

**Required Report:** Required - Public Distribution

**Date:** August 14, 2023

**Report Number:** CA2023-0030

**Report Name:** Biofuels Annual

**Country:** Canada

**Post:** Ottawa

**Report Category:** Biofuels

**Prepared By:** Erin Danielson

**Approved By:** Tyler Babcock

**Report Highlights:**

Canada's Clean Fuel Regulation (CFR) became law on July 6, 2022. It aims to reduce the carbon intensity of liquid transportation fuels and has the potential to increase the use of low carbon-intensity diesel by an additional 2.2 billion liters and the use of ethanol by an additional 700 million liters by 2030 under the CFR, according to the federal government. Canadian fuel ethanol consumption increased an estimated 20 percent in 2022, year-over-year, to 3.4 billion liters. Canadian imports of U.S. fuel ethanol increased 40 percent to 1.76 billion liters. In 2023, the CFR is expected to support an upward trend in the average nationwide blend level and growth in U.S ethanol imports. Effective January 1, 2023, Quebec requires ten percent renewable content in gasoline and 15 percent in diesel. Canada's first renewable diesel facility, owned by Tidewater Midstream, began commercial operation in June 2023.

## I. Executive Summary

After more than six years of development, Canada’s Clean Fuel Regulation (CFR) became law on July 6, 2022. It aims to expand the use of low carbon fuels in the transportation sector, both lower carbon fossil fuels and biofuels whose carbon intensity is incentivized to fall as well. It is widely expected to significantly change the transportation fuel-mix in Canada. As a market-oriented program for change, with features similar to U.S. West Coast programs and British Columbia, the speed of change and future mix of fuels at any point in time are challenging to predict.

Canada’s CFR encourages the use of low carbon-intensity (CI) fuels by limiting the CI of transport fuels delivered to the market to a lower value each “compliance year” (calendar year). For example, by 2030 the fuel CI limit for ethanol blended gasoline will reach 81.9 gCO<sub>2e</sub>/MJ<sup>1</sup>. Environment and Climate Change Canada (ECCC) estimates that about 2.2 billion liters of additional low CI diesel and 700 million liters of additional ethanol will be consumed by 2030 under the CFR.

In addition to stimulating increased use of lower CI biofuels and displacing fossil fuels, the CFR will alter the fuel-mix in Canada by prioritizing the use of the lowest CI fuels (such as [renewable diesel](#), which is currently the only lower CI commercially-available biofuel available in largest volumes from the United States, Europe and Singapore ) relative to the other renewable fuels available in larger volumes, namely ethanol and biodiesel. Canada’s first stand-alone renewable diesel facility, owned by [Tidewater Midstream](#), began commercial operation in June 2023.<sup>2</sup>

Fuel ethanol consumption increased an estimated 20 percent in 2022, year-over-year, to 3.4 billion liters. This increase was driven by anticipation of the CFR’s implementation, Quebec's new volumetric requirements for low-carbon fuel content, and volumetric requirements in Ontario.

Canada is the United States’ top market for renewable fuel and accounts for over half of all U.S. ethanol and bio-based diesel (biodiesel and renewable diesel) exports, valued at USD \$2.8 billion in 2022. Canadian imports of U.S. fuel ethanol increased 40 percent in 2022, year-over-year, to 1.76 billion liters. In value terms, imports increased 53 percent to USD \$1.3 billion. This increase was primarily driven by higher blending levels, especially in Ontario which consumed more ethanol blended gasoline than any other province.

---

<sup>1</sup> Carbon intensity is the measure of greenhouse gas (GHG) emissions associated with producing and consuming a transportation fuel, measured in grams of carbon dioxide equivalent per megajoule of energy (gCO<sub>2e</sub>/MJ).

<sup>2</sup> Parkland Corporation has been co-processing renewable diesel in British Columbia for several years, but Tidewater is the first stand-alone renewable diesel facility.

In 2023, imports of U.S. fuel ethanol are forecast at a record 2.3 billion liters mainly due to a further increase in blending and further post-Covid recovery in demand for light-duty vehicles.

U.S. federal biofuel policy (RFS obligations to meet volumetric obligations for various biofuels, the value of RINs Canadian biofuels is permitted to generate) and hefty tax credits (mostly federal) for biomass-based diesel continue to influence Canada's biofuels market and trade with the United States. Canada's fuel ethanol imports from the United States have accounted for about 40 percent of Canadian consumption and are now exceeding 50 percent, while the vast majority of biodiesel produced in Canada is shipped southward and then backfilled by U.S. biodiesel consumed in Canada.

Corn mainly but also wheat are the feedstocks used to produce ethanol in Canada, while canola oil, vegetable oil, and some used cooking oil and tallow are used to produce bio-based diesel. Canola oil use is expected to increase further as the primary feedstock for Canada's diesel industry and perhaps also renewable diesel industry as production for both expand under the CFR.

Canada has specified Land Use and Biodiversity (LUB) criteria that must be met by credit creators (all feedstock growers, including American growers) if they wish to generate credits for Canadian liquid fossil fuel primary suppliers (producers and importers). Most of the LUB criteria is set to go into effect in January 2024. The CFR has some unresolved eligibility and compliance details and FAS/Ottawa continues to monitor announcements and work with the Canadian government to help provide clarity to the U.S. agriculture sector.

## **II. Policy and Programs**

### **Greenhouse Gas (GHG) Emissions**

Canada submitted its revised [Nationally Determined Contributions](#) (NDC) under the Paris Agreement in July 2021, which included a target to reduce greenhouse gas (GHG) emissions by “at least” 40 to 45 percent below 2005 levels by 2030.

Further, [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. This followed President Biden's Leaders' Summit on Climate, where the United States and Canada announced an initiative engaging governments around the world to increase the use of renewables and lower dependence on fossil fuels in government operations. Leading by example, both countries announced they will work together in their respective efforts towards the shared goal of net-zero emission governments.

Canada supports the Agriculture Innovation Mission for Climate (AIM for Climate), an initiative co-led by the United States and the United Arab Emirates launched at COP26 that seeks to “enable global partnerships and solutions at the intersection of agriculture and climate change.” On the sidelines of the AIM for Climate bilateral meeting on May 9 in Washington, Canada’s former Agriculture and Agri-Food Minister, Marie-Claude Bibeau, met with U.S. Secretary of Agriculture Tom Vilsack and discussed the concerns agricultural sectors in both countries have expressed about the CFR.

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, technology, and capacity building support to developing countries, and a quadrennial [National Communications](#) report.

Canada Energy Regulator (CER) [states](#) that Canada’s gross GHG emissions in 2020 were 672.4 megatons (Mt) of carbon dioxide equivalent (CO<sub>2</sub>e).<sup>3</sup> Canada’s gross emissions have increased 13.1 percent since 1990 and declined 9.3 percent since 2005.

Canada’s 2023 National Inventory Report on GHG Emissions states that from 2020 to 2021, transport emissions increased by 9.0 Mt, keeping them slightly below 2005 levels. Road transportation was responsible for the majority of the emissions increase in transport (5.2 Mt or 4.7 percent year-over-year).

In British Columbia, [The Greenhouse Gas Reduction Act and the Renewable & Low Carbon Fuel Requirements Regulation](#), known collectively as British Columbia’s low carbon fuel standard (BC-LCFS), is to date the single most effective GHG emissions reduction contributor for transportation fuels in Canada. A provincial government news release states that the BC-LCFS is expected to lead to five million tons of GHG emissions reductions by 2030, accounting for 31 percent of the total emissions reductions required to meet [CleanBC](#) climate targets.

In July 2022, the Government of Canada published the final [CFR](#) in Canada Gazette Part II. An ECCC [news release](#) published June 30, 2023 states that the CFR will cut “up to 26.6 million tons of emissions reduction annually by 2030.”

---

<sup>3</sup> Canada’s total GHG emissions net of emissions and removals from land use, land-use change, and forestry were 653 Mt CO<sub>2</sub>e in 2021.

## **Federal Biofuel Policy and Financial Supports and Provincial Mandates and Programs**

### **Federal Policy**

As of July 1, 2023, the CFR's reduction requirements came into force when the Government of Canada published the final [CFR](#) in Canada Gazette Part II. This followed the publication of a [draft regulation](#) in December 2020 in Canada Gazette Part I. By reducing the lifecycle CI of liquid fuels and all energy used in Canada through CFR mandates and the adoption of a new carbon credit trading system, the government aims to stimulate investments and innovation in low CI fuels and decouple GDP from emissions.

In addition to mandated fuel CI limits, Federal minimum renewable content in gasoline came in effect in December 2010 at five percent, and diesel in July 2011 at two percent.

### **Reducing Lifecycle Carbon Intensity of Transportation Fuel**

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 Table 1 of this report.

**Table 1: Fuel Carbon-Intensity Limits**

| Carbon Intensity Limit for Each Compliance Period (gCO <sub>2</sub> e/MJ) |      |      |      |      |      |      |      |                |
|---|------|------|------|------|------|------|------|----------------|
| Liquid Fossil Fuel  | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 and after |
| 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, Clean Fuel Regulation*

The fuel carbon-intensity limit for gasoline will reach 81.0 gCO<sub>2</sub>e/MJ by 2030. ECCC estimates that about 2.2 billion liters of additional low-carbon-intensity diesel (biodiesel and renewable diesel) and 700 million liters of additional ethanol will be needed by 2030 under the CFR.

The [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. The model was developed for the CFR by a third-party contractor. For general information on ECCC's Fuel LCA tool used under the CFR to calculate the carbon intensity of a fuel and feedstock throughout its lifecycle, please see GAIN Report [CA2022-0019](#).

The custom crop CI tool was set to be released by the Canadian government in 2026 but is now slated to be released in the second half of 2024. A soil organic carbon portion that was set to be announced in 2024 is now pushed to 2026.

The custom crop CI tool allows farmers to input their own farm data instead of relying on farm averages in the model. It is expected this will encourage industry to adopt low-CI practices that they have not already, and thus benefit from a lower CI score.

### **Carbon Credit Trading System**

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 (Environment and Climate Change Canada) received data on credits created for the 2022 compliance period.

To meet the CFR's annual CI reduction requirements, primary suppliers of fossil fuel 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 federal government has stated that it will begin publishing carbon credit prices in the summer of 2023. Until then, little is known about the value of carbon credits other than Tidewater Renewables' publication of the price of two credit sales. In [June 2022](#), the company agreed to sell a total of 45,000 CFR credits at CDN \$95 per credit. In [Tidewater's second sale](#), in September 2022, it agreed to sell a total of 25,000 CFR credits at CDN \$100 per credit.

### **Clean Fuel Regulation - Land Use and Biodiversity (LUB) Criteria**

Most of the LUB criteria that must be met by credit creators (feedstock growers) is set to go into effect in January 2024. The CFR has some unresolved eligibility and compliance details such as Canada's producer declaration requirements.

### **Clean Fuel Regulation - Biofuel and Biofuel Feedstock Environmental Sustainability and Certification**

U.S. producers of feedstocks and biofuels must register with the Minister of Environment to participate in the CFR.

A primary supplier that is not already registered must register by submitting to the Minister a registration report that contains the information set out in items 1 to 3 of Schedule 3 of the CFR no later than 90 days after they produce in Canada or import, during a given compliance period, a total volume of 400 m<sup>3</sup> or more of any type of fuel in the liquid class, according to the final text of the CFR.

In the case of feedstock certification, a feedstock is eligible for use under the CFR after harvesters, within their declarations, confirm that the feedstock meets the requirements of each LUB criterion, or state that their operation is obligated under a piece of legislation recognized by the CFR under the legislative (national or sub-national) recognition process.

If no application for legislative recognition is in place, the feedstock suppliers must use evidence of compliance with legal mandates as evidence of meeting the LUB Criteria, to create compliance credits.

### **Financial Support for Biofuel Producers**

Government sources state that a renewable fuel strategy will be outlined in Canada's 2023 Fall Economic Statement, usually published in October of each year. Several industry and government sources speculate that it may include investment tax credits and further information around carbon contracts for differences between strike price and a market reference price.<sup>4</sup> The latter was previously announced in [Budget 2023](#) and in the November 2022 Fall Economic Statement. The Fall Economic Statement specifies contracts for difference as one of the tools that the Canada Growth Fund may use. Budget 2023 introduces a more broad-based approach to contracts for difference, which might extend beyond the Growth Fund.

As evidenced in the proceedings of Parliamentary committee meetings and a committee report titled [The US' IRA of 2022: Trade Impact on Certain Sectors](#), industry is critical of the 2023 Canadian Federal Budget for providing limited new support for the biofuel sector. The parliamentary standing committee recommended that "the Government should consult with relevant stakeholders, including other governments [provincial and territorial] in Canada..." The government is facing growing pressure to establish a producer tax credit, like the U.S. federal tax credits for biomass-based diesel that have provided substantial support for many years, or those more recently announced for SAF under the Inflation Reduction Act.

The Canadian Federal government announced in May 2023 that it will spend USD \$64.9 million (CDN \$86 million) on the Braya Renewable Fuels refinery to help convert the facility from one that refines oil to one that produces renewable diesel. Industry sources say the facility will have a capacity of more than 820 million liters per year and will begin commercial operations in 2023.

### **Provincial Mandates and Programs**

Canada allows for various [provincial blending rates](#) amidst a federal backstop for blend rates that remain in effect, below which provincial rates cannot fall as previously noted. These rates will be retained under the CFR. Provincial regulations vary, while Newfoundland, the Northwest Territories, and regions north of the 60-degree latitude are exempt.

---

<sup>4</sup> As proposed by [industry](#), through carbon contracts for differences, the federal government would sign long-term contract with low-carbon project proponents, at an agreed strike price. The government would commit to pay the project proponent the difference between that strike price and a market reference price (i.e., the average price of credits/offsets in a given year) if the market price fell below the strike price. In the opposite case, the project proponent would pay the difference to the government.

**Table 2: 2023 Low-Carbon Biofuel Content Mandates**

| <b>Region</b>    | <b>% low-carbon fuel content in gasoline</b> | <b>% low-carbon fuel content in diesel</b> |
|------------------|--|--|
| Federal Backstop | 5.0  | 2.0  |
| Ontario          | 10.0   | 4.0  |
| Quebec*          | 10.0   | 3.0  |
| British Columbia | 5.0  | 4.0  |
| Alberta          | 5.0  | 2.0  |
| Saskatchewan     | 7.5  | 2.0  |
| Manitoba         | 10.0   | 5.0  |

\* Note: Quebec mandate came into effect January 1, 2023

#### QUEBEC:

A mandate for incorporating clean fuels into gasoline and diesel came into effect in Quebec on January 1, 2023. Quebec, with the third largest diesel pool and second largest gasoline pool of any province, requires ten percent low-carbon fuel content<sup>5</sup> in gasoline (it is not required to be ethanol, although most of it will be) in 2023 and 15 percent by 2030. This is higher than the federal rate of five percent.

Low-carbon fuel content in diesel will begin at three percent in 2023 and increase to ten percent by 2030. This is above the federal rate of two percent.

#### ONTARIO:

Ontario has the largest gasoline pool and diesel pools. Ontario's Cleaner Transportation Fuels regulation requires that fuel suppliers blend ten percent renewable content in gasoline from 2020 to 2024. The renewable content requirement increases 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 four percent renewable content in diesel. This renewable content must currently emit 70 percent fewer greenhouse gas emissions than fossil diesel on a lifecycle basis.

---

<sup>5</sup> Industry sources state that they are awaiting further guidelines of the definition of low-carbon fuel.



## BRITISH COLUMBIA:

The Renewable and Low Carbon Fuel Requirement mandates five percent ethanol content in gasoline and four percent in diesel fuel. In addition, the province has a Low Carbon Fuel Standard, which aims to achieve a 30 percent reduction in fuel carbon intensity by 2030.

Credit market activity is published on the provincial government's [web site](#). Credit transfers reached a maximum price of CDN \$490 per credit in calendar year 2022, down from the maximum of CDN \$519 in calendar year 2021.

British Columbia continues to consult on whether it will introduce blending obligations for Sustainable Aviation Fuel (SAF). Industry contacts say the province is very likely to become the first market in North America to obligate. The province invited comments on British Columbia's Low Carbon Fuel Standard (BC LCFS) [Aviation Fuel Regulation Intentions Paper](#) released on April 6, 2023.

British Columbia is also progressive in its carbon tax policy which, when it went into effect in 2008, was North America's first broad-based carbon tax. The province has committed to increase pace and exceed the federal carbon tax rate, which rose to CDN \$65/ton of emissions on April 1, 2023, and is scheduled to rise to CDN \$170 by 2030. Ethanol is currently taxed by the volume of fuel in Canada as a whole, and both the motor fuel tax and carbon tax apply to ethanol at the same rate as gasoline.

The B.C. government transitioned to the updated GHGenius 5.02 model for estimating carbon intensity in July 2023.

## SASKATCHEWAN:

The province's Ethanol Fuel Regulation requires 7.5 percent ethanol in the gasoline pool as of January 1, 2008. The Renewable Diesel Act, effective July 1, 2012, requires fuel distributors to include two percent renewable diesel content.

## ALBERTA:

The Renewable Fuels Standard requires a minimum annual average of five percent renewable alcohol in gasoline and two percent renewable diesel in diesel fuel sold in Alberta by fuel suppliers. To meet the Renewable Fuels Standard, renewable fuels must demonstrate at least 25 percent fewer GHG emissions than the equivalent petroleum fuel. This petroleum oil and gas producing province has the lowest renewable fuels goals of any province and has seen considerable push back and legal challenges to federal policy on clean fuels and tax policy.

## MANITOBA:

Beginning January 1, 2008, the Ethanol Mandate required fuel suppliers in Manitoba to replace at least 8.5 percent of their gasoline with ethanol, which on January 1, 2022, was raised to ten percent. The Biodiesel Mandate started on November 1, 2009, which required fuel suppliers to blend two percent renewable content in both on and off-road diesel fuel, which was raised to five percent effective January 1, 2022.

## SECTION III. FUEL ETHANOL

| <b>Table 3: Ethanol Used as Fuel and Other Industrial Chemicals (Million Liters)</b> |        |        |        |        |        |        |        |        |        |        |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Calendar Year  | 2014   | 2015   | 2016   | 2017   | 2018   | 2019   | 2020   | 2021   | 2022e  | 2023f  |
| <b>Beginning Stocks</b>  | 131    | 131    | 131    | 131    | 143    | 150    | 180    | 200    | 200    | 225    |
| Fuel Begin Stocks  | 131    | 131    | 131    | 131    | 131    | 131    | 169    | 188    | 189    | 195    |
| <b>Production</b>  | 1,820  | 1,820  | 1,860  | 1,851  | 1,873  | 2,013  | 2,200  | 2,100  | 2,100  | 2,000  |
| Fuel Production  | 1,756  | 1,721  | 1,739  | 1,728  | 1,748  | 1,881  | 1,681  | 1,721  | 1,774  | 1,660  |
| <b>Imports</b>   | 1,161  | 1,224  | 1,192  | 1,302  | 1,400  | 1,283  | 1,289  | 1,385  | 1,904  | 2,240  |
| Fuel Imports   | 1,139  | 1,088  | 1,113  | 1,216  | 1,233  | 1,220  | 1,164  | 1,254  | 1,759  | 2,280  |
| <b>Exports</b>   | 63     | 68     | 76     | 88     | 73     | 83     | 143    | 178    | 152    | 140    |
| Fuel Exports   | -      | -      | -      | -      | -      | 9      | 75     | 108    | 82     | 80     |
| <b>Consumption</b>   | 2,918  | 2,976  | 2,976  | 3,053  | 3,193  | 3,183  | 3,326  | 3,307  | 3,827  | 4,095  |
| Fuel Consumption   | 2,895  | 2,809  | 2,852  | 2,944  | 2,981  | 3,054  | 2,751  | 2,866  | 3,445  | 3,845  |
| <b>Ending Stocks</b>   | 131    | 131    | 131    | 143    | 150    | 180    | 200    | 200    | 225    | 230    |
| Fuel Ending Stocks   | 131    | 131    | 131    | 131    | 131    | 169    | 188    | 189    | 195    | 210    |
| <b>Refineries Producing Fuel Ethanol (Million Liters)</b>                            |        |        |        |        |        |        |        |        |        |        |
| Number of Refineries   | 15     | 15     | 14     | 13     | 12     | 12     | 12     | 12     | 12     | 12     |
| Nameplate Capacity   | 1,800  | 1,800  | 1,750  | 1,750  | 1,822  | 1,881  | 1,881  | 1,881  | 1,881  | 1,881  |
| Capacity Use (%)   | 98%    | 96%    | 99%    | 99%    | 96%    | 100%   | 89%    | 91%    | 94%    | 88%    |
| <b>Co-product Production (1,000 MT)</b>  |        |        |        |        |        |        |        |        |        |        |
| DDGs   | 1,334  | 1,306  | 1,317  | 1,311  | 1,332  | 1,428  | 1,268  | 1,284  | 1,333  | 1,252  |
| Corn Oil   | 6      | 6      | 10     | 10     | 10     | 11     | 10     | 10     | 10     | 10     |
| <b>Feedstock Use for Fuel Ethanol (1,000 MT)</b>                                     |        |        |        |        |        |        |        |        |        |        |
| Corn   | 3,371  | 3,405  | 3,577  | 3,411  | 3,884  | 4,102  | 3,450  | 3,800  | 3,700  | 3,500  |
| Wheat and other grains   | 891    | 766    | 630    | 778    | 370    | 459    | 600    | 302    | 560    | 500    |
| <b>Market Penetration (Million Liters)</b>   |        |        |        |        |        |        |        |        |        |        |
| Fuel Ethanol Use   | 2,895  | 2,809  | 2,852  | 2,944  | 2,981  | 3,054  | 2,751  | 2,866  | 3,445  | 3,845  |
| Gasoline Pool 1/   | 46,688 | 47,620 | 49,149 | 49,605 | 51,085 | 47,529 | 42,799 | 44,440 | 45,510 | 46,500 |
| Blend Rate (%)   | 6.2%   | 5.9%   | 5.8%   | 5.9%   | 5.8%   | 6.4%   | 6.4%   | 6.4%   | 7.6%   | 8.3%   |

*Note: 1/ Covers gasoline and all biocomponents (ethanol).*

*Totals include ethanol beverages.*

*Data source for gasoline pool: IEA, June 2023 Oil Report*

*Data source on non-fuel ethanol production: LMC International (Oxford)*

*See Section VI. notes on statistical data for feedstock-to-biofuel conversion rates.*

*e=estimate; f=forecast*

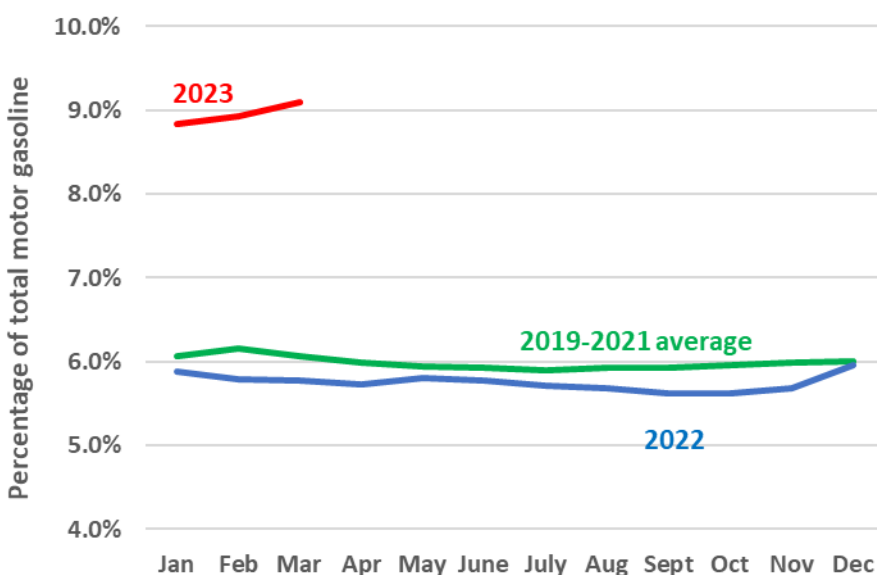
## Consumption

Fuel ethanol consumption increased an estimated 20 percent in 2022, year-over-year, to 3.4 billion liters. Consumption is estimated to rise further to 3.8 billion liters in 2023 due to strong imports from the United States and continued recovery in post-pandemic transportation. Fuel blenders increased their usage in the ramp up to the implementation of Canada's new CFR and Quebec's new volumetric requirements for low-carbon fuel content. Over 50 percent of Canada's fuel consumption is in Ontario and Quebec.

While the actual blend rate of fuels consumed at gasoline pumps in each province is of interest to federal and provincial regulators, most provinces -- except for British Columbia -- do not publish the actual average blend rate of fuels consumed at fuel pumps. However, the amount of renewable fuel used by gasoline and diesel finishers paints an informative picture of renewable fuel demand in each province, regardless of where the final product is consumed.

Statistics Canada publishes data on net production of finished motor gasoline and renewable fuel inputs used by blenders. This data includes finished fuel that is consumed outside of the province or country, so it is not an accurate indicator of blend rates at the pumps. Rather, it is only an indicator of renewable fuel demand by fuel blenders in each province. These data on the two provinces with the largest gasoline pools are illustrated below:

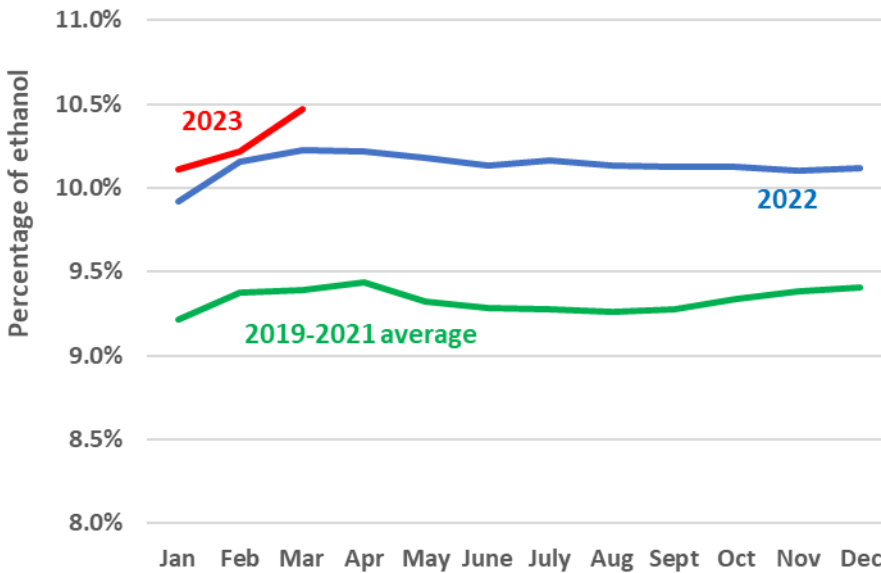
**Figure 1: Cumulative ethanol share of gasoline blended in Quebec**



Data Source: Statistics Canada; forecast by FAS/Ottawa

Note: Each month's data reflect the annual ethanol share of gasoline up to that point in the year; This data includes all motor gasoline finished in the province including motor gasoline shipped outside the province and therefore may not be representative of average blend rates at the pump.

**Figure 2: Cumulative ethanol share of gasoline blended in Ontario**



Data Source: Statistics Canada Table 25-10-0081-02; forecast by FAS/Ottawa

Note: Each month’s data reflect the annual ethanol share of gasoline up to that point in the year; This data includes all motor gasoline finished in the province including exported motor gasoline and may not be representative of average blend rates at the pump.

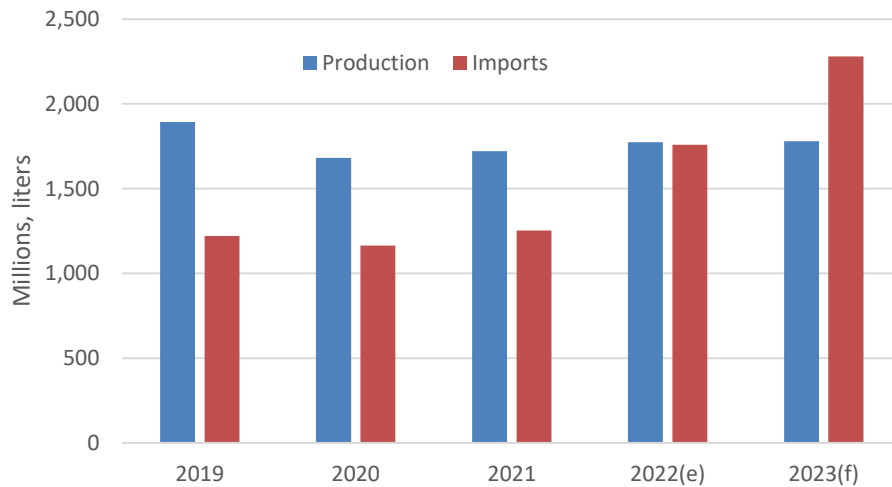
The government of British Columbia [reported](#) that in 2021, 0.41 billion liters of renewable gasoline (including ethanol and co-processed gasoline) were consumed in 2021, up from 0.33 billion in 2020. Renewable content increased to 9.0 percent from 7.9 percent in 2020.

**Production**

Fuel ethanol production increased three percent year-over-year in 2022 to 1.8 billion liters. It remains near the five-year (2018 to 2021 average of 1.76 billion liters). Production is expected to fall slightly in 2023 to 1.7 billion liters due to strong competitive imports from the United States as exports remain flat. No additional production capacity has been added.

## Imports

**Figure 3: Fuel Ethanol Production and Imports**



*Data source: Statistics Canada*

Canadian imports of U.S. fuel ethanol increased 40 percent year-over-year in 2022 to 1.74 billion liters, nearly as much as the estimated 1.77 billion liters produced. This increase was driven by higher blending in Ontario and continued growth in the fuel pool.

## Exports

Exports of fuel ethanol remain small at only five percent of production volume in 2022, or 82 million liters, but have been growing from negligible amounts since 2020. Nearly all fuel ethanol exports are destined for the Netherlands and are classified as undenatured fuel.

## SECTION IV. Biodiesel

| <b>Table 4: Biodiesel (FAME) &amp; Renewable Diesel (HDRD), Million Liters</b> |             |             |             |             |             |             |             |             |              |              |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|
| <b>Calendar Year</b>   | <b>2014</b> | <b>2015</b> | <b>2016</b> | <b>2017</b> | <b>2018</b> | <b>2019</b> | <b>2020</b> | <b>2021</b> | <b>2022e</b> | <b>2023f</b> |
| <b>Biodiesel (Million Liters)</b>  |             |             |             |             |             |             |             |             |              |              |
| <b>Beginning Stocks</b>  | 20          | 20          | 20          | 20          | 20          | 20          | 11          | 9           | 7            | 5            |
| <b>Production</b>  | 351         | 397         | 464         | 397         | 308         | 359         | 405         | 416         | 357          | 420          |
| <b>Imports</b>   | 264         | 281         | 262         | 300         | 391         | 344         | 384         | 422         | 400          | 360          |
| <b>Exports</b>   | 327         | 267         | 455         | 350         | 308         | 342         | 451         | 440         | 379          | 400          |
| <b>Consumption</b>   | 287         | 410         | 271         | 348         | 391         | 370         | 340         | 400         | 380          | 380          |
| <b>Ending Stocks</b>   | 20          | 20          | 20          | 20          | 20          | 11          | 9           | 7           | 5            | 5            |
| <b>Renewable Diesel (Million Liters)</b>                                       |             |             |             |             |             |             |             |             |              |              |
| <b>Production</b>  | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0            | 60           |
| <b>Imports</b>   | 346         | 224         | 261         | 411         | 358         | 380         | 500         | 472         | 380          | 400          |
| <b>Exports</b>   | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0            | 0            |
| <b>Consumption</b>   | 346         | 224         | 262         | 411         | 358         | 380         | 500         | 472         | 380          | 460          |
| <b>Biodiesel + Renewable Diesel (Million Liters)</b>                           |             |             |             |             |             |             |             |             |              |              |
| <b>Beginning Stocks</b>  | 20          | 20          | 20          | 20          | 20          | 20          | 11          | 9           | 7            | 5            |
| <b>Production</b>  | 351         | 397         | 464         | 397         | 308         | 359         | 405         | 416         | 357          | 480          |
| <b>Imports</b>   | 610         | 505         | 523         | 711         | 749         | 724         | 884         | 894         | 780          | 760          |
| <b>Exports</b>   | 327         | 267         | 455         | 350         | 308         | 342         | 451         | 440         | 379          | 400          |
| <b>Consumption</b>   | 633         | 634         | 533         | 759         | 749         | 750         | 840         | 872         | 760          | 840          |
| <b>Ending Stocks</b>   | 20          | 20          | 20          | 20          | 20          | 11          | 9           | 7           | 5            | 5            |
| <b>Biodiesel Production Capacity (Million Liters)</b>                          |             |             |             |             |             |             |             |             |              |              |
| <b>Number of Plants</b>  | 8           | 9           | 9           | 9           | 11          | 13          | 12          | 12          | 11           | 11           |
| <b>Nameplate Capacity</b>  | 400         | 400         | 550         | 591         | 728         | 931         | 912         | 912         | 893          | 913          |
| <b>Capacity Use (%)</b>  | 88%         | 99%         | 84%         | 67%         | 42%         | 39%         | 44%         | 46%         | 40%          | 46%          |
| <b>Renewable Diesel Production Capacity (Million Liters)</b>                   |             |             |             |             |             |             |             |             |              |              |
| <b>Number of Plants<sup>1</sup></b>  | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0            | 1            |
| <b>Nameplate Capacity</b>  | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0            | 170          |
| <b>Capacity Use (%)</b>  | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0            | 35%          |
| <b>Feedstock Use for Biodiesel + Renewable Diesel (1,000 MT)</b>               |             |             |             |             |             |             |             |             |              |              |
| <b>Canola Oil</b>  | 190         | 230         | 260         | 225         | 165         | 200         | 240         | 230         | 170          | 240          |
| <b>Soybean Oil</b>   | 15          | 15          | 20          | 20          | 10          | 10          | 15          | 15          | 10           | 30           |
| <b>UCO</b>   | 70          | 70          | 70          | 70          | 60          | 70          | 65          | 75          | 75           | 80           |
| <b>Animal Fats</b>   | 35          | 40          | 60          | 40          | 40          | 40          | 40          | 50          | 70           | 80           |
| <b>Market Penetration, Biodiesel + Renewable Diesel (Million Liters)</b>       |             |             |             |             |             |             |             |             |              |              |
| <b>Diesel Pool/<sup>2</sup></b>  | 34,279      | 34,998      | 32,702      | 35,387      | 36,350      | 35,349      | 33,096      | 33,124      | 32,566       | 32,519       |
| <b>Blend Rate (%)</b>  | 1.8%        | 1.8%        | 1.6%        | 2.1%        | 2.1%        | 2.1%        | 2.5%        | 2.6%        | 2.3%         | 2.6%         |

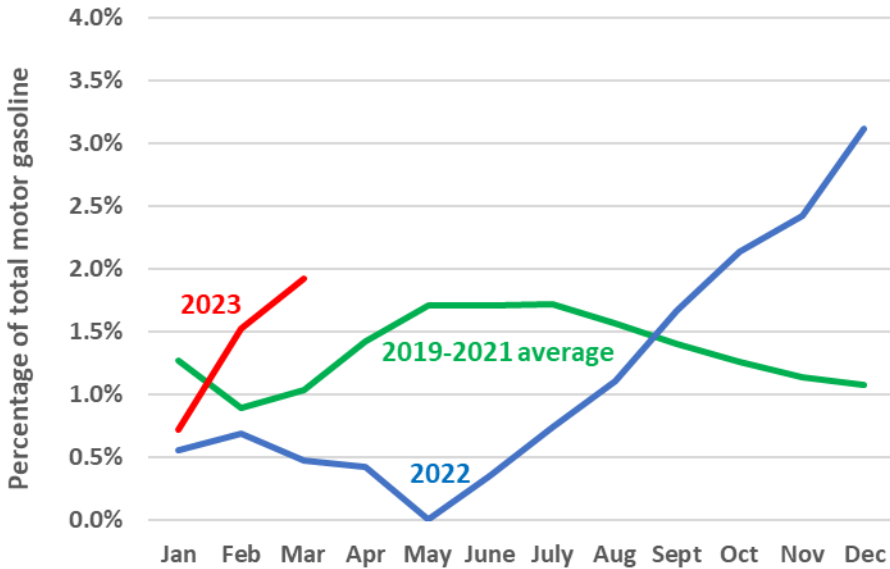
*Note:*  
*f=forecast; e=estimate*

1. Co-processing excluded
2. Fossil diesel plus all "bio-components" (biodiesel and renewable diesel). See Section VI. notes on statistical data

## Consumption

With a slightly smaller diesel pool in 2022 from the previous year and no change expected in the size of the pool this year, renewables (biodiesel and HDRD) consumption fell along with the national average blend rate in 2022 to 760 million liters and 2.3 percent, but some recovery for both to 840 million liters and 2.6 percent is forecasted for 2023.

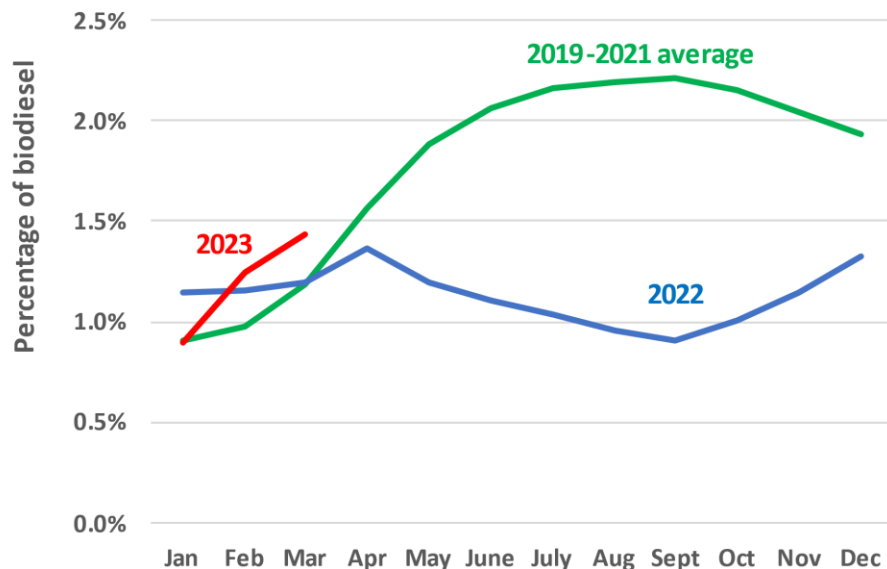
**Figure 4: Cumulative biodiesel share of distillate fuel blended in Quebec (excluding renewable diesel)**



Data Source: Statistics Canada; forecast by FAS/Ottawa

Note: Each month's data reflects the annual biodiesel share of gasoline up to that point in the year; This data includes all diesel finished in the province, including exported diesel.

**Figure 5: Cumulative biodiesel share of distillate fuel blended in Ontario (excludes renewable diesel)**



Data Source: Statistics Canada; forecast by FAS/Ottawa

Note: Each month's data reflects the annual biodiesel share of gasoline up to that point in the year; This data includes all diesel finished in the province, including exported diesel.

The government of British Columbia [reported](#) that in 2021, renewable content in diesel fuel (biodiesel, Hydrogenation-Derived Renewable Diesel, and co-processed renewable diesel) increased to 0.49 billion liters in 2021 from 0.46 billion liters in 2020. Renewable fuel content decreased to 13.4 percent from 13.6 percent in 2020. Year 2021 data is the most recent available.

## Production

Biodiesel production fell 14 percent year-over-year to 357 million liters in 2022, but recovery to the 2021 level is expected in 2023. Canada is expected to produce renewable diesel (HDRD) for the first time in 2023.

Unlike in the United States, very little domestic yellow grease (UCO) and tallow is used as feedstocks for biodiesel production partly because supplies are tied to a much smaller population. At least two Canadian biodiesel producers located near the U.S. border import animal fat and yellow grease to meet nearly all their feedstock requirements.

There are 11 biodiesel facilities standing, with a capacity of 913 million liters, but only half are operational. Canary Biofuels expanded its capacity in November 2022 to 91 million liters per



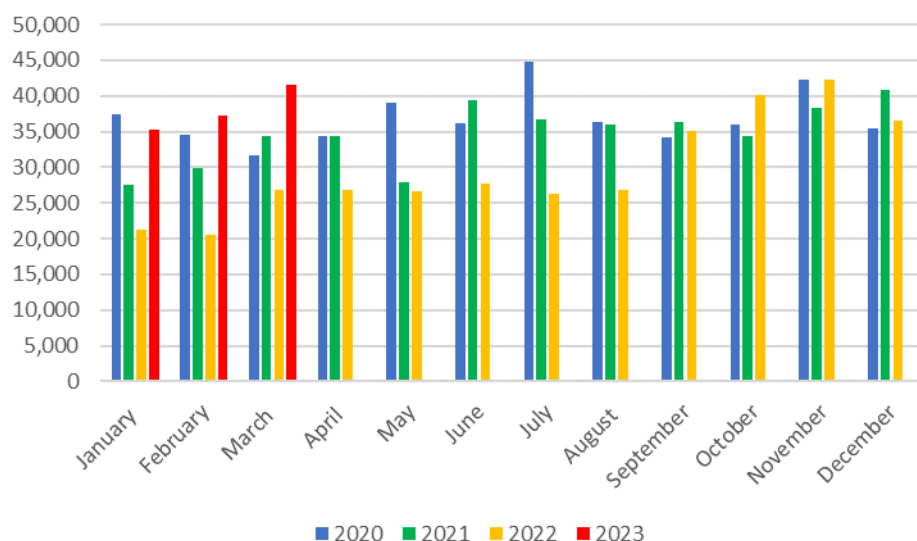
year from 71 million liters. It previously announced an increase in capacity to 182 million liters in phase two of its expansion, but the expected date of completion of phase two is unknown. In addition, the Evoleum facility in Quebec was dismantled sometime in the years after the company was acquired by Evoleum in late 2017.

Canola crush capacity is forecasted to grow from 11.3 million metric tons (MT) in 2022 to 16.5 million MT in 2025, according to a series of industry announcements. This growth is in conjunction with several announcements for new renewable diesel plants and expansions of established biodiesel facilities.

The 2023 crush capacity forecast is lower than the one in the 2022 GAIN Biofuels Report because Ceres Global Ag Corp. has suspended previously announced plans to develop a crush facility in Saskatchewan, citing inflationary pressures. Not included in this forecast is 1.1 million metric tons of crush capacity announced by Federated Co-op and AGT because the two Saskatchewan companies have not publicly announced when their new complex will be constructed and operational.

Competition for canola oil may increase after the U.S. Environmental Protection Agency [finalized an action](#) to approve Renewable Fuel Standard (RFS) pathways for HDRD that is produced from canola/rapeseed oil, in December 2022.

**Figure 6: Biodiesel Production**



*Data source: Statistics Canada*

Innoltek Inc. is planning to increase capacity at its biodiesel plant in Saint-Jean-sur-Richelieu, Quebec by more than 60 percent. The facility will reportedly produce about 22.7 million liters per year by late 2023, up from the current 13.6 million liters. The company uses rendered animal

fats as a feedstock. Innoltek, like other biodiesel companies in its region, will benefit from mandated blending requirements in Quebec that take effect in 2023, and New York’s B5 ‘bioheat’ statewide mandate for heating oil by summer 2023 (original start date of July 2022 was delayed due to high prices).

## **Trade**

Canada has already exported 200 million liters of biodiesel in the first five months of 2023. This is more than the 160 million liters exported during the same time in 2022. Total biodiesel imports in 2022 were 400 million liters; imports so far in 2023 are 223 million liters. Virtually all product is exported to the United States.

Canada’s biodiesel plants are export oriented. In any given year, 88 to 99 percent of Canadian biodiesel is exported and virtually all is shipped to the United States while only small residual exports head to Europe. Nearly all the biodiesel consumed in Canada is imported from the United States.

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 RIN values (Canadian biodiesels generate RINS since their production pathways are approved by EPA to meet RFS renewable fuel obligations) and the Blenders Tax Credit (BTC). The new Blenders Tax Credit scheme for sustainable aviation fuel (SAF)<sup>6</sup> will undoubtedly influence Canada’s SAF industry as it becomes established.

The U.S. market nets higher returns to producers than domestic Canadian outlets due to the U.S. Biomass-Based Diesel (BBD) BTC of USD \$1/gallon, and Renewable Identification Numbers (RINs) which are attached to every gallon of BBD and have value when the product is sold to blenders. RIN values vary over time and are impacted by many factors, including non-market factors tied to ongoing political risk. The blenders credit adds considerable value to each gallon sold into the United States by Canadian companies. The BBD BTC was extended until December 31, 2024.

## **SECTION V. ADVANCED BIOFUELS**

### **Renewable Diesel**

Renewable diesel (HDRD type) has played an important role in Canada’s renewables market for distillates, and consumption volumes have generally matched those for biodiesel since renewable

---

<sup>6</sup> *Effective Jan. 1, 2023, a new BTC in the United States makes U.S. SAF producers eligible for a USD \$1.25 per gallon credit for each gallon of SAF sold as part of a qualified fuel mixture with a demonstrated life cycle GHG reduction of at least 50 percent compared to conventional jet fuel.*

diesel was introduced in 2010. Indeed, in no other country in the world, until very recently the United States, has renewable diesel consumption matched biodiesel consumption.

## **Consumption**

Renewable diesel consumption has been range bound between about 400 to 500 million liters since 2017 and was an estimated 400 million liters in 2023. But that is expected to change shortly with the start of an upward trajectory because of fuel carbon-intensity limits imposed under the CFR, and increased North American [capacity](#) and subsequent production, primarily in the United States but also Canada.

The new Tidewater Midstream renewable diesel facility will [reportedly](#) offer an 80 to 90 percent reduction in carbon emissions compared to fossil fuel diesel and generally higher than most biodiesels, which will help obligated parties meet carbon-intensity limits under the CFR. Renewable diesel also has key advantages over biodiesel (and ethanol for that matter) in that it requires no separate storage and delivery supply chain, has no blend limit and can be substituted one-for-one for fossil diesel, has superior cold weather performance qualities over biodiesel and even fossil diesel #2, and burns with far fewer air toxins, thus lowering air pollution.

## **Production**

Canada has been co-processing renewable diesel with fossil diesel for several years, but the first stand-alone renewable diesel facility began commercial operation in June 2023. [Tidewater Midstream's](#) facility in Prince George, British Columbia [reportedly](#) has an annual capacity of 170 million liters of renewable diesel per year and will use canola, tallow and tall oil<sup>7</sup> feedstocks. The company is assessing sustainable aviation fuel (SAF) production.

Since Tidewater Midstream is Canada's only renewable diesel facility, its production will make up Canada's entire 2023 annual production total. It is not known how much fuel the facility will produce in 2023. FAS/Ottawa's 2023 forecast assumes six months of production at an average 75 percent facility capacity.

Carbon credit prices once they reach a certain level can play a big role in determining the economic viability of a credit-generating project, including the development of new renewable diesel facilities. Several projects remain on hold until pricing becomes more transparent, and the government's renewable fuels strategy has been announced. ECCC officials state that they will begin publishing carbon credit prices in summer 2023. In addition to Tidewater's production capacity, combined investment announcements to date equate to 3.02 billion liters of renewable diesel, excluding companies that aborted plans to proceed.

---

<sup>7</sup> Tall oil is a residual product of the pulp and paper industry. It can be extracted from pine, spruce, and birch.

Parkland Corporation was the first company to announce that it will abandon plans for a new renewable diesel complex. In its [2022 fourth quarter report](#), the company stated, “several factors have impacted the competitiveness of the renewable diesel complex, including rising project costs, lack of market certainty around emerging renewable fuels, and the U.S. Inflation Reduction Act of 2022, which advantages U.S. producers.” However, it will proceed with the expansion of its co-processing facility. Parkland operates gas stations under the Pioneer, Ultramar, Chevron, and Fas Gas Plus brands, as well as franchised Esso locations.

The next renewable diesel facility to open in Canada will likely be the Braya Renewable Fuels facility in Come By Chance, Newfoundland. The capacity of this facility will reportedly be more than 820 million liters per year. Braya is converting the facility from an oil refinery and will receive up to CDN \$86 million in federal investments, subject to final negotiations. The funding is made possible through Natural Resources Canada’s Clean Fuels Fund and Innovation, Science and Economic Development’s [Strategic Innovation Fund](#). Production from the Braya facility is not incorporated into FAS Ottawa’s 2023 production estimates at this time. Feedstocks will reportedly include used cooking oil, corn oil, and animal fat.

## **Imports**

Renewable diesel imports in 2022 were 380 million liters. So far in 2023 there have been 265 million liters imported and 460 million liters are forecast for 2023.

Renewable diesel imports have been low and steady over the past six years (2017 to 2022) and are expected to begin an upward trajectory in 2023 because renewable diesel will help obligated Canadian parties meet fuel carbon-intensity limits imposed under the CFR. This forecast also assumes that U.S. renewable diesel capacity and production will continue to grow while Canada’s market is established.

Until now, all renewable diesel consumed in Canada was imported, in the earliest years imports arrived from NesteOil in Europe, then the NesteOil plant in Singapore replaced those sales, and more recently some product was shipped from the United States. But this situation has changed with the opening of Canada’s first renewable diesel plant, although greater program support in the United States has potential to limit Canadian industry growth.

## **Sustainable Aviation Fuel (SAF)**

### **Production**

There is currently no SAF produced in Canada.

### **Consumption**

Global SAF supply remains limited, product remains 4 to 6 times more expensive to produce than fossil jet kerosene, and the SAF volumes airlines purchase SAF through offtake agreements

represent only a tiny fraction of airline fuel demand. Canada's major airlines are using SAF on some flights, purchasing fuel overseas where available. California airports are acting as the major North American hub SAF, but volumes are steadily growing at other West Coast airports. Further, Air Canada has adopted book and claim systems, where a user located near a SAF production site outside of Canada uses SAF in their flights and the GHG reductions associated with this use are claimed, in exchange for the additional cost of SAF, by a user in Canada. Virtually all SAF produced today is produced in Europe or the United States, but that will change slowly.

SAF use can and is being supported through customer offset payments or direct fuel purchase agreements. Through Air Canada's [Leave Less Travel Program](#), corporate customers and cargo freight forwarders can purchase SAF, carbon offsets or a combination of both to offset or reduce GHG emissions related to business travel or cargo shipments, mitigating their carbon footprint. Since 2012, and as of April 2023, Air Canada has purchased 2,399,435 liters of SAF. Air Canada [reportedly](#) began purchasing Neste's SAF in February 2022.

The Canadian government's [Aviation Climate Action Plan 2022-2030](#) sets an aspirational goal of ten percent SAF use by the year 2030. If Canada were to reach its aspirational goal, it will need to source more than one billion liters of SAF per year by 2030, based on predictions from the Canadian Energy Regulator (CER) that 2030 jet fuel consumption will increase to 10.6 billion liters by 2030. Any larger expansion of SAF use by Canadian airlines (say half a billion liters) over this medium-term timeline means the vast majority would almost certainly be sourced from producers outside Canada, and most likely be directly acquired at U.S. and European airports or indirectly thru book and claim.

## **SECTION VI. NOTES ON STATISTICAL DATA**

### **Ethanol Production:**

Years 2014 to 2021 denatured ethanol fuel production data are derived from data submitted to ECCC by regulated facilities under ECCC's Renewable Fuels Regulation (RFR). It is typically published with a two-year delay or more. Year 2022 production data is expected to be published by ECCC in late 2023. That will be the final year of publication, because the RFR will be fully repealed on September 30, 2024.

Because undenatured fuel ethanol is not included in ECCC's fuel ethanol category, FAS/Ottawa adds undenatured fuel exports (HS Code 2207.10.10, where the relatively low unit value and relatively large volume size indicate that shipment is fuel), and this sum comprises FAS/Ottawa's ethanol fuel production estimate.

For year 2022, denatured fuel production is taken from Statistics Canada Table 25-10-0082-01, which is drawn from Statistics Canada's Monthly Renewable Fuel Survey of fuel producers. Because undenatured fuel ethanol is not included in the fuel ethanol category, FAS/Ottawa again

adds undenatured fuel exports (HS Code 2207.10.10), and this sum comprises the ethanol fuel production estimate.

Ethanol produced for non-fuel applications is estimated using consulting services and kept within expected year-over-year changes in consumption given market conditions which include covid and post-covid demand for disinfectants.

*Separate statistics on beverage ethanol are not available and are therefore not excluded from “total” ethanol production, consumption, trade and stocks. Various consulting companies’ intel was consulted and used to guide construction of data covering production and consumption of ‘non-fuel, other industrial’ and ‘beverage’ ethanol to build market balance ‘totals.’ Trade Data Monitor was consulted for ‘total’ ethanol exports/imports.*

## **Feedstock-to-Biofuel Conversion Rates Used**

### **Ethanol**

Corn kernels: 1 metric tons = 402 (before 2014) to 417 liters (after 2014)

Wheat kernels: 1 metric tons = 393 liters

Rye/Barley kernels: 1 metric tons = 241 liters

### **Biodiesel**

Rapeseed oil: 1 metric tons = 1,136 liters of RME (rapeseed oil methyl ester)

Soyoil, crude: 1 metric tons = 1,113 liters of SME (soybean oil methyl ester)

Soyoil, 1x refined: 1 metric tons = 1,128 liters of SME (soybean oil methyl ester)

Animal fats/grease: 1 metric tons = 1,043 liters of AFME (animal fat methyl ester)

Used cooking oil (UCO): 1 metric tons = 1,043 liters of UCOME (UCO methyl ester)

## **Ethanol Fuel Exports and Imports:**

Ethanol fuel exports are derived from the Canadian International Merchandise Trade Web Application. HS 2207.20.10 and 2207.10.10. Total ethanol trade is tracked using 2007.10 and 2207.20.

## **Ethanol Feedstock Use for Fuel Ethanol:**

Ethanol feedstock estimates are derived from two sources. First, data on feedstocks used to produce denatured fuel ethanol is derived from Statistics Canada Table 25-10-0082-01, which is drawn from Statistics Canada’s Monthly Renewable Fuel Survey of fuel producers. We specifically use corn rates, instead of rates that apply to wheat or other possible inputs, because all undenatured fuel ethanol produced for export is produced in Ontario and Quebec, where corn is currently the only ethanol feedstock.

FAS/Ottawa has ceased using feedstock data published by ECCC because, unlike ECCC's fuel production data, the feedstock data is not audited. The data appears to be inconsistent with known feedstock conversion rates.

**Ethanol Ending Stocks:**

Fuel ethanol ending stocks are derived from Statistics Canada table 25-10-0082-01, which includes only denatured fuel stocks.

FAS/Ottawa is not aware of any data published on total ethanol stocks that include non-fuel and therefore total stocks are only an estimate based on conversations with industry and estimated using a range of four to seven percent of consumption.

**Biodiesel Production:**

Years 2014 to 2021 are derived from data submitted to ECCC by regulated facilities under the RFR. It is typically published with a two-year delay or more and audited. Year 2022 production data is expected to be published by ECCC in late 2023. That will be the final year of publication, because the RFR will be fully repealed on September 30, 2024.

Year 2022 production data is derived from Statistics Canada survey results. Capacity levels are determined by speaking with the biodiesel industry and tracking publicly available news releases from companies.

**Biorefineries Producing Fuel Ethanol:**

Co-op Ethanol Complex

GreenField Global (Varenes location)

Husky Energy (Lloydminster location)

Husky Energy (Minnedosa location)

IGPC Ethanol Inc

Kawartha Ethanol Inc

North West Bio-Energy Ltd.

Permolex

Pound-Maker Agventures Ltd

Suncor

**Biodiesel/Renewable Diesel Trade:**

Biodiesel trade data is tracked under HS code 3826.00, which covers biodiesel blended above 30 percent by volume with fossil diesel, and HS code 2710.20 for petroleum oil containing biodiesel up to and including 30 percent biodiesel by volume. All biodiesel traded under HS 3826.00 is assumed to be B99. Some RD is also erroneously reported by customs officials under the biodiesel code HS 2710.20 and HS 3826.00. Trade data is derived from the Canadian International Merchandise Trade Web Application.

Renewable Diesel imports for 2022 are only an estimate. Canada imports volumes of renewable diesel under HS code 2710.19.99.93 for pure HDRD and 2710.19.99.23 for diesel fuel blended with HDRD. These HS codes were implemented on January 1, 2022; however, it took several months for exporters to learn the correct codes, and therefore the data collected under them in the first half of 2022 is unreliable. Canada has not yet issued errata to correct these trade statistics.

**Biodiesel Feedstocks:**

Feedstock quantity for years prior to 2017 are based on information supplied by industry and consistent with known feedstock/biofuel conversion rates. Available data on canola oil, soybean oil, and UCO feedstock data beginning 2017 to 2021 is either aggregated or unreliable and thus rough estimates for those years provided.

**Biorefineries Producing Biodiesel:**

Archer Daniels Midland

Consolidated Biofuels Ltd

CoWICHAN Bio-Diesel Co-op

Innoltek Inc.

Noroxel

Canary Biofuels Ltd.

Verbio Diesel Canada Corp.

**Fuel Pools:**

FAS/Ottawa has derived gasoline and diesel usage data from the International Energy Association (IEA).



**Attachments:**

No Attachments