

# Clean Fuel Regulations

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**Discussion Paper**  
to Inform the Draft  
Targeted Amendments



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## Clean Fuel Regulations

### Discussion paper to inform the draft targeted amendments

#### PURPOSE

On September 5, 2025, the Government of Canada announced its intent to make targeted amendments to the *Clean Fuel Regulations* (CFR) to strengthen the resiliency and support the development of Canada's low-carbon fuel sector, while maintaining the Regulations' primary focus on lowering greenhouse gas (GHG) emissions, and transitioning to a low carbon economy.

Environment and Climate Change Canada (ECCC) is publishing this Discussion Paper to invite views and information related to these targeted amendments. The comment period will close **January 15, 2026**. Information on how to submit comments is provided at the end of the paper.

#### CONTEXT

The *Clean Fuel Regulations* (CFR) require producers and importers of gasoline and diesel (i.e. primary suppliers) to reduce the life cycle carbon intensity of gasoline and diesel produced and imported for use in Canada, thereby reducing GHG emissions. A life cycle approach considers the GHG emissions involved in multiple stages of the fuel's production process, from feedstock extraction or cultivation to fuel combustion. Reduction requirements for primary suppliers took effect as of July 1, 2023. The CFR is an important part of Canada's climate competitiveness strategy -- reducing emissions, accelerating the use of clean technologies and fuels, and supporting sustainable jobs in a diversified economy. It is the main federal measure creating demand for clean fuels in the Canadian market and complements the various clean fuel policies and regulations in the provinces and territories.

The CFR establishes a credit market, where each credit represents a life cycle emission reduction of one tonne of CO<sub>2</sub>e. Regulated parties meet their obligations via credits which they create themselves or buy on the CFR credit market. Credits can be created by:

- compliance category 1 – undertaking projects that reduce the life cycle carbon intensity of liquid fossil fuels (e.g. carbon capture and storage, renewable electricity, co-processing)
- compliance category 2 – supplying low-carbon intensity fuels (e.g. ethanol, biodiesel)
- compliance category 3 – supplying fuel or energy to advanced vehicle technology (e.g. electricity or hydrogen in vehicles)

The majority of credits created to-date under the CFR come from the supply of low-carbon intensity fuels.<sup>1</sup> While an important share of these credits comes from fuel produced in Canada, Canada does not currently produce enough low-carbon intensity fuels to meet the total domestic demand. As such, a large share of CFR credits for low-carbon intensity fuel supply come from imports, mostly from the United States (US) (Annex 1).<sup>2</sup>

Canada's liquid low-carbon intensity fuel production is split between a relatively small number of facilities (see Annex 2 for more information on the sector). There are twelve ethanol facilities, six biodiesel facilities and three renewable diesel facilities, including one that focuses mainly on exports. Six refineries have indicated interest in co-processing low-carbon feedstock along with crude oil by 2030,

<sup>1</sup> 81% of credits created from 2022 to 2024 under the CFR comes from the supply of low-carbon intensity fuels.

<sup>2</sup> In 2024, 73% of the CFR credits for low-carbon intensity fuel supply came from imports.

with some of them already creating credits under the CFR. There are currently 48 Canadian facilities registered under the CFR, which produce biogas, renewable natural gas, hydrogen or renewable propane. In 2024, 1.3% of the credits created were for low-carbon-intensity gaseous fuels. Domestic feedstocks are used to produce about 41-66% of Canadian liquid low-carbon intensity fuels used to create CFR credits. For canola specifically, 90% of domestically produced biomass-based diesel was produced from Canadian canola. Demand for ethanol and biomass-based diesel has grown significantly over recent years and is projected to continue growing out to 2030.

Canadian biofuel producers, and their supply chains, are facing competitiveness and trade challenges, which are putting their operations at risk. This could result in less supply of domestic low-carbon intensity fuels, putting future emission reductions at risk, deepening Canada's reliance on imports, including from the US, and dampening demand for domestic agricultural feedstocks like canola.

In this context, the Government of Canada announced (Sept. 5, 2025) it will make targeted amendments to the CFR to strengthen the resiliency and support the development of Canada's low-carbon fuel sector, while maintaining the Regulations' primary focus on lowering GHG emissions and transitioning to a low-carbon economy. The targeted amendments will ensure the Canadian market is able to continue supplying material and reliable quantities of low-carbon intensity fuels. This will help to ensure the CFR can continue to deliver emission reductions. By creating more demand for Canadian low-carbon intensity fuels, the targeted amendments will support Canada's agriculture producers – such as canola – whose crops are a key feedstock in the production of Canadian low-carbon intensity fuels.

The targeted CFR amendments will complement Canada's recently announced Biofuels Production Incentive, which will provide over \$372 million over two years to support the stability and resiliency of domestic producers of biodiesel and renewable diesel. The Government will also work closely with provinces and territories to explore a more comprehensive approach to growing the domestic low-carbon fuel sector and ensuring its longer-term competitiveness.

A number of provinces have also taken action. In February 2025, the Government of British Columbia published amendments to their Low Carbon Fuel Standard, requiring a minimum percentage of renewable fuels to be from domestically produced biofuel (i.e. 8% Canadian renewable content in diesel, starting April 1, 2025; 5% Canadian renewable content in gasoline, starting January 1, 2026). On August 7, 2025, the Government of Ontario finalized regulatory amendments mandating that at least 75% of the renewable content required in diesel fuel and 64% of the renewable content required in gasoline be produced in Canada. Quebec is the only province with a low-carbon fuel production tax credit. In 2024, the Government of Quebec modified the credit to ensure low-carbon intensity fuel facilities in Quebec could remain competitive.

## **CFR AMENDMENTS**

This paper outlines two regulatory options to achieve this goal, however ECCC welcomes input on other design options and considerations.

### Regulatory approach

#### *Minimum domestic content approach*

The CFR currently requires primary suppliers to incorporate a minimum of 5% low-carbon intensity fuel content in the total volume of gasoline produced and imported for use in Canada, and 2% in diesel (sections 6 and 7 of the Regulations). Under this approach, the volumetric requirements of the CFR could be amended to require that a minimum volumetric requirement be met with low-carbon intensity fuel produced in Canada. Implemented similarly to the volumetric requirements currently set in the CFR, a minimum volume of domestic low-carbon intensity fuel content could be set for gasoline and for diesel. This approach would require primary suppliers to demonstrate that low-carbon intensity fuels produced in Canada represent a certain percentage of their regulated volume of gasoline and diesel.

A minimum content approach could guarantee a market for a significant portion of Canadian low-carbon intensity fuel production while allowing the remaining demand to be met with imports. By creating more demand for Canadian low-carbon intensity fuels, the targeted amendments will support Canada's agriculture producers, whose crops are a key feedstock in the production of Canadian low-carbon intensity fuels.

Minimum domestic content requirements would be set high enough to provide a market for a significant portion of Canadian low-carbon intensity fuel production. However, the requirements would need to provide some flexibility to account for unforeseen circumstances (e.g. closure of a low-carbon intensity fuel production facility), regional considerations and unequal access to low-carbon intensity fuels across Canada.

#### *Domestic content requirements in BC and ON*

As currently set, about 1,310 ML of ethanol and 603 ML of biomass-based diesel would have to be produced in Canada and consumed in ON and BC in 2030 to meet their respective domestic content requirements. The 1,310 ML of ethanol represents about 58% of the Canadian production capacity of ethanol and co-processed low-carbon intensity gasoline, about 75% of the ethanol production in Canada in 2024 and 3.6% of the expected CFR regulated volume of gasoline in 2030. The 603 ML of biomass-based diesel represents about 18% of Canadian production capacity of biodiesel, renewable diesel, and co-processed low-carbon intensity diesel, about 54% of the biodiesel and renewable diesel production in Canada in 2024 and 2.2% of the expected CFR regulated volume of diesel in 2030.

#### *Credit multiplier approach*

The CFR could also support Canada's low-carbon intensity fuel sector by introducing a credit multiplier for domestic low-carbon intensity fuels. This would result in more credits being created for domestic low-carbon intensity fuel than the same quantity of imported low-carbon intensity fuel.

A credit multiplier may potentially provide additional revenue to Canadian low-carbon intensity fuel producers already in operation. It could be relatively simple in design given that no new requirement would be added for primary suppliers. However, multiplying the number of credits for a given volume of fuel may not provide a sufficient financial incentive to support the clean fuel sector in Canada. This approach may create a downward pressure on credit price, reducing the incentive for investments in actions that create credits under other CFR compliance categories (e.g. carbon capture and storage, electric vehicle charging). The additional credits would not represent incremental emission reductions from the CFR and could reduce the demand for volumes of domestic low-carbon intensity fuels, as

regulatees (primary suppliers) would be able to meet reduction requirements with lower volumes of low-carbon intensity fuel.

Under a credit multiplier approach, ECCC may consider different multipliers for various types of fuels, considering a number of factors, such as:

- impact on the credit market
- policies in Canada and other jurisdictions impacting each fuel type
- production costs of each fuel type

*Credit multiplier – comparison to US Production Tax Incentive*

The production tax incentive for a typical renewable diesel facility using soybean oil in United States is estimated to be about 23 cents per litre in CAD\$. In a scenario in 2030 where the forecasted credit cost under the CFR would be \$300/tonne, the reference carbon intensity from the CFR would be 80.1 gCO<sub>2</sub>e/MJ and the average carbon intensity of renewable diesel would be 30 gCO<sub>2</sub>e/MJ - a credit multiplier could be set at 1.4 to provide an incentive that is equivalent to the production tax incentive received by producers in United States.

The production tax incentive for a typical ethanol facility in United States is estimated to be about 5 cents per litre in CAD\$. In a scenario in 2030 where the forecasted credit cost under the CFR would be \$300/tonne, the reference carbon intensity from the CFR would be 80.1 gCO<sub>2</sub>e/MJ and the average carbon intensity of ethanol would be 38 gCO<sub>2</sub>e/MJ, a credit multiplier could be set at 1.14 to provide an incentive that is equivalent to the production tax incentive received by producers in United States.

The examples above are for two low carbon intensity fuels. The production tax incentive also applies to other fuels, such as biodiesel, sustainable aviation fuel and renewable natural gas. A credit multiplier applied to these fuels when produced in Canada could similarly create an incentive that is equivalent to the production tax incentive received by producers in the United States.

**Key questions on the regulatory approach**

1. What design would best meet the objective of the amendments:
  - a minimum domestic content, a credit multiplier, or another potential design?
  - Should a combination of options be used?
2. Should the targeted amendment be a temporary measure or longer-term?
3. If a minimum domestic content approach is recommended, should the requirements remain stable or increase over time?
4. Under a minimum domestic content approach, what percentage of the respective gasoline and diesel CFR regulated volumes is recommended?
5. Are there special circumstances, cases or exceptions that should be taken into consideration if a minimum domestic content approach is taken?
6. Considering the different costs and challenges for each type of fuel, if a credit multiplier approach is taken, should there be a differentiated rate set for each type of domestic low-carbon intensity fuel? If so, what multiplication rate is recommended for each type of fuel?
7. If a credit multiplier approach is taken, how could it be designed to prevent it from creating an oversupply of credits or depressing the credit price?
8. Are there other elements, data or information that should be considered?

### Scope

A number of different types of low-carbon intensity fuels are produced in Canada and are eligible for credit creation under the CFR.

Under the CFR, credits for liquid low-carbon fuels are created predominantly via Compliance Category 2 (i.e. sections 94-97 of the CFR). Liquid low-carbon intensity fuels for which credits have been created include ethanol, biodiesel, renewable diesel, sustainable aviation fuel and pyrolysis oil. Under Compliance Category 1, specific to low-carbon intensity fuels, credits can also be created for co-processing low-carbon intensity feedstocks along with crude oil at refineries, which requires the use of a Quantification Method, a project application and the recognition of the co-processing project. While the number of credits created based on the production of co-processed fuels in 2024 was a small portion of the total number credits created that year, the production of co-processed fuels at refineries has the potential to increase significantly in future years. This, in turn, would be expected to increase the demand for low-carbon intensity fuel feedstock such as canola oil.

Credits can be created in respect of gaseous low-carbon intensity fuels produced and imported for use in Canada (i.e. biogas, renewable natural gas, hydrogen, renewable propane). These gaseous credits can be used to satisfy up to 10% of a primary supplier's annual reduction requirements.

ECCC is seeking input on which fuels should be in scope for the targeted amendments.

<b>Key questions on scope</b>
9. Which fuels should be in scope?
10. What considerations should inform which fuels would be in scope?

### Special circumstances and exemptions

Depending on the design, it may be relevant to consider the regional variations and different circumstances of certain primary suppliers, such as exclusive importers.

If we take the example of minimum domestic content requirements, a minimum threshold for the obligated gasoline and diesel pools could be set to exempt lower volume suppliers. Alternatively, another option could be to calculate the minimum domestic content requirements as a function of the size of a primary supplier's obligated pool<sup>3</sup>.

Depending on the approach taken, ECCC may also consider further compliance flexibility as part of the targeted amendments. For example, a mechanism to mitigate potential risks to fuel supply could be considered in a scenario where there was insufficient domestic low-carbon intensity fuel supply to comply with the CFR requirements due to unforeseen circumstances.

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<sup>3</sup> An obligated pool refers to the total volume of gasoline or diesel that was produced or imported into Canada during a given compliance period, excluding volumes eligible for exemption as referred to in Section 8 of the CFR.

**Key questions on special circumstances & exemptions**

11. If minimum domestic content requirement or other mandatory requirements are set, should the requirement be the same for all primary suppliers?
  - Are there specific criteria, considerations or circumstances that could justify setting different requirements that should be taken into account?
12. Should the requirements be set only above a minimum volume threshold (i.e. domestic requirements would only apply to primary suppliers who supply more than a minimum amount of gasoline or diesel)?
  - If so, what threshold do you recommend?
13. Should the requirements be progressive and / or be calculated as a function of the size of the primary supplier's obligated pool (e.g. lower percentage of domestic content requirement for small pool vs higher percentage of domestic content requirement for big pool)?
14. Should a special clause or mechanism be integrated in the amendments to provide additional flexibility in the case where the domestic low-carbon intensity fuel supply is insufficient to meet the minimum domestic content requirement?
  - How should this be designed?

Maintaining focus on emission reductions and transition to a low-carbon economy

The primary objectives of the CFR are to reduce GHG emissions by reducing the lifecycle carbon intensity of gasoline and diesel produced and imported for use in Canada, and transition to a low-carbon economy. The targeted amendment will maintain these primary objectives. To do so:

- the targeted amendment will ensure the Canadian market is able to continue supplying material and reliable quantities of low-carbon intensity fuel and can continue to deliver significant emission reductions;
- credits for all low-carbon intensity fuel will continue to be created based on the life cycle carbon intensity determined using the Fuel LCA Model to reward fuels with the lowest carbon intensity;
- low-carbon intensity fuels (those derived from biomass) will continue to be subjected to the land use and biodiversity criteria of the CFR.

**INFORMATION REQUESTED**

ECCC is gathering data and undertaking analysis to ensure that the targeted amendments will support Canada's low-carbon fuel sector while maintaining the Regulations' primary focus on lowering carbon emissions. To support this, ECCC invites stakeholders with access to relevant information and data to share this with ECCC, including the data and inputs outlined below.

**Additional input requested**

15. For primary suppliers, what are your constraints to obtaining Canadian-made low-carbon intensity fuel (e.g. transport, contracts, geographical concerns, specific constraints related to blending, etc.)?
  - What percentage of the CFR regulated volumes for gasoline and diesel do you think is achievable and why?
16. If physically procuring domestic low-carbon fuel is challenging, are there constraints to obtaining the credits created based on the production of domestic low-carbon fuels from the credit market instead?
  - If so, what are these?
17. For low-carbon intensity fuel producers, what measures would be sufficient to ensure you can continue to produce or stay competitive?

18. Recognizing this may vary by approach, how much time would you need after the publication of the amendments in *Canada Gazette*, Part II to implement the changes required in the amendments?
19. Do you have any other information or considerations to support the development of these targeted amendments to the CFR?

#### NEXT STEPS

The Government of Canada plans to move quickly to advance these amendments.

Your input is important as ECCC's develops this amendment. Please submit your written comments on the above key considerations and questions **by January 15, 2026**.

**Comments may be submitted by email to the following address:**

**Lisa Ryan, Acting Executive Director, Low Carbon Fuels Division**

**Email: [cfsncp@ec.gc.ca](mailto:cfsncp@ec.gc.ca)**

Building on the feedback received on this paper and through further consultations, ECCC will publish draft amendments in *Canada Gazette, Part I*. Only comments related to these targeted amendments will be considered at this time.

As a next step in the Government's commitment to further examine concerns raised about potential compliance risks related to imported low carbon fuel feedstocks used for the CFR, including used cooking oil (UCO), the Government will assess the verification and certification requirements in other jurisdictions, as well as best practices regarding traceability, tracking, and data management across feedstock supply chains. ECCC welcomes input on other actions or steps relating to the treatment of imported low carbon fuel feedstocks, including UCO.

**ANNEX I**  
**VOLUME OF LIQUID LOW-CARBON INTENSITY FUELS UNDER THE CFR**

Table 1: Volumes of Liquid Low-carbon intensity Fuels Used to Create Credits from 2022 to 2024

	2022 (from June 21 to December 31)		2023		2024	
Fuel	Produced in Canada (ML)	Imported (ML)	Produced in Canada (ML)	Imported (ML)	Produced in Canada (ML)	Imported (ML)
Ethanol	883	1,055	1,669	2,350	1,648	2,592
HDRD	0	502	Confidential	1,244	164	1,299
Biodiesel	5	299	14	517		448
Other Liquid Low-Carbon Intensity Fuel*						41
Biogas and Renewable Natural Gas**	31,186***		94,333***		139,171	110,362

\*Other Liquid Low-Carbon Intensity Fuels include low-carbon intensity fuel that is suitable for use in aviation and self-declared low-carbon intensity fuels (e.g. pyrolysis oil)

\*\*Includes biogas used to produce electricity

\*\*\*Production in Canada and import of fuels combined for confidentiality reasons

**ANNEX II**  
**SNAPSHOT OF CANADA LOW-CARBON INTENSITY FUEL SECTOR**

Canada’s low-carbon intensity fuel production is split between a relatively small number of facilities.

Table 2: Low-carbon intensity Fuel Production Facilities in Canada

Fuel Type	Number of Facilities	Location	Production Capacity (ML)	2024 Annual Production (ML)
Ethanol	12	AB, SK, MB, ON, QC	1,869	1,756**
Biodiesel	6	BC, AB, ON, QC	650	1,119**
HDRD	3	BC, AB, NFL	2,380	
Co-processed low-carbon intensity diesel*	6	Confidential	238	Confidential
Co-processed low-carbon intensity gasoline*	4	Confidential	371	Confidential
Renewable natural gas***	43	AB, BC, ON, QC	558,244	-

\*For low-carbon intensity co-processed fuels, the number of facilities corresponds to the number of refineries that have indicated interest in co-processing by 2030. The production capacity of co-processed low-carbon-intensity diesel and co-processed low-carbon-intensity gasoline is an estimate of the co-processed low-carbon intensity fuels that could be produced by these refineries.

\*\*Statistic Canada, Table 25-10-0081-01

\*\*\* Canadian Gas Association, Innovation Hub. Facilities in operation in 2025 or before. The following energy density were used for conversion: 38 MJ/m<sup>3</sup>.

*Ethanol*

Ethanol represents Canada’s largest volume of low-carbon intensity fuel production, with a capacity of 1,869 ML across 12 facilities. Canada does not currently produce enough ethanol to meet the total domestic demand; 38% of the volume of ethanol used to create credits in 2024 was produced in Canada. While Canada’s ethanol production has been stable in recent years, Canadian ethanol sector has indicated it may start experiencing competitiveness problems in the near term. With policy changes passed in summer 2025 in the US, US-produced ethanol exported to Canada will now be eligible to

receive US tax incentives, potentially making it harder for Canadian producers trying to compete on the Canadian market.

### *Biodiesel*

Canada has six biodiesel facilities and sufficient domestic biodiesel production capacity to meet the current total domestic demand. However, until 2024, most of the biodiesel produced in Canada was exported to United States and was eligible to benefit from the now cancelled US Blender's Tax Credit, where both biodiesel and renewable diesel imported into and produced in United States received a US\$1 per gallon tax. Therefore, most of the biodiesel used in Canada was imported. The Inflation Reduction Act (IRA) replaced the Blender's Tax Credit with the Section 45Z Clean Fuel Production Credit in 2025, which only applies to biodiesel and renewable diesel produced in United States, regardless of whether the fuel is used in United States<sup>4</sup>. The IRA tax credit made it virtually impossible for Canadian production to compete on the US or Canadian market, resulting in a temporary shut-down of several facilities.

However, recent actions taken by Provinces are starting to have an impact. As a result of the production tax credit in Quebec and the recent regulatory amendments in British Columbia and Ontario, some biodiesel facilities are resuming production. In the second quarter of 2025, four biodiesel facilities produced biodiesel in Canada and created CFR credits.

### *Renewable Diesel*

Canada's renewable diesel industry is nascent. There are three domestic production facilities, including one that focuses on exports and another one that just started production in Summer 2025. Prior to the first Canadian facility starting production in 2023, all volumes of renewable diesel were imported.

### *Co-Processing in Refineries*

Low-carbon intensity feedstock (e.g. canola oil) may be co-processed along crude oil at existing refineries to produce co-processed low-carbon intensity fuels (e.g. co-processed low-carbon intensity diesel, co-processed low-carbon intensity gasoline). Co-processing projects at four different refineries have been approved for credit creation under the CFR. In total, six refineries have indicated their interest in co-processing by 2030.

### *Low-carbon intensity gaseous fuels*

There are currently 48 active Canadian facilities registered under the CFR, which produce biogas, renewable natural gas, hydrogen or renewable propane, but only 34 facilities have created credits to date. In 2024, 1.3% of the credits created were for low-carbon-intensity gaseous fuels. Many registered creators currently use default carbon intensity values that result in no or only a few credits. The number of credits is expected to increase in future years as carbon intensities determined with the Fuel LCA Model are more commonly used to create credits and new facilities come online.

The installed capacity of low-carbon intensity gaseous fuels is expected to grow quickly over the next few years. For instance, the Canadian Gas Association projects that the renewable natural gas capacity will grow from 9.3 PJ (244,737 ML) in 2023 to 28.9 PJ (760,526 ML) in 2026. There are also several hydrogen projects under development<sup>5</sup>.

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<sup>4</sup> <https://www.eia.gov/todayinenergy/detail.php?id=66045>

<sup>5</sup> [CER – Market Snapshot: Hydrogen update—a small molecule's role in Canada's energy system](#)

*Feedstocks*

About 41-66% of liquid low-carbon intensity fuels produced in Canada that create CFR credits is produced from Canadian feedstock, such as canola and corn. For domestically produced renewable diesel and biodiesel, 90% of the fuel was produced from Canadian canola.

*Demand*

Demand for ethanol and biomass-based diesel has grown significantly in recent years, driven by provincial and territorial policies, as well as the CFR. This demand is projected to continue to grow out to 2030 (Table 3).

Canadian production capacity of ethanol and co-processed low-carbon intensity gasoline represents 37% of the expected ethanol demand in 2030. Canadian production capacity of biodiesel, renewable diesel and co-processed low-carbon intensity diesel represents 59% of the expected biomass-based diesel demand in 2030.

Table 3: Forecasted Liquid Fuel Demand (ML) in Canada from 2022 to 2030\*

Fuel Type	2022	2023	2024	2025	2026	2027	2028	2029	2030
Gasoline	38,339	43,450	43,080	42,317	41,313	40,201	38,965	37,642	36,276
Ethanol	2,502	2,960	3,783	4,432	4,930	5,453	5,868	6,153	6,032
Diesel	31,953	31,631	30,200	29,426	28,905	28,399	28,262	27,966	27,938
Biomass-based Diesel	928	938	2,302	3,205	4,008	4,651	4,978	5,400	5,549

\*From 2024 ECCC reference case. The following energy densities were used for conversion: 34,690 MJ/m<sup>3</sup> for gasoline, 23,419 MJ/m<sup>3</sup> for ethanol, 38,650 MJ/m<sup>3</sup> for diesel, 35,183 MJ/m<sup>3</sup> for biomass-based diesel.