing EEUs first and then EPU in order of expiry date based on vintage year). This means that we may group transfer or purchase requests received over several days/weeks, and place compliance instruments into the facility account and remove them in batches.

10.0 Carbon Leakage and Related Competitiveness Assessment

The stringency factors applied to performance standards generally consider their effect on business competitiveness, with the goal of minimizing the risk of carbon leakage. The competitiveness of a sector or industry 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.

The risk of carbon leakage is driven by uneven costs for businesses between jurisdictions due to differing environmental policies, such as carbon pollution pricing, and the ability of those businesses to pass costs on to consumers.

10.1. Assessment Metrics

Competitiveness and carbon leakage risk assessments use common metrics, such as emissions intensity (EI) and trade exposure (TE), that can be used individually and in tandem to assess which sectors face carbon leakage risks.

EI and TE serve as proxies for a sector's carbon cost and its ability to pass on those costs to consumers. The more emissions intensive a sector is, the greater compliance costs it would face. The greater a sector's trade exposure, the lower its ability to pass on costs. The degree of emissions intensity and trade exposure varies across sectors and can change over time.

10.2. Assessment Approach

We use a two-step approach to assess the risk of carbon leakage and categorize the risk as high, medium or low.

- In step 1, the combination of EI and TE are used to classify industrial sectors into high, medium and low risk categories.
- In step 2, TE is used as a standalone metric to reassess the classification for sectors not deemed high risk in step 1.

The following tables set out the indicators used to determine EI and TE as well as thresholds applied in setting the risk categorization.

Table 4: Formulas for EI and TE Indicators

Emissions Intensity	Trade Exposure
$\frac{\textit{Emissions (tCO2e)}}{\textit{Value added (\$m)}}$	$\frac{\textit{Value of exports + Imports}}{\textit{Value of domestic shipments + Imports}}$

Table 5: Thresholds Applied to EI and TE Indicators

	Step 1		Step 2
Risk Category	Emissions Intensity	Trade Exposure	Trade Exposure
High	≥ 1000	≥ 10%	≥ 30%
Medium	< 1000	≥ 10%	< 30%
Low	< 1000	<10%	<30%

10.3. Additional Assessment Methodology, by Request

We are proposing that facilities in industries that are not listed in Schedule 2 of the EPS Regulation or section 3 of this proposal may request their sector⁵ be assessed for competitiveness and carbon leakage risk.

For the sector to be assessed, the requestor would be required to:

- provide sufficient sectoral data and information (as described below)
- meet the other registration criteria (e.g., be an EPS facility that reported emissions of 10,000 tCO₂e or more in any year from 2014 onward, etc.)

Each sector's risk would be assessed using the two-step approach described in section 11.2 of this proposal. We are proposing to use up to two additional steps to reassess the classification for sectors categorized as low risk after step 2.

- In step 3 the direct carbon cost as a share of revenue and TE are applied.
- In step 4, the combination of the estimated ratio of direct and indirect carbon costs to the industry's gross value added (GVA) and TE are applied to reassess the classification for sectors categorized as low risk after step 3.

The result of an assessment of a sector's risk classification may lead to a future proposal for public consultation.

⁵ Note that in this section, the word sector is being used as a catch all for the group of similar facilities with which a facility could most reasonably be affiliated. Ideally, assessments would be made at the lowest level possible in the hierarchy of industrial classification (e.g., the Industry, or five-digit level of the NAICS).

The following tables set out the thresholds we would apply to direct carbon cost as share of revenue and TE in step 3 and the ratio of direct and indirect carbon cost to GVA and TE in step 4.

Table 6: Thresholds applied to direct carbon cost as a share of revenue and TE

	Step 3	
Risk Category	Direct Carbon Cost as a Share of Revenue	Trade Exposure
High	$\geq 3\%$	Not Applicable
Medium	$< 3\%$	$\geq 10\%$
Low	$< 3\%$	$< 10\%$

Table 7: Thresholds applied to the ratio of direct and indirect carbon cost to GVA and TE

	Step 4	
Risk Category	Ratio of Direct and Indirect Cost to GVA	Trade Exposure
High	$\geq 3\%$	Not Applicable
Medium	1% - 3%	$\geq 10\%$
Low	$< 1\%$	$< 10\%$

Data and Information

To assess a sector's competitiveness and carbon leakage risk, data and information relevant to the potential competitiveness impacts of carbon pricing will need to be submitted with the request, including:

- GHG emissions
- International trade (exports and imports)
- Gross value added, revenue and manufacturing sales (shipments)
- Direct and indirect carbon cost

This data must be credible and available as:

- public information
- non-public information that is certified in writing by independent third-parties

Independent third-parties must:

- Be a professional engineer certified in accordance with the Ontario law that governs the practice of professional engineering, or a chartered professional accountant certified in accordance with the Ontario law that governs the practice of professional accounting
- Have technical knowledge and expertise of greenhouse gas emission quantification methodologies for the sector, financial statements, financial accounts and audit practices
- Not be the owner or operator of the facility making the request or a director, officer or employee of the owner or operator of the facility or of an affiliate, or an employee or agent of the Government
- Attest that the information is complete, free of material errors and omissions and the review leading to their certification has been prepared in a manner that is consistent with the policy

11.0 Public Reporting

Ontario's Digital and Data Directive ensures the delivery of high-quality digital services and access to public government data, unless it is exempt for legal, privacy, security, confidentiality or commercially sensitive reasons.

We are proposing to publish regular and transparent information on the key features, outcomes, and impacts of the EPS program. Reporting could also include aggregated compliance information and market data where publication could enhance accountability, market function and oversight such as:

- Number of registered facilities: total and by sector
- Compliance obligations: total and by sector
- GHG emissions covered: total and by sector
- Number of EEUs purchased: total and by sector
- Number of EPU's distributed: total and by sector
- Compliance broken out by method (i.e., purchase of excess emissions units, use of emissions performance units)
- Total number of compliance instruments by status (e.g., active, retired, expired)
- Number of compliance instrument transfers: total and by sector

- Compliance instrument holdings: total, by compliance instrument type and by sector
- Total number of facilities that are in compliance

Sectors with limited number of facilities may be aggregated with other sectors to preserve any sensitive commercial information.

12.0 Next Steps

We will continue to engage with stakeholders over summer/fall 2022 to:

- refine this proposal
- develop performance standards for facilities that use energy-based methods

We will also continue discussions with the federal government to ensure the proposed EPS program meets the updated federal benchmark and remains in effect in Ontario for the 2023-2030 period.

After considering stakeholder feedback on this proposal, we are targeting finalizing the necessary amendments to the EPS and Reporting Regulations, and the EPS Methodology and Guideline in fall 2022.

13.0 Questions for Discussion

1. Should the changes described in sections 5.1 (Replacing Energy-Based Methods) and 8.4 (Implications of a Revised GHG Report) of this proposal start to apply as of the 2022 compliance period or the 2023 compliance period?
2. How can the future EPS program elements, such as stringency factors, optimize GHG emissions reductions while minimizing carbon leakage?
3. Should different stringency factors continue to apply to fixed process and non-fixed process emissions for the 2023-2030 period?
4. Should the EPS program consider a more stringent performance standard for the electricity sector for the 2023-2030 period?
5. Are there any other sectors that should be considered for a sector-wide performance standard (e.g., lime production, automobile manufacturing, ethanol production, gold mining and milling)?

14.0 Contacts

14.1. Questions about this Proposal

Financial Instruments Branch

- **Name:** Melissa Ollevier
- **Telephone:** 647-248-1459
- **Email:** Melissa.Ollevier@ontario.ca

14.2. Questions about the Current EPS Program

Ontario EPS Program Help Desk

- **Telephone:** 416-314-5352
- **Toll-free:** 1-888-217-3326
- **Email:** EPShelp@ontario.ca

Ontario EPS Registration

- **Email:** EPSapplications@ontario.ca

14.3. Questions about the Current GHG Emissions Reporting Program

Ontario GHG Reporting Help Desk

- **Telephone:** 416-314-5352
- **Toll-free:** 1-888-217-3326
- **Email:** GHGReporting@ontario.ca

15.0 Appendix

15.1. Proposed Performance Standard Formulas

We are proposing the following formulas for developing new or adjusted performance standards.

Non-Fixed Process Emissions Performance Standard

$$PS_{j,y,nonFPE} = BEI_{j,nonFPE} \times SF_{y,nonFPE}$$

Formula 1

Where,

PS_{j,y,nonFPE} = non-fixed process emissions performance standard for the facility, or site that forms part of a facility, for production parameter “j” in year “y” expressed in tonnes of CO₂e per unit of production

j = an approved production parameter

y = year of the compliance period

BEI_{j,nonFPE} = non-fixed process baseline emissions intensity for the facility, or site that forms part of a facility, for the approved production parameter “j”, as determined using Formula 2

SF_{y,nonFPE} = non-fixed process emissions stringency factor for the industrial activity in year “y”

$$BEI_{j,nonFPE} = \sum_k^{k+2} Emissions_{j,k} \div \sum_k^{k+2} Production\ Parameter_{j,k}$$

Formula 2

Where,

k = applicable emissions years described in section 5.3 of this proposal

Emissions_{i,k} = sum of direct and indirect non-fixed process baseline emissions for production parameter “j” in year “k”

- Direct emissions – emissions from combustion units used directly for the production of parameter j (e.g., boilers, furnaces, kilns, ovens)
- Indirect emissions – from imported steam or steam from onsite-cogeneration system only (excludes electricity related emissions)

Production Parameter_{j,k} = production parameter “j” in year “k” associated with emissions_j