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Report Highlights:

This report was re-issued in February 2025 to capture revisions to 2024 U.S. renewable diesel import data derived from the U.S. Energy Information Agency. Rising ethanol use and blending continued in 2025, supported by the carbon credit exchange and provincial policies. The same was true for renewable diesel and biodiesel in 2024 and expected in 2025. Fuel ethanol consumption in 2025 is forecast to be 52 percent higher than 2021 levels (pre-CFR); biodiesel and renewable diesel are forecast to be 20 percent and 275 percent higher, respectively. Canada's third, and largest, renewable diesel plant began operation in July 2025, bringing capacity up from 994 ML in 2024 to 2,380 ML. Renewable diesel exports to the United States began in June 2024. There is significant uncertainty for Canada's biofuel production and international trade given imminent changes in U.S. and Canadian federal biofuel policies, and due to provincial domestic content requirements introduced in 2025.

THIS REPORT CONTAINS ASSESSMENTS OF COMMODITY AND TRADE ISSUES MADE BY USDA STAFF AND NOT NECESSARILY STATEMENTS OF OFFICIAL U.S. GOVERNMENT POLICY

Acronyms Used in this report

BC-LCFS - British Columbia Low Carbon Fuel Standard

BTC - Blenders Tax Credit

BBD - Bio-based diesels

CFR - Clean Fuel Regulations

CI - Carbon intensity

CO2 - Carbon dioxide

ECCC - Environment and Climate Change Canada

EPA - U.S. Environmental Protection Agency

FCC - Fluidized catalytic cracking

HDRD - Hydrogenation-Derived Renewable Diesel

IRA – Inflation Reduction Act

LUB – Land use and biodiversity

LCA – Life cycle assessment

LCFS – Low Carbon Fuel Standard

ML – Million liters

MT – Metric tons

MMT – Million metric tons

OBBBA - One Big Beautiful Bill Act

RFS – Renewable Fuel Standard

RIN – Renewable identification number

RD - Renewable diesel

CANADA BIOFUELS ANNUAL

SECTION I. EXECUTIVE SUMMARY

After years of little change, ethanol and renewable diesel (Hydrogenation-Derived Renewable Diesel/ HDRD-type) use is up sharply. Year-over-year, an increasing proportion of energy demand is met by fuels with lower carbon intensities than the fossil fuels they replace, in large part because of Canada's Clean Fuel Regulations (CFR), which became law on July 6, 2022. Carbon-intensity (CI) reduction requirements in fossil fuels came into effect on July 1, 2023, but an early credit creation mechanism that occurred between June 21, 2022, and June 30, 2023, incentivized growth in ethanol blend rates in 2022, and later blend rates for biomass-based diesel (BBD).

FAS/Ottawa estimates a 52 percent increase in fuel ethanol consumption in 2025 over 2021 (pre-CFR) levels, driven by the CFR, a regulation that boosts ethanol consumption across the country by incentivizing the use of low-CI fuels like ethanol by providing credits to the suppliers who blend it into gasoline, thereby increasing demand for ethanol to meet requirements. Increased consumption is also driven by new blend rate requirements in Ontario and Quebec (the most populated provinces in Canada), and British Columbia's Low Carbon Fuel Standard (LCFS), which works similarly to the CFR by incentivizing the use of lower-CI fuels like ethanol to meet requirements.

In 2024, fuel ethanol imports grew 2.3 percent over the previous year and are forecast to increase an additional three percent in 2025. Ethanol imports as percentage share of consumption averages 45 percent for the period 2016 to 2022. In 2024, that share elevated to a record 59 percent. Canada is the second largest ethanol importer in the world, and the United States' largest export market.

In 2024, combined domestic biodiesel and renewable diesel consumption grew by 10 percent over the previous year on CFR obligations for fuel suppliers and blend rate requirements in Ontario and Quebec. Canada's biodiesel sector is extremely responsive to U.S. regulation with virtually all imports arriving from the United States. Notable influences on Canadian biodiesel investment and sales decisions are the U.S. Blenders Tax Credit (BTC), and U.S. RIN values (Canadian biodiesel generates RINs because the U.S. EPA approved their production pathways to meet RFS renewable fuel obligations).

As a share of the diesel pool, biodiesel consumption has stagnated through the years and decreased in 2024 over the previous year. HDRD consumption as a share of the diesel pool saw an increase in 2024 and Post forecasts an additional increase in 2025. Further, Canada has for a long time seen the highest use of HDRD as a share of total bio-based diesel (BBD – biodiesel and renewable diesel), running an average 53 percent for the period 2015 to 2022. HDRD's share of BBD has since skyrocketed to 72 percent in 2023 and 80 percent in 2024.

HDRD consumption surpasses biodiesel because it does not require a separate supply chain (nor the costs associated with it) and it has a lower CI score than biodiesel. HDRD is favored in urban areas as it is a cleaner fuel with less toxins than diesel and biodiesel. And, finally, HDRD performs like fossil diesel much better than biodiesel in Canada's cold climate.

Canada began producing renewable diesel for the first time with the first facility coming online in November 2023, and a second in February 2024. A third facility came online in July 2025. Total capacity grew from nothing in 2022 to 2.4 billion liters in 2025. One of those facilities exports all of its production to the United States. With this new domestic supply, Canada exported renewable diesel, for the first time in June 2024, to the United States. Exports reached 450 million liters (ML) by the end of the year.

Exports of biodiesel ramped up in the final months of 2024 as industry took advantage of the U.S. blenders tax credit (BTC) which expired in December 2024. Subsequent to the expiration, there is significant uncertainty in the fuel and feedstock markets. Changes in U.S. federal tax credits have had implications for North American biofuel production and U.S.-Canada trade.

The U.S. Clean Fuel Production Tax Credit (45Z) does not apply to imported renewable fuel from Canada, unlike the preceding U.S. BTC, which all Canadian biodiesel producers benefited from since its implementation in 2004. Canadian industry points to the expiry of the BTC and the establishment of 45Z as a reason for the temporary shuttering of biodiesel facilities in Canada.

In response to 45Z, Canadian federal and provincial levels of government are exploring options to "level the playing field." Two provinces have already established "made in Canada" rules that require fossil fuel suppliers to purchase some of their renewable fuel from Canadian producers.

SECTION II. POLICY AND PROGRAMS

A. Renewable Energy and Greenhouse Gas Emissions

Canada's Environment and Climate Change Canada states that in 2023,[1] Canada emitted 694 million metric tons (MMT) of carbon dioxide equivalent (CO2 eq) greenhouse gas (GHG) emissions, a decrease of 6 MMT (-0.9 percent) from revised 2022 emission levels[2] and a decrease of 65 MMT (-8.5 percent) from 2005. The emissions intensity for the entire Canadian economy (GHG per gross domestic product [GDP]) has continued to decline; in 2023 it had declined by 34 percent since 2005. Canada's *National Inventory Report on GHG Emissions* states that transportation was the second largest emitter of GHG emissions in 2023, with 195 MMT CO2e, indicating no change from the previous year.

Canada submitted its revised Nationally Determined Contributions (NDC) under the Paris Agreement in February 2025, which included a target to reduce emissions by 45-50 percent below 2005 levels by 2035, building on the 2030 target of 40-45 percent below 2005 levels. The Canadian Net-Zero Emissions Accountability Act, which became law on June 29, 2021, states that the government is committed to achieving net-zero emissions by 2050.

Under the United Nations Framework Convention on Climate Change (UNFCCC), Canada prepares and submits to the Secretariat a National Inventory Report on GHG Emissions on an annual basis, a Biennial Report on Canada's progress in achieving emission reductions and provisions of

financial, technological, and capacity building support to developing countries, and a quadrennial National Communications report.

In a June 2022 news release, Environment and Climate Change Canada (ECCC) stated that Canada's Clean Fuel Regulation (CFR) "will help cut up to 26.6 MMT of greenhouse gas pollution in 2030."

British Columbia's annual Renewable and Low Carbon Fuel Requirements Summary for 2024 reports that the British Columbia Low-Carbon Fuel Standard (BC-LCFS) alone resulted in the avoidance of 4.99 MMT of GHG emissions in 2024, an increase from the 3.7 MMT avoided in the previous year. Hydrogenation-Derived Renewable Diesel (HDRD)[1] was the major contributor, avoiding 2.8 MMT of CO2 in 2024 (1.8 MMT in 2023). In 2024, British Columbia was the largest consumer of renewable diesel[2] and biodiesel[3] in Canada. It is the fourth largest consumer of ethanol.

B. Policy & Programs: Federal Level Policy/Mandates

Clean Fuel Regulations: The main federal policy driving Canada's biofuels market is the CFR, which became law on July 6, 2022. It limits the carbon intensity (CI)[4] level of gasoline and diesel for each compliance period (effective beginning July 1, 2023 and ending December 31, 2030) and retains the minimum volumetric requirements of renewable fuel from the previous regulation, the Renewable Fuels Regulations (RFR). The volume and CI obligations set by ECCC are the main drivers for overall biofuel growth rates because they obligate national consumption demand, while the "stacked support" from provincial policies and tax credits help bridge the cost gap with fossil fuels.

The CFR regulates the minimum volumetric requirements of at least five percent low-CI fuel content in gasoline and two percent low-CI fuel content in diesel fuel and light fuel oil. While important years ago when provincial blend rates were lower, upward adjustments at the provincial level more recently mean that federal mandates are now only seen as a safeguard measure that creates a minimum floor. While the actual national average blend levels are now well above the mandated federal rate, there are localities that remain at the minimal federal rates.

A September 5 announcement by Prime Minister Carney on a range of measures across Canadian industry included incentives for biofuel producers. In the immediate term, Canada will introduce a time-limited Biofuels Production Incentive for renewable diesel and biodiesel producers and work with provinces and territories to explore complementary measures. This incentive will be provided on a per liter basis to Canadian producers of biodiesel and renewable diesel and will be available from January 2026 to December 2027 for up to 300 ML per facility. Natural Resources Canada will provide more details about the program in the coming weeks.

The government also announced that it intends to amend the CFR to "strengthen the resiliency and support the development of Canada's low-carbon fuel sector, while maintaining the CFR's primary focus on lowering carbon emissions." On December 3, it released a discussion paper that explains the options it might pursue. The two options being explored include:

3. **The 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.

4. **Minimum domestic content approach**: 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.

Canadian industry states that these options will help level the playing field between Canada and the United States, as long as the latter has the U.S. Clean Fuel Production Tax Credit (45Z) and a potentially forthcoming ruling that allows U.S. fuel producers to generate twice as many Renewable Identification Numbers (RINs) as imported fuel. Canadian industry stakeholders that Post spoke with preferred the credit multiplier option.

Written comments are due to ECCC by January 15. Building on the feedback received, ECCC will publish draft amendments in Canada Gazette, Part I, which is a public notice that invites feedback from stakeholders. The final regulations will then be published in Canada Gazette, Part II.

The CFR has faced opposition from the Conservative Party of Canada, the Official Opposition in the Canadian Parliament. The lexicon of the leader of the official opposition was that the country faced not only a consumer carbon tax, but also "a second carbon tax" (i.e. the CFR). However, subsequent to the cancellation of the carbon tax in 2025, industry members have expressed that the CFR is now under less of a threat of cancellation. The renewed optimism over the CFR's future is positive news for U.S. exporters of renewable fuel, who have seen an increase in renewable fuel exports to Canada since the CFR came into force.

Carbon tax: Canada had a federal consumer-facing carbon tax in place since January 2019, but on April 1, 2025 the government terminated the tax, which was applicable in all provinces that did not have their own levy. At the time of its introduction, the levy was seen as an effective way to ensure reduced emissions over the long term. At the time of its termination, the federal carbon tax equated to about CAD 20 cents per liter tax on the diesel pool, CAD 17.6 cents per liter tax on the gasoline pool, and about CAD 20 cents per liter tax on interprovincial jet fuel (flights between provinces).

After the termination of the federal carbon tax, provinces followed suit by terminating their own carbon pricing, and Saskatchewan took the additional step of terminating its industrial carbon pricing system. Quebec remains the only province in Canada to have a carbon pricing system (its cap-and-trade system). Unlike the federal carbon tax, which returned all of its proceeds to consumers in the form of direct bank deposits, Quebec invests most of the revenue generated by its carbon market into climate action programs.

Carbon Credit Trading System: To meet the CFR's annual CI reduction requirements, primary suppliers of fossil fuel (the obligated party) must demonstrate compliance by either creating credits or buying carbon credits from other creators in Canada's new carbon credit market. Each carbon credit represents fuel lifecycle emission reduction of one ton of carbon dioxide equivalent. The credit trading system does not have any interactions with other trading systems.

The CFR establishes a compliance credit market whereby the annual CI reduction requirements can be met by creating credits through three categories of actions:

Compliance Category 1 – projects that reduce the life cycle CI of liquid fossil fuels (e.g. carbon capture and storage (CCS), on-site renewable electricity);[3]

Compliance Category 2 – supply of low-carbon-intensity fuels (e.g. ethanol, biodiesel); and,

Compliance Category 3 – supply of fuel or energy to advanced vehicle technology (e.g. electricity or hydrogen in vehicles).

U.S. suppliers create credits for Canadian importers when U.S. fuel is imported into Canada. Only registered Canadian participants are credit generators. By lowering their CI, U.S. suppliers make their product more attractive to registered Canadian participants.

Early credit creation was available for the period of June 21, 2022, to July 1, 2023. The first credit creation reports were due June 30, 2023, at which point ECCC received data on credits created for the 2022 compliance period. The coming-into-force date of CI limits was July 1, 2023.

The CFR requires fossil gasoline and diesel primary suppliers (producers and importers) to reduce the CI of the fossil gasoline and diesel they supply to Canada as indicated by the CI limits in the table below. As a baseline, gasoline had a CI of around 91.5 gCO2e/MJ in 2023, and diesel had a CI of around 89.5 gCO2e/MJ.

Table 1: Fuel Carbon-intensity limits for each compliance period (gCO2e/MJ)

Liquid Fossil Fuel	2023	2024	2025	2026	2027	2028	2029	2030
Gasoline	91.5	90.0	88.5	87.0	85.5	84.0	82.5	81.0
Diesel	89.5	88..0	86.5	85.0	83.5	82.0	80.5	79.0

Source: ECCC, CFR

The fuel CI limit for gasoline is required to reach 81.0 gCO2e/MJ by 2030. Canada estimates that about 2.2 billion liters of additional low-CI diesel and 700 ML of additional ethanol will be needed by 2030 (over 2022 volumes) under the CFR.

ECCC publishes national average CI values, credit creation data, and credit transfer data in its Credit Market Report. The first report was published in June 2024, and the second was published in July 2025 (covering Q1 to Q4, 2024). ECCC aspires to achieve quarterly frequency with its publication

beginning in the coverage period of Q2 2025, released in October, 2025. Data from each of the two published reports is compiled in the table below.

Table 2: CFR compliance credit transfers and values

CFR Compliance Periods	Number of transfers of compliance credits with a price	Compliance credits Transferred with a price (t CO2e)	Average credit price (CAD$)	Minimum credit price (CAD$)	Maximum credit price (CAD$)
2022	77	1,222,594	141.80	9.77	300.0
2023	163	1,780,206	127.30	6.75	300.0
2024 - Q1	56	611,307	150.28	6.75	280.0
2024 - Q2	101	1,042,566	166.42	9.78	263.1
2024 - Q3	85	77,019	162.34	3.52	280.0
2024 - Q4	105	918,917	149.24	3.52	265.0
2025 - Q1	89	1,216,717	93.08	1	280.0

The high price of credits under the CFR is primarily driven by an imbalance between supply and demand, with demand currently exceeding available credits. Other contributing factors include rising compliance requirements, the high cost of creating new low-carbon fuel projects, and market immaturity.

Sources close to industry indicate that the credit value for one metric ton of CO2 equivalent was averaging around US $229 (CA $320) in September 2025 and edged higher in the first week of October. This is an increase from the credit price average of approximately US $ 106.63 (CA $149.24) in Q4 2024, as reported by ECCC.

By comparison, the price of a California LCFS credit was around US $48 per metric ton in July 2025, firming up to US $57 per metric ton as of mid-October following the abandonment of a controversial price ceiling proposal and the July 1 implementation of a tightening of program balances. Prices have been on a decline since 2021, falling from around US $185 per ton in 2019. As the largest market of its kind, California's program is more liquid and attracts more traders than smaller programs like Canada’s or British Columbia’s.

Life Cycle Assessment Model: Canada's Fuel Life Cycle Assessment (LCA) Model is a tool used to calculate the lifecycle CI of fuels and energy sources used and produced in Canada. Its LCA tool is unique to Canada, and specifically the CFR. Notably, it does not currently differentiate between canola and soybean oil (i.e. they receive the two feedstocks each receive same CI score).

Canada’s Fuel LCA Model does not include Indirect Land Use Change (ILUC) in its default CI calculations (it does include direct land management effects such as soil organic carbon where applicable). That means direct CI numbers from the Canadian model are comparable to the

U.S. GREET (Greenhouse gases, Regulated Emissions, and Energy use in Technologies) direct CI outputs, but will be lower than California LCFS calculations that append CARB (California Air Resource Board) ILUC defaults for soy/canola, unless Canada explicitly adopts ILUC in its calculation, which it has no intention of doing.

Co-processed fuel and the CFR: Co-processed fuels are produced by processing renewable feedstocks, such as vegetable oils and animal fats, alongside crude oil in existing refinery infrastructure like Fluidized Catalytic Cracking (FCC) units. This "drop-in" fuel technique allows refineries to rapidly increase production of low-CI fuels by leveraging existing infrastructure, making it a key strategy for creating renewable fuels that meet existing product standards and help Canada meet its climate goals. Co-processing is only incentivized federally under the CFR, not under provincial policy. Major players like Parkland Corp and companies in British Columbia are actively co-processing. Conversely, in the United States, coprocessing does not qualify for a 45Z tax credit and is not as incentivized as it is in Canada.

The quantification method for co-processing in refineries is intended for use by registered creators applying to have a CO2e Emission Reduction Project recognized to create credits under the Clean Fuel Regulations. Credits can be created under the CFR with this quantitative methodology through the production of a co-processed low-CI fuel produced from low-CI feedstocks combined with petroleum at a refinery. This QM covers two types of co-processing projects eligible for credit under the Regulations: co-processing in a hydrotreater and co-processing in an FCC unit.

Sustainable Aviation Fuel: Under Canada's CFR, aviation fuel suppliers can generate credits for using low-carbon aviation fuels like Sustainable Aviation Fuel (SAF), rewarding lower CI fuels with credits tradable to obligated parties to meet mandates, incentivizing a shift away from fossil fuels and fostering a low-carbon industry. However, the CFR does not mandate the use of low carbon aviation fuel. Challenges remain in scaling production affordably.

Parkland produced Canada's first batch of low-carbon jet fuel in late 2024 through co-processing. Jet fuel standard ASTM D1655 limits the amount of approved renewable feedstocks to five percent in low-carbon jet fuel. The company is working alongside several other industry experts to increase the limit of approved renewable feedstocks from five percent up to 30 percent or more.

Marine Fuel: Similar to low-carbon aviation fuels, marine fuel suppliers are not obligated to lower their CI under the CFR. While primarily focused on road transport gasoline/diesel, the CFR principles and credit-generating pathways (like low-CI fuels, CCS, advanced tech) apply broadly, creating incentives for marine fuel innovation, e.g., using renewable methanol eligible for credits. The Government of Canada is actively seeking low-carbon marine fuels for its own fleet, informing its strategy.

C. Environmental Sustainability and Certification: The CFR contains land use and biodiversity (LUB) criteria, and the International Sustainability and Carbon Certification's (ISCC) has released an optional certification scheme to prove compliance. Further, the CFR has criteria around used

cooking oil, and general report verification. Each of these requirements and certifications are described below. Further, biofuels are required to meet minimum GHG emissions reductions over their fossil fuel equivalent, which can vary by province and from federal government requirements. Provincial regulations are specified in the *Policy & Programs: Provincial Level Policy/Mandates* section of this report.

LUB Criteria: Canada has LUB criteria that currently applies to domestically grown and imported feedstocks. The objective of the LUB criteria is to minimize negative environmental impacts from harvesting, cultivating, and producing low-carbon feedstocks for renewable fuels.

To ensure that all the feedstock eligibility requirements are met, documentation must show that feedstock meets the LUB criteria, compliance credits allocated to the low-carbon feedstock producer must be accurate, and traceability methods need to be in place throughout the supply chain. This latter requirement involves the completion and tracking of farmer declaration forms through the supply chain.

On November 9, 2023, ECCC publicly announced that it approved the U.S. application for legislative recognition which demonstrates that U.S. feedstocks are in compliance with the LUB criteria under the CFR. Without legislative recognition, individual farmers or states would have had to prove their own compliance, as of the January 1, 2024 coming-into-force date for renewable fuel feedstocks to meet LUB criteria. With the approval of the U.S. application, Canada acknowledges that U.S. feedstocks are in compliance with the wildlife habitat and the damaging agents sections of the LUB criteria and can generate credits under the CFR. Exporters to Canada are still required to complete farmer declaration forms, despite aggregate compliance, just as Canadian industry does.

International Sustainability and Carbon Certification: In June 2025, ECCC announced the recognition of ISCC Canada CFR as a certification scheme approved under section 62 of the CFR to serve as an optional mechanism to assert that a feedstock used to produce low-CI fuel is compliant with the LUB criteria.

The use of certificates is only applicable to feedstocks deemed eligible for the creation of compliance credits under paragraph 46(1)(c) of the CFR, which are those derived from agricultural or forest biomass and not derived from any materials or sources listed in paragraph 46(1)(b), and that meet the LUB criteria set out in sections 48 to 52 of the CFR.

ECCC's Low Carbon Fuels Division has published information pertaining to the approved certification scheme on the Clean Fuel Regulations (CFR) Google Drive: 9 – Verification and Certification: 9.1 Certification.

Criteria around used cooking oil: In June 2024, ECCC provided information on the LUB criteria under the CFR with respect to used cooking oil (UCO) feedstock, specifically subsection 46(1)(b)(v) as it pertains to the indirect changes to land use criteria (subsection 50(1) of the CFR).

For UCO feedstock, the low-CI fuel producer must demonstrate that UCO feedstocks are Type 2 (i.e., meeting 46(1)(b)(v)) and therefore proving with reasonable level of assurance that it is a waste product coming out of an upstream processing operation. Low-CI fuel producers must ensure that collection points retain records of contracts, delivery records, invoices, etc. from where all UCO feedstocks are sourced. The objective of this criterion is to crack down on virgin oil that is fraudulently presented as used, particularly palm oil.

Palm-derived UCO is something Canada supports and provides incentives for, as a fuel carbon credit generator, even if it is derived from (used) palm oil. In fact, the LCA tool used by British Columbia and other provinces, (GHGenius), incorporates palm oil into its model.

ECCC has yet to publicly state how it may account for mislabeled and fraudulent virgin oils blended with UCO, and what checks they may enact for that. It is not required for the low-CI producer to determine the specific composition of the originating material that the UCO mix is derived from (e.g., palm, corn, canola, etc.).

Third-party verification: Several reports required of industry under the CFR mandate third-party verification, including annual credit creation reports for the supply of fuels and CO2e emission reduction projects, applications for a temporary approval of carbon-intensity for low carbon-intensity fuels, quarterly credit creation reports for the production or import of eligible low-carbon-intensity fuel, and more.

D. Policy & Programs: Provincial Level Policy/Mandates

Canada allows for various provincial blending rates in addition to federal mandates, provided they do not fall below the federal rates. Federal Renewable Fuels Regulations for gasoline came in effect in December 2010 at five percent renewable content, and diesel in July 2011 at two percent renewable content. Provincial regulations vary, while Newfoundland, the territories, and regions north of the 60-degree latitude are exempt.

Table 3: Low carbon fuel mandates in 2025

Region	% low-carbon fuel content in gasoline	% low-carbon fuel content in diesel
Federal Backstop	5	2
Ontario	11	4
Quebec	12	5
British Columbia	5	8
Alberta	5	2
Saskatchewan	7.5	2
Manitoba	10	5

The impact of provincial mandates on the national market varies to a considerable degree due to differences in market size. Ontario and Quebec continue to account for the largest share of net national gasoline sales, with Ontario accounting for 39 percent in 2024 and Quebec accounting for 19 percent. Alberta accounted for 15 percent.

Ontario and Alberta continue to account for the largest share of national diesel sales, with Ontario accounting for 30 percent in 2024 and Alberta accounting for 21percent. Quebec accounted for 19 percent

Domestic Policy: British Columbia

The CleanBC program is British Columbia's climate action plan to reduce GHG emissions, meet climate targets, and build a cleaner economy. A key component of CleanBC is the Low Carbon Fuel Standard (BC-LCFS), which mandates the reduction of transportation fuel's carbon intensity by 30 percent from a 2010 baseline by 2030.

Effective January 1, 2024, the Low Carbon Fuels Act replaced the Greenhouse Gas Reduction Act established in 2008. The Low Carbon Fuels Act and its regulations are together known as the BC-LCFS. The BC-LCFS became effective in June 2022, which increased the CI reduction requirement from 20 percent to 30 percent by 2030 in transportation fuels and increased the penalty rate for non-compliance with the CI requirements from $200 per ton to $600 per ton.

The program sets annual CI reduction targets for suppliers of fossil fuels and becomes increasingly stringent over time, reinforcing the transition to low-carbon fuels, at least in the transportation sector. As a market transformation policy, the BC-LCFS creates a financial incentive to reward the use of low carbon fuels in proportion to the amount of measurable GHG reductions they yield when substituted for conventional fuels.

Like the CFR, the carbon level of fuel is assessed across the full production and delivery chain (i.e. across the life cycle of the fuel). Unlike the federal government, British Columbia uses the GHGenius LCA tool. Similar to CFR's LCA tool, GHGenius does not include ILUC. While the ECCC LCA tool does not currently differentiate between canola and soybean oil, GHGenius, includes regional variations and there can be quite a large difference in the scores depending on the region or the level of aggregation.

The BC-LCFS requires that suppliers of fossil-derived fuels meet the following standards each year:

Table 4: British Columbia's low-carbon fuel content mandates

Fuel type	2024	2025	2026	2027	2028	2029	2030 onward
Gasoline	5%	5%	5%	5%	5%	5%	5%
Diesel	4%	8%	8%	8%	8%	8%	8%
Jet fuel	0%	0%	0%	0%	1%	2%	3%

Source: Government of British Columbia

In December 2023, British Columbia announced that fuel suppliers are required to include one percent sustainable aviation fuel (SAF) in their aviation fuel by 2028, through its BC-LCFS, increasing to two percent by 2029 and three percent by 2030. This groundbreaking mandate makes British Columbia the first jurisdiction in North America to implement such a requirement. British Columbia's regulations also mandate specific CI reductions for jet fuel, starting at two percent in 2026 and progressing to a ten percent reduction by 2030. The expected volumes of SAF are 22 ML in 2028, 44 ML 2029, and 66 ML in 2030.

The BC-LCFS is smaller than the CFR market, which means liquidity is an issue and there is a limited quantity of transactions per month. Industry states that they sometimes have difficulty selling credits. Further, it takes a full year to generate credits and there is uncertainty over the exact date that credits are generated, making it difficult for industry to plan ahead. This is challenging in an already low liquidity market. Some proponents are pushing for quarterly credit generation like the California LCFS has.

In 2024, the scope of the BC-LCFS expanded to include jet fuel, with a target of reducing carbon intensity by ten percent by 2030, and renewable blending requirements commencing in 2028.

In 2025, British Columbia undertook an independent review of their CleanBC programs. A report describing the review results was published in November 2025.

British Columbia domestic content requirements: On February 27, 2025 the government of British Columbia announced that mandated volumes of renewable fuel under the BC-LCFS must be made in Canada if consumed in the province. Effective April 1, 2025, the mandated eight percent renewable content in diesel consumed in British Columbia must be produced in Canada. By January 1, 2026, the mandated five percent of renewable content in gasoline must be produced in Canada. Any renewable volumes consumed above the eight and five percent mandates can originate from outside of Canada.

Currently, U.S. renewable fuel continues to be imported into British Columbia (see market analysis section for more details), because the actual blend rates in British Columbia are well above the minimum blend rates. Blending is strongly incentivized by the BC-LCFS and Canada's CFR. In 2024, actual blend rates were 11.4 percent for gasoline,[4] and 31.3 percent for diesel.

British Columbia raised concerns about the U.S. Inflation Reduction Act (IRA) 45Z Clean Fuel Production Tax Credit for renewable fuel made in the United States when it led to a month-over-month 84 percent decline in Canadian biodiesel exports to the United States in January 2024 (see market analysis section of this report for more). After the introduction of the U.S. tax credit, at least six bio-based diesel facilities in Canada temporarily shuttered. Post is not certain if any of these plants remain shuttered as of printing.

The government of British Columbia had faced pressure to respond to mounting concerns from industry for more than a year prior to making its decision. See *Section D. Trade Policy Covering Import Duties/Licenses & Export Taxes/Levies* for information on an anti-dumping case against the United States.

Domestic Policy: Ontario

Ontario's Cleaner Transportation Fuels (CTF) regulation requires that fuel suppliers blend ten percent renewable content in gasoline from 2020 through 2024, increasing to 11 percent in 2025, 13 percent in 2028, and 15 percent in 2030 and onwards. The renewable content must emit fewer greenhouse gas emissions than fossil gasoline on a lifecycle basis by 45 percent before 2030 and 50 percent from 2030 onward. The regulation also requires fuel suppliers to continue to blend 4 percent renewable content in diesel. This renewable content must emit 70 percent fewer greenhouse gas emissions than fossil diesel on a lifecycle basis.

Ontario domestic content requirements: On August 8, 2025, Ontario's Ministry of the Environment, Conservation and Parks announced domestic bio-based content requirements for both diesel fuel and gasoline placed in the Ontario market, under the CTF regulation. At least 75 percent of the renewable content required in diesel fuel and 64 percent of the renewable content required in gasoline must be produced in Canada. These requirements will be prorated for the remainder of the 2025 compliance year and be effective immediately as of August 8.

The decision details state that the domestic content requirements are expected to enhance Ontario biodiesel and ethanol producers and local feedstock suppliers' ability to compete with lower-cost U.S. imports that are supported by federal subsidies through the 45Z tax credit.

The measure is expected to be time-limited, and the ministry will monitor "the situation impacting the domestic biofuels industry." Industry contacts state that the volume under domestic content provisions equates to the local supply available to the market.

Based on conversations with U.S. stakeholders, FAS/Ottawa does not predict that Ontario's domestic content requirements will have a significant impact on U.S. ethanol exports for the remainder of 2025 nor in 2026. As the blending mandate increases, the proportion of domestic content remains the same through 2030, equivalent to roughly seven percent of all fuel ethanol for Ontario gasoline. For the remainder of 2025, as the changes were scheduled to take effect immediately, they were pro-rated to 27 percent.

In response to Ontario's domestic content requirement announcement, Valero Energy Incorporated, a diesel and gasoline supplier to the Ontario market, has issued a lawsuit against the province of Ontario. Valero states that the province of Ontario failed to comply with the mandatory public notice and comment process and did not conduct or publish a regulatory impact analysis in relation to Ontario Regulation 163/25 under the *Environmental Protection Act — Cleaner Transportation Fuels: Renewable Content Requirements for Gasoline and Diesel Fuels.* The domestic content requirement for bio-based gasoline was not part of the original public consultation.

Valero states that Ontario's domestic content requirements directly impact its operations by constraining the company's ability to source renewable fuels from foreign suppliers to meet its compliance requirements under the Cleaner Transportation Fuels regulation, as well as other compliance regimes including Canada's CFR.

Domestic Policy: Quebec

A mandate for incorporating low-carbon-intensity fuel into gasoline and diesel came into effect in Quebec on January 1, 2023 under Quebec's *Regulation Respecting the Integration of Low-CI Fuel Content into Gasoline and Diesel Fuel*.

The regulation states the percentage by volume of low-CI fuel content that must be integrated into the total volumes of gasoline and diesel. Quebec's regulation is not a pure LCFS, nor is it purely volumetric-based; a Ministerial Order prescribes how to integrate volume and carbon intensity to meet the regulation.

Table 5: Quebec's low-carbon fuel content mandates, as of January 1 of each year

Fuel type	2023	2025	2028	2030
Gasoline	10%	12%	14%	15%
Diesel	3%	5%	5%	10%

Following the publication of the regulation in Quebec's Gazette, two modifications have been made, regarding quality and compliance periods. Notably, suppliers have until the end of 2026 to comply with the 2025 blend rate.

Federal regulation remains the driving force behind Quebec's high volume of ethanol content[5], because of the monetary incentive of credit creation with higher ethanol content and lesser GHG reduction. However, Quebec's advantageous import and export infrastructure, with both rail and marine access, combined with its blending facilities and provincial regulations, establishes the province as a prime destination for high ethanol content fuel in Canada, driving up provincial blend rates.

On June 9, 2025, the Quebec government abolished the floor price of gasoline that had been in place since the 1990s to protect small service stations from being undercut by larger players. Quebec's Economy and Energy Minister framed the decision as a way to boost competition and ultimately lower prices. The province has faced pressure to act since the federal government scrapped the consumer carbon price, which applied across much of the rest of the country, on April 1.

Quebec launched its cap and trade system in 2013 and linked it with California's system in 2014, forming the largest carbon market in North America. The system initially covered industrial and electricity sectors. In 2015, it expanded to include fuel distributors that sell or import 200 liters or more of fossil fuels annually.

Domestic Policy: Alberta

Alberta's Renewable Fuels Standard requires a minimum annual average of five percent renewable alcohol in gasoline and two percent bio-based diesel (BBD)[5] in diesel fuel sold in Alberta by fuel suppliers, as mandated by the regulation passed in 2010. Alberta has no schedule for future mandate increases. To meet the Renewable Fuels Standard, renewable fuels must demonstrate at least 25 percent fewer GHG emissions than the equivalent petroleum fuel. As Canada's major producer of petroleum and petroleum products, Alberta has set the least ambitious use requirements for biofuels and has actively challenged in court federal efforts to establish the carbon tax for fossil fuels.

Alberta's emission reduction strategy also involves its Technology Innovation and Emissions Reduction (TIER) system, the province's industrial carbon pricing and emissions trading system. It is the provincial equivalent of the federal Output-Based Pricing System (OBPS).

An interim review which includes the Renewable Fuels Standard must be completed by the end of 2026. The TIER system was last reviewed in 2022, and amendments came into effect at the start of 2023.

E. Policy & Programs: U.S. Policy Impacting Domestic Supply and Demand

Canada's renewable fuel sector is extremely responsive to U.S. regulation. Notable influences on Canadian biodiesel investment and sales decisions are the now expired U.S. Blenders Tax Credit (BTC), the U.S. IRA Clean Fuel Production Tax Credit (45Z), U.S. RIN values,[6] Renewable Volume Obligations (RVOs), and tariff uncertainty.

IRA 45Z

The Clean Fuel Production Tax Credit (45Z) is a tax credit established by the U.S. IRA and became available on January 1, 2025. It is administered by the U.S. Treasury Department and is currently scheduled to be available through 2029.[7] 45Z replaced the U.S. BTC that has applied to biomass-based diesel (BBD – a term to describe total biodiesel and renewable diesel) for many years and sunset at the end of the 2024.

IRA 45Z does not apply to imported renewable fuel from Canada, unlike the preceding U.S. BTC, which Canadian low-carbon fuel producers benefited from since its implementation in 2004. Under the former U.S. tax credit, nearly 100 percent of Canadian biodiesel production was exported to the United States to benefit from it, and nearly all of Canada's biodiesel consumption was imported from the United States. However, with the transition to the 45Z, eligibility criteria shifted to prioritize U.S. domestically produced fuels. Imported fuels are no longer able to claim the U.S. credit, leading to a sharp decline in BBD exports from Canada to the United States.

The U.S. BTC applied only to BBD, while 45Z applies to biofuels such as ethanol, in addition to biodiesel, renewable diesel, and SAF. Subsequently, Canadian BBD *and* ethanol producers now each claim they are undercut by imports because of U.S. tax credits.

Fuel produced from canola oil was initially ineligible for 45Z tax credits based on its carbon intensity under the original 45Z guidelines, reducing Canadian canola oil exports and escalating the domestic push for a made-in-Canada response to 45Z.

U.S. canola oil imports from Canada fell 44 percent year-over-year in the month of February 2025 and 42 percent year-over-year in March 2025, because of details within the January 10, 2025 version of the 45ZCF-GREET (Greenhouse Gases, Regulated Emissions, and Energy use in Technologies) life cycle analysis model. Fuel produced from canola oil, regardless of the country it is grown in, was initially ineligible for 45Z tax credits (during the period of January 1, 2025 to July 4, 2025) due to its unfavorable CI score. However, new rules under OBBB in July 2025 eliminated the ILUC penalty, enabling canola's CI score to drop to a level that would make it eligible.

Canola oil-based fuel must meet specific CI thresholds, as determined by the 45ZCF-GREET model. A CI score below 50 (grams of CO2e per megajoule) is generally required for eligibility. Under the new rules, canola's carbon intensity score drops to 38.5 grams of carbon dioxide per megajoule from 54.9.

Legislative changes made within the United States' One Big Beautiful Bill Act (OBBBA - Public Law 119-21) on July 4, 2025, that impact Canada, include:

- OBBBA extends the period for which the clean fuel production credit can be claimed by two years, until December 31, 2029.
- With respect to fuel produced after December 31, 2025, OBBBA reduces the maximum credit potential for sustainable aviation fuel from $1.75/gallon to $1/gallon.
- For fuels produced after 2025, OBBBA limits the credit to fuel that is exclusively derived from a feedstock that was produced or grown in the United States, Mexico, or Canada
- For fuels produced after 2025, OBBBA modifies the calculation of the emissions rate, which is used in determining the credit amount.
- Additionally, the credit is subject to OBBBA's 'foreign entity of concern' limitations.
- ILUC penalties were removed from the calculation of emissions for the 45Z clean fuel production tax credit, allowing canola oil's carbon intensity score to fall low enough to enable it to be used as a feedstock under 45Z.
- As of January 1, 2026, to qualify for 45Z eligible fuels must be produced in the United States from feedstocks grown or produced in the United States, Mexico, or Canada.

Proposed U.S. Renewable Fuel Standards: RVOs and RIN valuation

On June 13, 2025, EPA announced a proposed rule to establish required Renewable Fuel Standard volumes and percentage blending standards for 2026 and 2027, as well as to partially waive the 2025 cellulosic biofuel volume requirement and revise the associated percentage standard due to a shortfall in cellulosic biofuel production. The proposed renewable volume obligations (RVOs), listed below, are higher than industry anticipated and, if approved, could trigger a strong demand signal for Canadian/U.S. vegetable oil, and renewable fuels, in 2026 and 2027.

Table 6: Proposed volume requirements (billion RINs)

	2025	2026	2027
Cellulosic biofuel	1.19	1.3	1.36
Biomass-based diesel	n/a	7.12	7.5
Advanced biofuel	n/a	9.02	9.46
Renewable fuel	n/a	24.02	24.46

Source: EPA

Note: One RIN is equivalent to one ethanol-equivalent gallon of renewable fuel.

However, EPA is also proposing that all fuels made from foreign feedstocks and imported renewable fuel will generate 50 percent fewer Renewable Identification Numbers (RINs)[8] than is generated for the same volume of U.S. produced renewable fuels made with U.S. feedstocks. The import RIN reduction would apply to all foreign-produced renewable fuel, regardless of feedstock origin. If the rule passes, U.S. businesses will be financially incentivized to prioritize U.S. feedstocks and fuels, reducing demand for foreign fuel and feedstocks, and U.S. renewable feedstocks and fuels will outpace foreign sources in RIN generation. The changes to the 2026 and 2027 RVOs described above are still preliminary, final guidance is expected later this year or early next year.

The Canadian fuel industry states that unequal treatment for fuels and feedstocks originating in the United States, Canada and Mexico will misalign the RFS with 45Z, generating complexity between these two incentives.

F. Trade Policy Covering Import Duties/Licenses & Export Taxes/Levies

Tariffs

Canadian-origin energy products that do not meet USMCA qualification criteria will face an additional ten percent ad valorem duty, applied under HTSUS classification 9903.01.13, if the fuel is entered for consumption or withdrawn from a warehouse for consumption on or after the effective date of March 4, 2025.

Certification of origin can be provided on an invoice or any other document but must include the nine specific data elements outlined in Chapter 5, Origin Procedures, Annex 5A.

G. Policy & Programs: Financial Supports

Financial support targeting biofuel production helps to lower production costs and/or boost returns, as well as bolster the supply. Key federal funding programs and initiatives include:

Biofuel Production Incentive: A September 5 announcement by Prime Minister Carney on a range of measures across Canadian industry included incentives for biodiesel and renewable diesel producers, starting January 2026. In the immediate term, Canada will introduce a time-limited Biofuels Production Incentive for renewable diesel and biodiesel producers and work with provinces and territories to explore complementary measures. This incentive will be provided on a per liter basis to Canadian producers of biodiesel and renewable diesel and will be available from January 2026 to December 2027 for up to 300 ML per facility. Natural Resources Canada will provide more details about the program in 2025. Likely, the incentive will only apply to Canadian fuel producers, similar to the U.S. producers' tax credit.

Canada's new tax incentive aims to "level the playing field" with the United States by helping Canadian renewable fuel companies compete against U.S. companies receiving the 45Z production tax credit. Additionally, the tax incentive aims to support Canadian producers of canola, which was an ineligible feedstock for the U.S. 45Z tax credit from January 1 to July 4, 2025 (but remained an eligible

feedstock for RIN generation), and now face prohibitively high tariffs from China. The federal action may have also had the goal to get ahead of Canadian provinces before they develop individual biofuel strategies, such as Ontario and British Columbia's domestic content requirements for biofuels, new in 2025.

Clean Fuels Fund (CFF): Renewed in 2024, this fund has CA $776.3 million (US $553.6 million) committed between 2024–2025 and 2029–2030 to provide cost-shared, conditionally repayable funding to de-risk capital investments for new and expanded clean fuel production facilities and can also fund feasibility studies. Canada's Budget 2024 advanced clean fuel initiatives by extending the CFF to March 31, 2030, to support capital investments in clean fuel production and address regulatory gaps. However, renewable fuel companies assert that capital-focused clean fuels fund would do little to assist existing biofuels companies seeking to continue operations and compete against U.S. companies receiving 45Z. The program is funded by CFR compliance payments. Projects that have received funding are listed publicly.

The Canada Infrastructure Bank (CIB): The CIB committed at least CA $500 million (U.S. $357 million) in investments for biofuel production under its green infrastructure stream, targeting fuels like sustainable aviation fuel and renewable diesel. It was part of a broader financial package announced in the 2024 budget to boost Canada's biofuel industry and support its role in the 2030 Emissions Reduction Plan. This funding will provide debt-financing for private sector projects in renewable diesel, sustainable aviation fuel, and renewable natural gas.

NextGen Biofuels Fund (NGBF): Sustainable Development Technology Canada (SDTC) manages a CA $500 million fund for next-generation biofuel projects. The program runs from July 30, 2007 to September 30, 2027. As of January 2025, it approved CA $250 million (US $178 million) in funding for projects. NGBF supports up to 40 percent of eligible project costs to a maximum of $200 million per project for the establishment of first-of-kind, large-scale demonstration next-generation renewable fuel production facilities to encourage the future sustainability and success of renewable fuels. Next-generation renewable fuels are derived from non-traditional renewable feedstocks, such as forest biomass, fast-growing grasses, and agricultural residues, and are produced with non-conventional conversion technologies.

Key provincial funding programs and initiatives include:

British Columbia's LCFS Initiative Agreement: The LCFS Initiative Agreement program helps businesses undertake actions that are not otherwise economically viable, and that will help create pathways for businesses to comply with the BC-LCFS. The Initiative Agreement allocates up to 25 percent of the previous compliance year's debits; reviews applications from anyone in British Columbia's for eligible actions; and grants LCFS credits to successful applicants for complete action. Projects supported under the Initiative Agreement are described here. Previously, this support fell under British Columbia's "Part Three Agreements" program, which provided funding to in-province and out-of-province projects (e.g. Imperial Oil's renewable diesel facility in Strathcona, Alberta).

British Columbia's Low Carbon Jet Fuel Incentive Program (BC-LCJFIP): This program helps offset the cost of using low carbon jet fuel (LCJF), including SAF, which is significantly more expensive than conventional jet fuel. It is intended to encourage the early adoption of LCJF across British Columbia. Backed by the BC-LCFS this initiative aims to lower the carbon intensity of jet fuel, supporting both provincial regulations and global efforts to reduce GHG emissions in aviation. The BC-LCJFIP is a three-year program. It will operate until December 31, 2026, providing incentives for eligible LCJF purchases made and received in BC during the 2024, 2025, and 2026 program years.

Vancouver International Airport (YVR), offer incentives worth CA $0.75 per liter to eligible carriers using LCJF with carbon intensities above 10 gCO2e/MJ, or incentives worth CA $1.20 per liter to eligible carriers using LCJF with carbon intensities less than 10 gCO2e/MJ. The CI of LCJF used in British Columbia is published by the provincial government.

Quebec's biofuel production tax credit: Quebec replaced its biofuel production tax credits (PTC) in 2023 with a new, broader refundable tax credit for eligible biofuels produced and sold within the province. The new tax credit rate is variable and dependent on the biofuel's carbon intensity relative to conventional fuels. Greater reductions lead to higher credit. The new credit is available from April 1, 2023, to March 31, 2033. Quebec is currently the only jurisdiction in Canada to have a PTC.

Alberta's Agri-Processing Investment Tax Credit (APITC): This program provides a 12 percent non-refundable, non-transferable tax credit when businesses invest CA $10 million (US $7 million) or more in a project to build or expand a value-added agri-processing facility in Alberta. The program is open to any food manufacturer and bioprocessor that adds value to commodities like grains and meat or turns agricultural by-products into new consumer or industrial goods. Up to CA $175 million (US $125 million) in tax credits is available for each project.

One notable recipient of the Agri-Processing Investment Tax Credit is Imperial Oil Ltd., for a CAD $720 million (US $513.6 million) project to build the nation's largest renewable diesel facility in Strathcona, Alberta. It began commercial operation in July 2025.

SECTION III. ETHANOL

Table 7: Ethanol Used as Fuel and Other Industrial Chemicals (Million Liters)

Calendar Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025f
Production	1,860	1,851	1,873	2,013	2,200	2,100	-	-	-	-
Fuel Production	1,739	1,728	1,748	1,881	1,690	1,719	1,774	1,787	1,864	1,868
Imports	1,192	1,251	1,346	1,283	1,289	1,385	-	-	-	-
Fuel Imports	1,113	1,216	1,233	1,219	1,163	1,254	1,752	2,461	2,518	2,594
Exports	76	88	73	83	143	178	-	-	-	-
Fuel Exports	0	0	0	9	75	108	82	72	112	115
Consumption	2,976	3,014	3,146	3,213	3,346	3,307	-	-	-	-
Fuel Consumption	2,852	2,944	2,981	3,091	2,778	2,865	3,444	4,176	4,270	4,347
Refineries Producing Fuel Ethanol (Million Liters)										
Number of Refineries	14	13	12	12	12	12	12	12	12	12
Nameplate Capacity	1,750	1,750	1,822	1,881	1,881	1,881	1,881	1,881	1,881	1,881
Capacity Use (%)	99.4%	98.7%	95.9%	100.0%	89.8%	91.4%	94.3%	95.0%	99.1%	99.3%
Co-product Production (1,000 MT)										
DDGs	1,317	1,311	1,332	1,274	1,274	1,265	1,280	1,314	1,297	1,296
Corn Oil	10	10	10	-	-	-	-	-	-	-
Feedstock Use for Fuel Ethanol (1,000 MT)										
Grain	4207	4189	4254	4561	4,054	4,102	4,260	4,175	4,350	4,360
Corn	3,577	3,411	3,884	4,102	3,502	3,800	3,700	-	-	-
Wheat and other grains	630	778	370	459	552	302	560	-	-	-
Market Penetration (Million Liters)										
Fuel Ethanol Use	2,852	2,944	2,981	3,091	2,778	2,865	3,444	4,176	4,270	4,347
Gasoline Pool 1/	49,276	49,717	51,169	50,876	42,878	44,575	45,696	46,363	44,375	44,149
Blend Rate (%)	5.8%	5.9%	5.8%	6.1%	6.5%	6.4%	7.5%	9.0%	9.6%	9.8%

Note: 1/ Covers gasoline and all biocomponents (biofuels) like ethanol and ETBE as well as MTBE if used; Totals include ethanol beverages. See Section VI. notes on statistical data.

Note: Number of Refineries includes facilities that are permanently shuttered, until dismantled.

f=forecast

Ethanol Consumption

In 2024, the national average blend rate increased to 9.6 percent, up from 9.0 percent in 2023, as a direct result of the CFR. Based on YTD production and trade data, FAS/Ottawa is forecasting the average blend rate to increase to 9.8 percent in 2025 over the previous year, as fuel ethanol displaces a shrinking fuel pool (based on an International Energy Agency fuel pool forecast). The majority of the growth in fuel ethanol consumption is occurring in the most populated provinces: Ontario, Quebec, and British Columbia.

In 2025, FAS/Ottawa forecasts a further increase in ethanol consumption, driven by the CFR. As the gasoline fuel industry reduces CI and raises ethanol blend rates, fuel ethanol consumption ramped up, beginning in 2022. Nationwide CI reduction requirements for liquid transport fuels did not come into effect until July 1, 2023, but the early credit creation mechanism that occurred between June 21, 2022 and June 30, 2023 incentivized growth in blend rates in 2022.

Ethanol Production

In 2024, fuel ethanol production increased 4.3 percent to 1.86 billion liters on increased demand from Europe and because of Canada's CFR, which requires fossil fuel suppliers to lower their carbon intensity scores. The main way that obligated parties do this is by increasing the volume of renewable fuel blended with fossil fuel. FAS/Ottawa includes undenatured fuel ethanol production in its fuel ethanol estimate. Undenatured fuel is exported to European markets where denaturing of fuel ethanol is not a regulatory requirement.

In 2025, fuel ethanol production is forecast to increase marginally to 1.87 billion liters, based on year-to-date production data (January through to September). Fuel ethanol production remains on an upward trajectory despite shrinking gasoline consumption because ethanol's share of the gasoline fuel pool continues to expand. The entire fuel pool is shrinking due to a combination of post-pandemic behavioral shifts (more work from home), increased fuel efficiency in newer vehicles, the growing adoption of electric vehicles (EVs) spurred by government incentives, a broader shift to less energy-intensive lifestyles in urban areas, and long-term policies aimed at emissions reduction. These factors, alongside economic changes and a structural shift towards cleaner energy, are driving a long-term trend away from fossil fuels, despite temporary rebounds after the pandemic.

FAS/Ottawa is not aware of any ethanol plants that shuttered because of changes to renewable fuel regulation, unlike biodiesel. Ethanol was never eligible for the U.S. BTC and was not impacted by the expiry of the U.S. BTC. However, the ethanol sector may gain from fuel production tax credits.

Fuel ethanol capacity is unchanged from last year. There are currently 12 facilities producing fuel ethanol, with a combined capacity of 2,015 ML. However, some of this capacity is dedicated to non-fuel end uses.

Fuel ethanol feedstocks primarily consist of Ontario and Quebec-grown corn, and corn imported from the United States. Wheat is a distant second most-used feedstock. Post is currently unable to disaggregate grain feedstocks, and currently available data is unreliable.

Western Canada may see increased use of wheat as a feedstock for ethanol production in 2026, as fossil fuel suppliers in British Columbia seek to purchase more Canadian produced ethanol to meet made-in-Canada rules. However, wheat is generally considered an inferior feedstock than corn because of its higher carbon intensity score.

Ethanol Imports

In 2024, fuel ethanol imports increased 2.3 percent over the previous year, driven by the CFR. Similar to the narrative in 2023, industry sources indicate that facilities in upper tier states were diverting their ethanol away from Washington State and Oregon to Canada because the CFR made it more profitable.

Fuel ethanol imports are forecast to increase by 3.0 percent in 2025 over the previous year on a rise in the national average blending rate. Year to date (January through August) fuel ethanol imports are up 6.1 percent over the same period in the previous year.

Canada's 2025 counter-tariffs against the United States did not include biofuels.

Ethanol Exports

In 2024, exports of fuel ethanol increased 56 percent year-over-year to 112 ML, primarily on increased exports of undenatured fuel ethanol to the European Union. Undenatured fuel makes up nearly 100 percent of total fuel ethanol exports. Additionally, Canada exports undenatured non-fuel ethanol to Europe and the United States.

FAS/Ottawa forecasts overall 2025 fuel exports to grow from 2024 levels on demand from Europe and a shift of further resources to the production of undenatured product. Year-to-date in August 2025, exports rose five percent over the same period in the previous year, to 60 ML.

Canada has not historically been an exporter of denatured fuel ethanol to the United States because, unlike biodiesel, ethanol did not receive a BTC in the United States. Most fuel ethanol produced in Canada is consumed domestically and six percent of production (in 2024) is exported to Europe.

Co-Products

The Canadian Feed Regulations demand that dried distillers; grains (DDGs - the leftover grain after ethanol extraction) retain significant energy value, which means keeping more oil in the DDG for livestock feed, discouraging oil removal. Therefore, corn oil production as a co-product is minimal. Corn oil production data is unavailable.

SECTION IV. BIODIESEL/ RENEWABLE DIESEL

Table 8: Biodiesel (FAME) & Renewable Diesel (HDRD), Million Liters

Calendar Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025(f)
Biodiesel (Million Liters)										
Production	464	397	308	359	458	431	369	496	432	296
Imports	262	300	391	344	384	422	400	517	448	270
Exports	455	350	309	342	451	441	380	520	492	70
Consumption	271	347	390	361	391	412	389	493	388	496
Renewable Diesel (Million Liters)										
Production	0	0	0	0	0	0	0	14	687	750
Imports	261	411	358	380	500	472	502	1,244	1,299	1,299
Exports	0	0	0	0	0	0	0	0	450	280
Consumption	261	411	358	380	500	472	502	1,258	1,536	1,769
Biodiesel + Renewable Diesel (Million Liters)										
Production	464	397	308	359	458	431	369	510	1,119	1,046
Imports	523	711	749	724	884	894	902	1,761	1,747	1,569
Exports	455	350	309	342	451	441	380	520	942	350
Consumption	532	758	748	741	891	884	891	1,751	1,924	2,265
Biodiesel Production Capacity (Million Liters)										
Number of Plants	9	9	11	11	10	10	10	9	9	9
Nameplate Capacity	550	591	678	704	686	686	686	671	671	671
Capacity Use (%)	84%	67%	45%	51%	67%	63%	54%	74%	64%	44%
Renewable Diesel Production Capacity (Million Liters)										
Number of Plants	0	0	0	0	0	0	0	1	2	3
Nameplate Capacity	0	0	0	0	0	0	0	170	994	2,380
Capacity Use (%)	-	-	-	-	-	-	-	8%	69%	32%
Feedstock Use for Biodiesel + Renewable Diesel (1,000 MT)										
Vegetable oils	245	285	232	171	330	338	315	429	1,055	990
Other	110	130	130	110	100	82	44	63	65	52
Market Penetration, Biodiesel + Renewable Diesel (Million Liters)										
Diesel Pool 1/	31,928	34,902	35,946	34,688	30,930	32,309	33,527	32,726	32,199	32,922
Blend Rate (%)	1.7%	2.2%	2.1%	2.1%	2.9%	2.7%	2.7%	5.4%	6.0%	6.9%

Note: 1/ Covers diesel and all biocomponents (biodiesel) and renewable diesel when used.

HDRD (Hydrogenation-derived Renewable Diesel) dominates commercialized renewable diesel worldwide.

Number of plants and nameplate capacity includes facilities permanently shuttered, until dismantled.

Biodiesel Consumption

In 2024, biodiesel consumption fell 21 percent because it was displaced by renewable diesel as the latter is a chemically identical "drop-in" replacement for petroleum diesel, unlike biodiesel which requires blending and has cold-weather limitations, making renewable diesel more versatile despite higher production costs. Further, renewable diesel offers greater carbon-emission reductions than biodiesel.

Overall, the average BBD usage rate increased to 6.3 percent of the total diesel pool, up from 5.4 percent in 2023. The blend rate continues to grow and is forecast to reach 6.9 percent in 2025, primarily on significantly increased HDRD use made possible by the supply of HDRD from Tidewater Renewables and Imperial Oil and a third year of sharply higher imports from the United States.

The largest consumers of biodiesel are Ontario, Quebec, Alberta, and British Columbia, due to population size.

Biodiesel Production

In 2024, Canada produced about 432 ML of biodiesel, a decrease of 13 percent from the previous year. This is likely attributed to renewable diesel displacing biodiesel in the Canadian market.

In 2025, FAS/Ottawa forecasts that biodiesel production will decrease by more than -31 percent, to about 296 ML, due to displacement and the temporary shuttering of facilities when the U.S. blenders tax credit expired.

In FAS/Ottawa's supply and demand table, the number of plants and their capacities include facilities that are permanently shuttered. Of the nine facilities, only six are operational (although industry contacts state that they were all temporarily shuttered during months of 2025, due to regulatory uncertainty in the United States). These six facilities have a total nameplate capacity of 671 ML. FAS is not certain of the capacity of the three facilities that are not operational.

While FAS/Ottawa, has previously pegged Archer Daniel Midland's (ADM) Lloydminster capacity at 265 ML since 2011, ADM publicly stated in November 2025 that current capacity sits at 320 ML. Post is uncertain when the facility underwent an expansion.

Table 9: Commercial-Level Biodiesel Facilities

Commercial-Level Biodiesel Facilities			
Biodiesel Plant	**Location**	**Feedstock**	**Capacity (mmly liters)**
Archer Daniel Midland	AB	Canola Oil	320
Verbio Diesel Canada Corp.	ON	Canola oil, soy oil	170
Canary Biofuels Inc.	AB	Multi (animal fat, UCO, veg oil)	91
World Energy	ON	Multi	67
Innoltek Inc.	QC	Multi	12
Consolidated Biofuels Ltd	BC	UCO	11.4
Total Nameplate Capacity			**671**

Note: Canary Biofuels is currently operating only as a canola crush facility

While feedstock data at the federal and provincial levels are either non-existent, overly aggregated, or unreliable, the government of British Columbia publishes a market summary document that describes the feedstock type used to produce the renewable fuel consumed within British Columbia, the province with the fourth largest BBD fuel pool.

British Columbia's data reveals that the annual renewable fuel supply that was produced from UCO fell to a five-year low in 2024, reaching 263.2 ML. In 2023, UCO was the most used feedstock in British Columbia, attributed to 423.3 ML of fuel supplied to the province. The majority of this fuel was likely imported from the United States. In 2024, canola oil and tallow became the most prominent feedstocks used to produce British Columbia's supply. Fuel produced from canola oil grew in volume from 288 ML in 2023 to 426.9ML in 2024, while fuel produced from tallow grew to 423.5 ML from 56.5 ML over the same period, Tallow as an input has increased significantly since 2014, when it was non-existence.

Alberta and British Columbia are the largest fuel producers in Canada.

Biodiesel Imports

In 2024, biodiesel imports fell 13 percent on increased HDRD consumption, which displaced biodiesel.

In the first quarter of 2025, biodiesel imports were down 47 percent over the first quarter of 2024, reaching 25 ML. This decline is due to not only the displacement of biodiesel by renewable diesel, but also the reduction in cross-border trade of biodiesel due to the elimination of the U.S. blenders tax credit. Under the BTC, Canada imported nearly 100 percent of its biodiesel consumption from the United States and exported nearly 100 percent of its biodiesel production to the United States. With the expiry of the BTC, this is no longer the case and cross-border trade is falling.

Effective March 4, 2025, Canada implemented a 25 percent retaliatory tariff on imports of U.S.-origin canola seed intended for propagation (low-erucic acid rape or colza seeds), classified under HS code 1205.10.00, specifically the subcategory 1205.10.00.10 for seeds intended for sowing. This did not directly impact exports of U.S. feedstock imports or supplies.

Biodiesel Exports

In 2024, biodiesel exports fell five percent from the previous year as HDRD consumption outpaced biodiesel in Canada.

Canada's exports of biodiesel to the United States fell to their lowest level in a decade in the first half 2025 following a change of U.S. tax credits and increased domestic use of biodiesel. Exports then dropped off significantly in July, August, and September, to less than one percent of their total in the same three months of the previous year. Over the period January to September 2025, biodiesel exports were only 61 ML, compared to 398 ML during the same period in the previous year.

The United States continues to be Canada's largest export market for biodiesel shipped under HS code 382600[6]. However, in the first nine months of 2025, the EU overtook the United States as the leading export destination for fuel shipped under HS code 271020. Canada shipped four ML to the EU under HS 271020[7], and only 24 thousand liters to the United States (assuming a five percent blend rate for all 2025 exports).

In January 2025, the U.S. revised its tax credit program to encourage biofuel production and use. The changes have effectively ended incentives for imported biodiesel and renewable diesel. Up until last year, both imports and domestic production received the same U.S. $1 credit per gallon under the blenders' tax credit. The new U.S. producers' tax credit only applies to domestic production. After the introduction of the U.S. tax credit, at least six bio-based diesel facilities in Canada temporarily shuttered.

Renewable Diesel Consumption

Consumption of HDRD in 2025 is forecast to be three times larger than 2022 levels, driven by the CFR. Like other renewable fuels, the largest consumers are Ontario, Quebec, British Columbia, and Alberta, due to population size. Among all countries, Canada has always had the highest penetration rate of HDRD in total renewables used in the diesel pool at or near 50 percent as early as ten years ago. Today, supported by sharply higher imports and the first ever domestic production, HDRD as a percentage of total BBD consumption has reached about 78 percent in 2025.

Renewable Diesel Production

In 2025, FAS/Ottawa forecasts HDRD production to increase nine percent over the previous year. The implementation of the federal government's CFR has been one of the main drivers unlocking investments used to build Canada's first HDRD plants.

Tidewater: Canadian commercial production of HDRD began November 7, 2023 with Tidewater Renewables' stand-alone HDRD facility in Prince George, BC bringing 170 ML per year of capacity online. Feedstocks to date include canola oil.

Braya Renewable Fuels: Commercial production of HDRD at Braya Renewable Fuels in Come By Chance, Newfoundland and Labrador, began in February 2024 with 824 ML of capacity. Braya has plans to expand its HDRD production capacity, add sustainable aviation fuel production capabilities, and explore green hydrogen production. Publicly available trade data indicates that 100 percent of Braya's production is exported to the United States. Sources state that it is not logistically feasible for the company to ship fuel to Canadian regions with the highest consumption rates.

The facility's feedstock is likely soy oil from Argentina, which the province began importing in 2024. The province imported 48 TMT of soy oil from Argentina in 2023, 757 TMT in 2024, and 401 TMT year-to-date (January to September) in 2025. One hundred percent of the province's vegetable oil imports over this period are in the form of soy oil from Argentina, according to trade data. The province also imported 24 TMT of corn oil from the United States in 2024, which may or may not have been used in renewable fuel production.

Imperial Oil: A third facility in Alberta, owned by Imperial Oil, came online in July 2025. It is the largest-producing HDRD facility, with more than one billion liters of capacity. It is using canola oil as a feedstock. Feedstocks include canola oil.

Renewable Diesel Exports

In 2024, Canada exported 450 ML of HDRD, with the commencement of commercial HDRD production at Braya Renewable Fuels in Come by Chance, Newfoundland. About 84 percent of Canadian exports were sold in California, while the remaining volume was sold in Texas and Minnesota.

In 2025, Canada's HDRD exports are forecast to fall 38 percent from the previous year to 280 ML. Canada didn't export any HDRD for five months of the year (March through July) due to uncertainty around renewable fuel regulation in the United States but resumed with a strong export pace in August 2025.

Renewable Diesel Imports

In 2024, HDRD imports increased four percent on increased preference for HDRD over biodiesel. In 2025, imports are forecast to remain flat, on increased domestic production offseting increased consumption. All of Canada's HDRD imports come the United States.

V. STATISTICAL NOTES

Trade Codes and Data Sources

Biodiesel and renewable diesel imports: In recent years, Post relied on Statistics Canada's International Merchandise Trade database to estimate biodiesel and renewable diesel imports. However, this customs data has historically been subject to error, primarily due to the mislabeling of harmonized system codes of renewable diesel and biodiesel. This former method of calculation required a determination of the proper fuel type by assessing the unit cost, region of export, and region of import for each shipment.

For this reason, Post has begun using ECCC trade data supplied in its quarterly market reports. This data, supplied to ECCC by obligated parties, has been third party verified and Post considers it to be more accurate than customs data.

Prior to relying on ECCC data, Post used HS Code 3826.00 and assumed it to be pure B100 biodiesel. Additionally, all trade under HS Code 2710.20 was assumed to contain five percent biodiesel by volume and is converted to a B100 equivalent volume. Post would then subtract fuel that was known to be renewable diesel. Post used 2710.19.9993 and 2710.19.9923, to estimate renewable diesel imports.

Biodiesel exports: Post uses Statistics Canada's International Merchandise Trade database.

Renewable diesel exports: Post estimates Canadian imports by using shipment-level U.S. import data from U.S. Energy Information Administration (EIA).

Notable definition of "renewable diesel" in British Columbia's government market reports: the "renewable diesel" category in British Columbia's market reports includes not only HDRD, but also biodiesel, and co-processed renewable diesel. Elsewhere in Canada (and the United States), the three fuels are defined uniquely. FAS/Ottawa's GAIN reports define renewable diesel in Canada and the United States solely as HDRD.

Co-products: Dried Distiller's Grain (DDG) production estimates come from Statistics Canada Table 25-10-0082-01. Because corn oil is not extracted from DDG in Canada, the average weight of Canada's DDG tends to be heavier than the implied weight that is based on known conversion rates.

Ethanol trade: For total non-beverage ethanol trade, post uses HS Codes 2207.10 and 2207.20. For fuel ethanol trade, post uses HS Codes 2207.10.0010 and 2207.20.1210.

Feedstocks: Post uses Statistics Canada Table 25-10-0082-01 to estimate bio-based diesel feedstock and known feedstock-to-ethanol conversion rates to estimate ethanol feedstocks.

Energy Content and Conversion Rates

1 MT Gasoline = 1,256 Liters

1 MT Ethanol = 1,267 Liters

1 MT Biodiesel = 1,136 Liters

1 MT of HDRD = 1,282 Liters

1 MT of SAF, HEFA-type = 1,250 Liters

1 MT of UCO = 1,087 Liters

Feedstock to Ethanol Conversion Rates

Corn: 1 MT = 417 liters

Wheat and other grains: 1 MT = 393 liters

Feedstock to Biodiesel Conversion Rates

Vegetable oils: 1 MT = 1,136 liters

Other: 1 MT = 1,136 liters

Feedstock to Renewable Diesel Conversion Rates

Vegetable oils: 1 MT = 1,053 liters

Other: 1 MT = 1,053 liters

Attachments:

No Attachments