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Regulations Amending the Sulphur in Gasoline Regulations: SOR/2020-277

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CANADIAN ENVIRONMENTAL PROTECTION ACT, 1999

P.C. 2020-1057 December 14, 2020

Whereas, pursuant to subsection 332(1) ^a of the *Canadian Environmental Protection Act, 1999* ^b, the Minister of the Environment published in the *Canada Gazette*, Part I, on August 29, 2020 a copy of the proposed *Regulations Amending the Sulphur in Gasoline Regulations*, substantially in the annexed form, and persons were given an opportunity to file comments with respect to the proposed Regulations or to file a notice of objection requesting that a board of review be established and stating reasons for the objection;

Whereas the Governor in Council is of the opinion that the *Sulphur in Gasoline Regulations* ^c, as amended by the proposed Regulations, could make a significant contribution to the prevention of, or reduction in, air pollution;

And whereas, pursuant to subsection 140(4) of that Act, before recommending the proposed Regulations, the Minister of the Environment offered to consult with the provincial governments and the members of the National Advisory Committee who are representatives of Aboriginal governments;

Therefore, Her Excellency the Governor General in Council, on the recommendation of the Minister of the Environment, pursuant to sections 140 ^d, 326 and 330 ^e of the *Canadian Environmental Protection Act, 1999* ^b, makes the annexed *Regulations Amending the Sulphur in Gasoline Regulations*.

Regulations Amending the Sulphur in Gasoline Regulations

1 The definition *trading system* in subsection 1(1) of the *Sulphur in Gasoline Regulations* ¹ is replaced by the following:

trading system

means the temporary sulphur compliance unit trading system referred to in subsection 13(1). (*système d'échange*)

2 (1) Paragraph 2(1)(b) of the Regulations is replaced by the following:

(b) in any other case, 12 mg/kg.

(2) Subsection 2(2) of the Regulations is replaced by the following:

(2) For the purpose of section 139 of the Act and subject to subsection (2.1), the pool average of a pool in respect of which a primary supplier has made an election under section 9 shall not exceed 10 mg/kg.

3 (1) Paragraph 3(1)(b) of the Regulations is replaced by the following:

(b) in any other case, the sampling method described in the National Standard of Canada CAN/CGSB-3.5-2016, entitled *Automotive Gasoline*.

(2) Paragraphs 3(2)(a) and (b) of the Regulations are replaced by the following:

(a) the concentration of sulphur in gasoline and the concentration of sulphur in an oxygenate shall be measured in accordance with the ASTM International test method D5453-19a, entitled *Standard Test Method for Determination of Total Sulfur in Light Hydrocarbons, Spark Ignition Engine Fuel, Diesel Engine Fuel, and Engine Oil by Ultraviolet Fluorescence*; and

(b) the concentration of sulphur in butane shall be measured in accordance with the ASTM International test method D6667-14(2019), entitled *Standard Test Method for Determination of Total Volatile Sulfur in Gaseous Hydrocarbons and Liquefied Petroleum Gases by Ultraviolet Fluorescence*.

4 (1) Subsection 9(1) of the Regulations is replaced by the following:

9 (1) A primary supplier may, in respect of a pool, elect to calculate the concentration of sulphur in gasoline that is in the pool on the basis of a pool average by submitting to the Minister a notice of the election within the period specified in subsection (2.1) or (2.2).

(2) Section 9 of the Regulations is amended by adding the following after subsection (2.1):

(2.2) Despite subsection (2.1), if the year in respect of which the calculation will be made on the basis of a pool average is the year 2020, the notice shall be submitted to the Minister no later than 30 days after the day on which this subsection comes into force.

(3) Subsection 9(5) of the Regulations is repealed.

5 Section 13 of the Regulations is replaced by the following:

13 (1) A primary supplier who makes an election under section 9 may, in respect of the pool to which that election applies, elect to participate in the temporary sulphur compliance unit trading system by submitting to the Minister a notice of the election to participate in accordance with subsection (2).

(2) The notice shall identify the pool to which the election applies and be submitted to the Minister

(a) within 30 days after the day on which this section comes into force; or

(b) if the election under section 9 is made after the day on which this section comes into force and the primary supplier is, for the first time, producing or importing gasoline, no later than 60 days before the first day on which the gasoline is produced or imported.

6 (1) Subsections 14(1) to (3) of the Regulations are replaced by the following:

14 (1) A primary supplier who is participating in the trading system may, in respect of the pool to which the election applies, create a number of sulphur compliance units, for a year, that is equal to the amount determined in accordance with the following formula:

$$(A - B) \times C$$

where

A

is 10 mg/kg;

B

is the pool average of that pool for the year, in mg/kg; and

C

is the volume of low-sulphur gasoline that was used to calculate the pool average, in m³.

(2) If a primary supplier makes an election under subsection 13(1) in respect of a pool for which they made an election under subsections 13(1) or (3) as it read immediately before the day on which this subsection comes into force, the primary supplier may, in respect of that pool, create for the year 2020 a number of sulphur compliance units that is less than or equal to the balance of the sulphur compliance units reported for that pool for the year 2019 under paragraph 5(e) of Schedule 2.

(2) Subsection 14(5) of the French version of the Regulations is replaced by the following:

(5) Une unité de conformité de soufre est créée lorsque le fournisseur principal en consigne la création dans le livre des unités de conformité de soufre qu'il tient en application de l'article 18. Il doit y consigner la création des unités pour une année donnée au plus tard le 15 février de l'année suivante.

7 (1) Subsection 15(1) of the Regulations is replaced by the following:

15 (1) A primary supplier who is participating in the trading system may use a sulphur compliance unit that they hold, in respect of a pool for which an election is made under section 13, to adjust the pool average of that pool for any of the years 2020 to 2025.

(2) Subsection 15(3) of the French version of the Regulations is replaced by the following:

(3) Une unité de conformité de soufre est utilisée lorsque le fournisseur principal en consigne l'utilisation dans le livre des unités de conformité de soufre qu'il tient en application de l'article 18. Il doit y consigner l'utilisation des unités de conformité de soufre pour une année donnée au plus tard le 31 mars de l'année suivante.

8 The heading before section 18 of the French version of the Regulations is replaced by the following:

Livre des unités de conformité de soufre

9 The portion of section 18 of the French version of the Regulations before paragraph (b) is replaced by the following:

18 Le fournisseur principal qui participe au système d'échange tient un livre des unités de conformité de soufre à l'égard de chaque ensemble des lots visé par le choix exercé conformément à l'article 13 dans lequel il consigne les renseignements suivants :

- a) la composition de l'ensemble de lots à l'égard duquel le livre est tenu;

10 The heading before section 19 of the Regulations is replaced by the following:

Records

11 The portion of section 19 of the Regulations before paragraph (a) is replaced by the following:

19 A primary supplier who is participating in the trading system shall, for each of the years 2020 to 2025, maintain a record that contains the following information for each pool in respect of which they make an election under section 13:

12 Sections 20 and 21 of the Regulations are replaced by the following:

20 A primary supplier who is participating in the trading system shall maintain a record that contains a copy of all supporting documents for the books and records referred to in sections 18 and 19.

Maintaining Books and Records

21 The primary supplier shall maintain the books and records referred to in sections 18 to 20 in Canada until December 31, 2031.

13 The heading of Part 3 of the Regulations is replaced by the following:

Reports and Notices

14 Section 23 of the Regulations is replaced by the following:

23 (1) A report or notice that is required to be submitted to the Minister under these Regulations shall be submitted electronically in the form and format specified by the Minister and bear the electronic signature of an authorized official.

(2) If the Minister has not specified an electronic form and format or if it is impractical to submit the report or notice electronically in accordance with subsection (1) because of circumstances beyond the control of the person sending the report, they shall submit it on paper, signed by an authorized official and in the form and format, if any, specified by the Minister. However, if no form and format have been specified, the report or notice may be in any form and format.

15 Subsections 25(1) and (2) of the Regulations are replaced by the following:

25 (1) For each year in which a primary supplier participates in the trading system, they shall, for each pool in respect of which they make an election under section 13, submit to the Minister a report, no later than April 30 of the year after the year for which the report is submitted, that contains the information referred to in Schedule 2.

16 Section 3 of Schedule 2 to the Regulations is repealed.

17 The portion of section 4 of Schedule 2 to the Regulations before paragraph (a) is replaced by the following:

4 The following information regarding the gasoline, other than gasoline produced for export or that was in transit through Canada, that was produced or imported by the primary supplier in that year and identified under section 5 of these Regulations as low-sulphur gasoline, with separate entries for gasoline with a sulphur concentration of 10 mg/kg or less and gasoline with a sulphur concentration of more than 10 mg/kg:

18 Section 5 of Schedule 2 to the Regulations is amended by adding the following after paragraph (a):

(a.1) for the year 2020, the number of units created by the primary supplier under subsection 14(2);

Transitional Provision

19 Section 21 of the *Sulphur in Gasoline Regulations* as it read immediately before the day on which these Regulations come into force continues to apply to the maintenance of records referred to in sections 18 to 20 as they read immediately before the day on which these Regulations come into force.

Coming into Force

20 These Regulations come into force on the day on which they are registered.

REGULATORY IMPACT ANALYSIS STATEMENT

(This statement is not part of the Regulations.)

Issues

The *Sulphur in Gasoline Regulations* (the Regulations) are part of Canada's suite of fuels regulations. The Regulations limit the sulphur content of gasoline that is produced, imported, or sold in Canada. Sulphur in gasoline impairs the performance of catalytic converters, the primary control devices in vehicles that reduce exhaust emissions of air pollutants. The Regulations limit the sulphur content of gasoline, leading to reductions in air pollutant emissions from vehicles and engines, which contributes to improvements in air quality and health outcomes.

A temporary sulphur compliance unit (SCU) trading system was established under the Regulations in 2015. This trading system was intended to provide gasoline refiners with compliance flexibility during the transition to lower sulphur concentrations in gasoline while they made capital investments and technological improvements to comply with the mandatory sulphur limits for 2020 and beyond. This trading system ended with the 2019 compliance period.

In the fall of 2018, the Canadian Fuels Association (CFA) expressed concern that, without an SCU trading system under the Regulations, there may be cases in the future in which a Canadian refiner would have limited means to comply with the requirements for lower sulphur gasoline while addressing unforeseen operational challenges, such as unanticipated failure of desulfurization equipment. ² In addition, the CFA indicated in July 2020 that recent developments and response needs surrounding the coronavirus (COVID-19) pandemic have resulted in delays for its members in completing upgrades that are necessary to comply with the regulated limits for sulphur in gasoline for 2020 and beyond.

The transition to lower sulphur gasoline in Canada was established through amendments made to the Regulations in 2015. Gasoline refiners and importers (primary gasoline suppliers) could still be making capital investments and operational improvements to comply with regulatory limits for sulphur in gasoline by the end of 2020. In the absence of amendments to the Regulations, primary gasoline suppliers would not be able to make use of any SCUs accumulated under the expired temporary trading system for 2020 and beyond. However, these SCUs are a potential compliance flexibility that could help refiners while they complete necessary upgrades, if they have not already done so, in order to meet regulatory requirements for lower sulphur gasoline, especially in the context of unforeseen circumstances that cannot be fully managed with existing compliance mechanisms.

Background

The Department of the Environment (the Department) administers a suite of fuels regulations under the *Canadian Environmental Protection Act, 1999* (CEPA) to address fuel quality and emissions of pollutants from the combustion of fuels. These regulations are designed to protect the environment and health of Canadians from the effects of air pollution through an integrated approach that deals with both fuel quality and vehicle and engine emissions. Fuels containing high sulphur levels notably contribute to air pollution and lead to increased emissions of sulphur dioxide and sulphate particles from vehicles and engines. In particular, fuels with high sulphur levels interfere with the performance of systems that control vehicle and engine emissions.

Sulphur in Gasoline Regulations

On June 23, 1999, the Regulations were published in the *Canada Gazette*, Part II, mandating gasoline refiners and importers in Canada to limit the sulphur content of gasoline to an annual average level of 30 milligrams per kilogram (mg/kg), or 30 parts per million (ppm), with a never-to-be-exceeded limit of 80 ppm, beginning in 2005. The Regulations also included a simpler default option of a 40 ppm batch limit, with minimal administrative requirements.

On July 29, 2015, the *Regulations Amending the Sulphur in Gasoline Regulations* (the 2015 Amendments) were published in the *Canada Gazette*, Part II, requiring refiners and importers to provide gasoline with lower sulphur content to the Canadian market. The default batch flat limit for sulphur remained at 40 ppm (or 40 mg/kg) until the end of 2016 and was reduced to 14 ppm during the 2017–2019 period. For 2020 and beyond, the default batch flat limit is 12 ppm. The annual gasoline pool average compliance option, which primary suppliers can elect to use, remained at 30 ppm until the end of 2016, and was then reduced to 10 ppm for 2017 and beyond. The 2015 Amendments retained the never-to-be-exceeded batch limit of 80 ppm, applicable to the sulphur concentration of any batch of gasoline produced or imported using the annual pool average compliance option, and applicable to the sulphur concentration of all gasoline sold in Canada.

The 2015 Amendments included compliance flexibilities to help primary suppliers transition to the requirements for lower sulphur gasoline. One of these flexibilities was a temporary SCU trading system, for the years 2012 to 2019, available to primary suppliers electing to participate in the annual pool average compliance option. For these years, primary suppliers could generate volume-based SCUs from gasoline produced or imported for which the annual average sulphur concentration was under 30 ppm during the years 2012 to 2016, and under 10 ppm during the years 2017 to 2019. SCUs were allowed to be applied towards meeting regulatory compliance with the 10 ppm standard during the 2017–2019 period, and could be traded once between companies and multiple times within a company.

Compliance with sulphur in gasoline limits

The estimated volume-weighted average sulphur concentration in gasoline produced in and imported into Canada decreased from 20.5 ppm in 2012 to 16.5 ppm in 2019. In 2012, two out of 14 Canadian refiners were at or below the 10 ppm sulphur standard, which took effect in 2017. By the end of 2019, 6 out of 14 refiners were at or below the 10 ppm standard; 5 refiners had sulphur content higher than 10 ppm, but below 20 ppm; and 3 had sulphur content closer to 30 ppm.

The temporary SCU trading system enabled primary gasoline suppliers to over comply with the 30 ppm sulphur in gasoline standard from 2012 to 2016, generating surpluses of tradeable SCUs that could be transferred to future compliance periods. These surpluses of SCUs have been used by primary suppliers to comply with the 10 ppm sulphur standard during the 2017–2019 period (at an average rate of about 17% of the total SCUs available each year).

Subject to their choice of compliance option under the Regulations, primary suppliers may utilize other regulatory flexibilities available to them, including an annual pool average compliance option, a never-to-be-exceeded sulphur limit of 80 ppm applicable to any batch of gasoline, the ability to further refine or blend batches of gasoline or add low-sulphur oxygenates, and the possibility to export higher sulphur gasoline from Canada. These flexibilities, however, do not provide the same level of relief as an SCU trading system in addressing unforeseen operational challenges, including failure of critical equipment that removes naturally occurring sulphur from gasoline, which can happen with unpredictable timing or frequency.

Sulphur dioxide emissions in Canada

Fuels, vehicles, and engines are significant sources of air pollutants, including sulphur dioxide (SO₂), which is the component of greatest concern within a larger group of sulphur oxide gases (SO_x). There have been important reductions in SO_x emissions associated with the production and the use of fuels with lower sulphur content since the establishment of the Regulations in 1999 and of the *Sulphur in Diesel Fuel Regulations* in 2002. Over the 1999–2017 period, SO₂ emissions have decreased in the Canadian petroleum refining sector by 62%, from approximately 124 kilotonnes (kt) in 1999 to about 47 kt in 2017, while SO₂ emissions have decreased in the Canadian transportation sector by 93%, from approximately 156 kt in 1999 to about 11 kt in 2017. ³ ⁴

Emissions of SO_x are a precursor to ambient levels of secondarily formed fine particulate matter (PM_{2.5}). Exposure to PM_{2.5} and ozone (two principal components of smog) is linked to adverse health impacts, such as premature deaths, as well as other important health and environmental effects. Since the Regulations and the *Sulphur in Diesel Fuel Regulations* set out the rules for the sulphur content in gasoline and in diesel fuel, they have played a key role in delivering the reductions in SO_x emissions observed in the petroleum refining and transportation sectors over the past two decades in Canada that are linked to significant health and environmental benefits.

Objective

The objective of the *Regulations Amending the Sulphur in Gasoline Regulations* (the Amendments) is to provide primary gasoline suppliers in Canada (i.e. regulated parties) with additional compliance flexibility while they continue to transition to lower sulphur gasoline.

Description

The Amendments re-enact the temporary SCU trading system under the Regulations for the years 2020 to 2025. This temporary trading system is available to regulated parties electing to participate in the annual pool average compliance option under the Regulations.

The Amendments enable regulated parties to transfer the surplus balances of SCUs that they generated or received in trade in the expired trading system and owned as of March 31, 2020, into the re-enacted temporary trading system. The Amendments also provide regulated parties with the option to generate, trade, or bank SCUs in the temporary trading system for use during the 2020–2025 period.

Regulatory development

Consultation

Regulated parties consist of gasoline refiners and importers in Canada. The CFA represents companies that process crude oil into essential products, such as transportation fuels, and deliver these products to market. The CFA thus represents gasoline refiners in Canada. The Canadian Independent Petroleum Marketers Association (CIPMA) represents independent Canadian fuel marketers. CIPMA thus represents gasoline importers in Canada that do not refine the gasoline they deliver to market.

Companies in the Canadian transportation and original equipment manufacturing sectors are not regulated parties, but they are nonetheless indirectly impacted by the Regulations. These industry stakeholders are represented by the Canadian Vehicle Manufacturers' Association (CVMA), the Global Automakers of Canada (GAC), and the Automotive Parts Manufacturers' Association (APMA).

In the fall of 2018, the CFA and its members expressed concern that there may be cases in the future in which a Canadian refiner experiencing an unplanned "gasoline desulphurization equipment failure" would have limited means to comply with the annual average sulphur limit of 10 ppm under the annual pool average compliance option in the Regulations. Consequently, the CFA and its members requested a transition from the temporary SCU trading system to a permanent trading system. The Department held consultations related to the possible establishment of a permanent trading system under the Regulations in the summer of 2019 with the CFA and its members.

In March 2020, primary suppliers advised the Department of an oversupply of motor gasoline in the Canadian market resulting from a sudden fall in demand due to the COVID-19 pandemic. In July 2020, as part of discussions with the Department, the CFA indicated

- (i) that recent developments and response needs surrounding the COVID-19 pandemic have resulted in delays for its members in completing upgrades that are necessary to comply with the requirements for lower sulphur gasoline for 2020 and beyond; and
- (ii) that its members unanimously supported an interim approach leading to a re-established temporary SCU trading system, which would recognize SCUs accumulated under the expired trading system and come into effect in time to apply to the 2020 and later compliance periods.

Consultations following the publication of the proposed Amendments in the Canada Gazette, Part I

In accordance with section 332 of CEPA, the proposed Amendments were published in the *Canada Gazette*, Part I, on August 29, 2020, followed by a 60-day comment period ending on October 28, 2020. At the same time, the Department published a link to the proposed Amendments on its CEPA Environmental Registry website to make them broadly available to interested parties.

The Department also sent an email to a wide range of interested parties — including representatives of the provincial and territorial governments, Indigenous leadership groups and organizations, industry associations and their members, and environmental and health non-governmental organizations (NGOs) — to provide an overview of the proposed Amendments and distribute information on the formal consultation process. The Department also sent a letter to members of the CEPA National Advisory Committee to inform them of the release of the proposed Amendments, and of the opportunity to be consulted and provide written submissions.

On October 7, 2020, the Department hosted general consultation sessions (webinars) in English and French. The goal of these sessions was to provide an overview of the regulatory proposal and answer questions to help inform possible written submissions. All but one member of the regulated community attended the webinars. Participants offered their general support for the proposed Amendments during the webinars. The Department closed each session by responding to questions from participants and inviting them to submit their written comments.

The Department received six written submissions from the CFA, the CVMA, a citizens' coalition for clean air (an environmental NGO), an importer and distributor of fuel products, and two fuel refiners and distributors. All six submissions indicated support for the proposed re-enactment of the temporary SCU trading system for the years 2020 to 2025. Fuel industry stakeholders emphasized the need to publish the Amendments as soon as possible to provide regulatory certainty. The environmental NGO indicated that, although the temporary trading system could potentially lead to regional variations in sulphur concentrations in gasoline and air pollutant emissions, they are

generally confident that the Regulations and the proposed Amendments are effective instruments to limit the sulphur content of gasoline in Canada. The CVMA also highlighted the importance of continuing to take vehicle-fuel compatibility into consideration in future regulatory development, emphasizing that low-sulphur fuels enable advanced control technologies and fuel-efficient designs for new vehicles. In most of the submissions, stakeholders requested that they be engaged in the consultations process that the Department plans to hold in 2021 and 2022 concerning potential future amendments to the Regulations to establish a permanent SCU trading system for 2026 and beyond. Finally, some stakeholders requested clarifications regarding the meaning of the proposed Amendments and how these changes would fit into and modify the Regulations. The Department has responded to these requests by providing detailed explanations to the interested parties.

Modern treaty obligations and Indigenous engagement and consultation

The Amendments are not anticipated to impact Indigenous peoples, or Canada's modern treaty obligations. As a result, specific Indigenous engagement and consultation were not undertaken. The Department informed Indigenous groups of the publication of the proposed Amendments in the *Canada Gazette*, Part I, and of the opportunity to be consulted and provide written submissions. No comments were received from Indigenous groups.

Instrument choice

Without the ability to exchange and use SCUs generated in the expired temporary trading system, it is projected that some gasoline refiners in Canada could have difficulty complying with the standards for lower sulphur gasoline under the Regulations for 2020 and beyond. In addition, given current levels of uncertainty and economic conditions related to the COVID-19 pandemic, it may be difficult for some refiners to complete capital investments or technological improvements in the short term to directly lower concentrations of sulphur in gasoline. For these reasons, maintaining the status quo (i.e. not re-establishing the expired temporary SCU trading system) was not pursued as an option.

The Department will further assess and consult on the establishment of a permanent SCU trading system under the Regulations for 2026 and beyond. One of the impacts of such a system that needs to be examined relates to the fact that the opportunity for trading SCUs within companies could provide a competitive advantage to companies operating multiple refineries, relative to companies operating a single refinery. Further, under a permanent trading system, situations of unbalanced gasoline quality across regions of the geographically dispersed Canadian market could arise if a primary supplier decided to use SCUs instead of producing or importing cleaner, lower sulphur gasoline. For these reasons, the creation of a permanent trading system is not being proposed at this time.

In the Department's view, re-enacting the temporary trading system by means of the Amendments is the recommended approach. This approach allows primary gasoline suppliers to use SCUs generated under the expired trading system for the years 2020 to 2025. This extension of the temporary trading system provides regulated parties with additional time to complete investments and improvements to meet the standards for lower sulphur gasoline under the Regulations. The re-enactment of the temporary trading system for the years 2020 to 2025 also allows sufficient time for the Department to conduct an analysis of the expected impacts of a permanent SCU trading system under the Regulations for 2026 and beyond.

Lastly, section 147 of CEPA allows the Minister of the Environment to grant waivers to the requirements of the Regulations if there is a real or anticipated shortage in fuel supply during a declared provincial or federal emergency. Such waivers are intended to be temporary and cannot be used for other reasons, so they are not a possible option in this case.

Regulatory analysis

Benefits and costs

Impacts related to compliance with limits for sulphur in gasoline

The temporary SCU trading system was included as part of the 2015 Amendments to provide more compliance flexibility during the transition to lower sulphur gasoline in Canada leading to 2020. During this transition, it was anticipated that Canadian refining companies would use the SCUs that they acquired through trade in the temporary system while making necessary investments and improvements in alignment with their periodic upgrade and maintenance schedules. Further, it was projected that all Canadian refiners would be producing gasoline with a sulphur concentration at or below the 10 ppm limit by 2020.

Primary gasoline suppliers may continue to use the other compliance flexibilities under the Regulations, yet operational and technical constraints can limit a primary supplier's ability to reprocess and blend gasoline with a high sulphur concentration to reduce sulphur content. The option of using the re-enacted temporary trading system under the Amendments could provide primary suppliers with a relatively high level of relief, especially in the context of future (unknown) economic impacts associated with the COVID-19 pandemic. From 2020 to 2025, gasoline refiners and importers are projected to make use of their surplus balances of SCUs transferred from the expired temporary trading system into the re-enacted temporary system. This flexibility will provide primary suppliers with additional time to fully comply, for 2026 and beyond, with the 10 ppm sulphur limit through capital investments and technological improvements, which are ongoing.

The temporary trading system will also facilitate compliance with the mandatory sulphur limit by lowering operational risks faced by regulated parties. Specifically, gasoline refiners should face lower operational risks in the event of unplanned equipment failure affecting desulphurization processes. While these types of interruptions are infrequent in general, they may happen with unpredictable timing or frequency, and they may result in extended operational delays for assessment, equipment replacement, repair or installation, and restart activities.

Reducing the level of sulphur in gasoline has been, and continues to be, an integral and important component of the Department's program for cleaner vehicles, engines, and fuels. The Amendments do not make any changes to current sulphur limits; this includes the never-to-be-exceeded limit of 80 ppm. Since this maximum sulphur limit is not changing, actual sulphur concentrations in gasoline sold in Canada during the 2020–2025 period are not anticipated to reach levels that will impair the effective operation of advanced technologies designed to control emissions from vehicles and engines.

Impacts related to air pollutant emissions and air quality

The impact analysis of the 2015 Amendments assumed a regulatory scenario in which the actual average sulphur concentration in gasoline would be 10 ppm across Canada as of 2020. Based on the 2019 annual reports submitted by regulated parties, and in the absence of further investments or improvements, the actual average sulphur concentration in gasoline in the Canadian market will most likely be above 10 ppm during the 2020–2025 period. With the re-enacted trading system in place, ongoing technological improvements are expected, but there is a risk that the actual average sulphur concentration in gasoline in the Canadian market will not reach the 10 ppm threshold during the 2020–2025 period, as primary suppliers will be allowed to use SCUs from the expired trading system for compliance purposes. The implementation of the Amendments could thus push back the first year in which primary suppliers comply with the 10 ppm sulphur limit without the use of SCUs from 2020 to 2026.

In accordance with subsection 140(2) of CEPA, the Regulations, as modified by the Amendments, will continue to make a significant contribution to the reduction in air pollution in Canada resulting from sulphur in gasoline and its effect on the performance of emissions control equipment (in this case, catalytic converters). From 2012 to 2016, primary gasoline suppliers over complied with the 30 ppm sulphur in gasoline standard. Primary suppliers used the surpluses of SCUs that were generated as a result to comply with the 10-ppm standard during the 2017–2019 period, and it is projected that they will use the remaining surpluses to comply with the 10 ppm standard during the 2020–2025 period. Since the generation of an SCU must occur before its use, the improvements in air quality resulting from the generation of an SCU must occur before the foregone improvements in air quality related to the use of that SCU. Any short-term changes in air quality benefits attributable to the use of SCUs in the re-enacted temporary trading system are assumed to be offset by the air quality benefits linked to the earlier generation of those SCUs. The Amendments are therefore not expected to substantially affect the overall air quality benefits associated with the Regulations.

Some regional increases in sulphur concentrations in gasoline and air pollutant emissions from vehicles and engines could occur in the regulatory scenario, when compared to a baseline (counterfactual) scenario in which there is no SCU trading system and each regulated party supplies the Canadian market with gasoline that has an actual average sulphur concentration of 10 ppm. Any increases in emissions and their subsequent impacts on air quality will be temporary, from 2020 to 2025. They are also expected to be small given that sulphur concentrations in gasoline are relatively low nationwide and are projected to continue to decrease during this period.

It is worth noting that, in its July 2020 *Monetary Policy Report*, the Bank of Canada forecast a sharp rebound in economic activity in the reopening phase of the recovery from the COVID-19 pandemic, followed by a more prolonged recuperation phase over the medium term in a slow return to pre-pandemic levels of economic activity in Canada. ⁵ While not attributable to the Amendments, air pollutant emissions from vehicles and engines could be relatively lower in comparison with emissions from these sources under a pre-pandemic scenario, if there is less economic activity during this recovery period in general. Once again, while not attributable to the Amendments, such possible decreases in air pollutant emissions from vehicles and engines could help offset any increases in emissions and their impacts on air quality due to actual average sulphur concentrations in gasoline being above 10 ppm between 2020 and 2025 as a result of the Amendments.

Business administrative and government impacts

Nearly all primary suppliers have already elected to comply with the annual gasoline pool average option. The Amendments will lead to minor administrative costs for regulated parties electing to participate in the re-enacted temporary trading system. These administrative costs are related to refamiliarization with the re-enacted administrative provisions concerning the temporary SCU trading system; completing a one-time application to participate in this system; and ongoing record-keeping, reporting and auditing requirements in connection with SCU transactions. Monetized estimates of the administrative costs attributable to the Amendments are presented in the “One-for-one rule” section.

The re-enactment of the temporary SCU trading system is not anticipated to lead to any incremental costs for the federal government. To implement and administer the temporary trading system, the Department will employ the existing processes used to track compliance and trading activity under the Regulations.

Small business lens

The small business lens does not apply to the Amendments, as they will have impacts on regulated parties consisting of medium and large businesses only. There are currently no small business producers or importers of gasoline that report under the Regulations, given that the 2015 Amendments removed all reporting requirements for producers or importers of less than 400 cubic metres (m³), or 400 000 litres (l), of gasoline annually.

One-for-one rule

The one-for-one rule applies as the Amendments will result in an incremental increase in administrative burden on business. The Amendments modify the Regulations, leading to no net increase or decrease in regulatory titles.

For the years 2020 to 2025, the Amendments will lead to some administrative burden costs related to the refamiliarization with re-enacted administrative obligations, completing applications, and ongoing record-keeping, reporting and auditing requirements. Gasoline refiners and importers in Canada electing to participate in the re-enacted temporary SCU trading system under the Regulations will incur these costs. This system will expire at the end of 2025, after which there will be no incremental administrative costs for businesses attributable to the Amendments.

For the purposes of this analysis, it is assumed that regulated parties will only elect the annual pool average compliance option and participation in the temporary trading system if they expect to realize net cost savings relative to the anticipated costs of the default batch flat limit option. It is further assumed that all gasoline refiners and importers electing to comply with the annual pool average option choose to participate in the temporary trading system. Overall, the new administrative burden for the Canadian gasoline producing and importing sector is estimated at approximately \$4,000 in annualized average administrative costs. ⁶ Net administrative impacts per

business for 23 regulated parties (14 refiners and 9 importers) are anticipated to be on average 7 hours per year, which corresponds to approximately \$180 in annualized average costs per business when allocated over a 10-year analytical period to assess administrative cost impacts (2020–2029). ⁷

Regulatory cooperation and alignment

The Regulations are part of the Government of Canada's Addressing Air Pollution Horizontal Initiative, which includes activities to reduce transboundary air pollution, as agreed to under the Canada–United States Air Quality Agreement. Under the Ozone Annex to this agreement, Canada and the United States have agreed to reduce emissions of ozone precursors, which contribute to the formation of smog, including air pollutant emissions from the operation of vehicles and engines and the combustion of fuel. ⁸

The same annual average limit of 10 ppm for sulphur content in gasoline is part of the U.S. Tier 3 fuel standards. The U.S. system, however, includes a permanent nationwide system that allows refiners and importers to average, bank, and trade credits on an ongoing basis. The re-enactment of the temporary SCU trading system will maintain alignment of the Regulations with the U.S. Tier 3 fuel regulations, which is consistent with the objectives of the Canada—United States Regulatory Cooperation Council.

Strategic environmental assessment

The Regulations and the Amendments fall under the Government of Canada's Addressing Air Pollution Horizontal Initiative. A public statement on the strategic environmental assessment of this initiative was published in 2017 and concluded that regulatory policies under it are expected to reduce outdoor air pollution and its negative impacts on air quality and communities in Canada. ⁹ These anticipated outcomes are in line with the goal in Canada's Federal Sustainable Development Strategy (FSDS) of safe and healthy communities, as well as with the FSDS goal of effective action on climate change when sources emitting both greenhouse gases and air pollutants are targeted. ¹⁰

Gender-based analysis plus

No gender-based analysis plus (GBA+) impacts have been identified for these Amendments.

Implementation, compliance and enforcement, and service standards

The Amendments come into force on the day on which they are registered. They come into force by the end of 2020 in order to provide sufficient notice to regulated parties so that they may elect to participate in the re-enacted temporary trading system, exchange and use SCUs for compliance purposes, and meet the reporting and auditing deadlines that apply to the 2020 compliance period, which include the deadline to submit temporary SCU trading system reports by April 30, 2021.

Information on the Amendments will be provided on the Department's website and updated periodically, as needed. ¹¹ Frequently asked questions with responses will be posted and updated on this website prior to or shortly following the coming into force of the Amendments.

The compliance promotion approach for the Amendments will be similar to the approach taken for the Regulations, which includes maintaining a presence on the Department's website and responding to inquiries from stakeholders. The Department conducts regular compliance promotion activities, and the national fuels program is staffed with personnel who can respond to inquiries regarding the Amendments.

Since the Amendments are made under CEPA, implementation and enforcement will continue to be undertaken by the Department in accordance with the Compliance and Enforcement Policy for CEPA. ¹² Enforcement officers will continue to apply this policy when verifying compliance with the regulatory requirements.

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Footnotes

- a S.C. 2004, c. 15, s. 31
- b S.C. 1999, c. 33
- c SOR/99-236
- d S.C. 2008, c. 31, s. 2
- e S.C. 2008, c. 31, s. 5
- 1 SOR/99-236
- 2 The CFA represents Canadian producers (refiners) of transportation fuels.
- 3 [Air Pollutant Emissions Inventory](https://pollution-waste.canada.ca/air-emission-inventory/) (<https://pollution-waste.canada.ca/air-emission-inventory/>) (APEI)
- 4 In the APEI, the sources of air pollutant emissions within the transportation sector include all types of air, land, and marine transportation, as well as mobile equipment, such as gasoline-powered engines.
- 5 [Bank of Canada: Monetary Policy Report — July 2020](https://www.bankofcanada.ca/2020/07/mpr-2020-07-15/#:~:text=The%20Bank%20expects%20a%20sharp,a%20more%20prolonged%20recuperation%20phase) (<https://www.bankofcanada.ca/2020/07/mpr-2020-07-15/#:~:text=The%20Bank%20expects%20a%20sharp,a%20more%20prolonged%20recuperation%20phase>)
- 6 In accordance with Canada's *Red Tape Reduction Regulations*, cost estimates under the one-for-one rule are calculated using a 10-year analytical period, 2012 Canadian dollars, a 7% discount rate, and a discounting base year of 2012.
- 7 The non-rounded increase in annualized average administrative costs is estimated to be \$4,041, or \$176 per business.

- 8 [Canada–U.S. Air Quality Agreement — Ozone Annex \(2000\) \(https://www.canada.ca/en/environment-climate-change/services/air-pollution/publications/canada-united-states-quality-agreement-ozone-annex.html\)](https://www.canada.ca/en/environment-climate-change/services/air-pollution/publications/canada-united-states-quality-agreement-ozone-annex.html)
- 9 [Public statement on the strategic environmental assessment of the Addressing Air Pollution Horizontal Initiative \(https://www.canada.ca/en/environment-climate-change/services/sustainable-development/strategic-environmental-assessment/public-statements/addressing-air-pollution.html\)](https://www.canada.ca/en/environment-climate-change/services/sustainable-development/strategic-environmental-assessment/public-statements/addressing-air-pollution.html)
- 10 [Achieving a Sustainable Future: A Federal Sustainable Development Strategy for Canada \(https://www.fsds-sfdd.ca/index.html#/en/goals/\)](https://www.fsds-sfdd.ca/index.html#/en/goals/)
- 11 [Fuel regulations: regulatory text, guidance, reporting \(https://www.canada.ca/en/environment-climate-change/services/managing-pollution/energy-production/fuel-regulations.html\)](https://www.canada.ca/en/environment-climate-change/services/managing-pollution/energy-production/fuel-regulations.html)
- 12 [Canadian Environmental Protection Act: compliance and enforcement policy \(https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/publications/compliance-enforcement-policy.html\)](https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/publications/compliance-enforcement-policy.html)
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