

Required Report: Required - Public Distribution

Date: July 15, 2025

Report Number: CO2025-0015

Report Name: Biofuels Annual

Country: Colombia

Post: Bogota

Report Category: Biofuels

Prepared By: Lady Gomez, Agricultural Specialist

Approved By: Mark Rosmann

Report Highlights:

Colombia's biofuels consumption is expected to modestly rebound in 2025, driven by increased ethanol and biodiesel output from improved crop yields and continued 10 percent blending mandates. Ethanol consumption is forecast to reach 955 million liters (ML) and will be met nearly equally through local production and U.S. imports. Biodiesel demand is anticipated to recover to 795 ML, supplied solely by local production. Established more than 20 years ago, Colombia maintains a relatively mature biofuels program, but the government has not unveiled any major policies in recent years. Colombia's efforts on advanced fuels resulted in the January 2025 SAF Roadmap, aiming to produce 100 million gallons (378.5 ML) of Sustainable Aviation Fuel by 2035 and 450 million (1.7 billion liters) by 2050. To date, one company has conducted SAF production tests in Colombia.

Section I. Executive Summary

Colombia's biofuels program, established in the early 2000s, focuses on energy diversification, rural development, and reducing fossil fuel dependence. In early 2025, the Colombian Ministry of Mines and Energy (MME) launched the "Just Energy Transition" initiative to support President Petro's 2022-2026 National Development Plan to reach the national goal of reducing greenhouse gas (GHG) emissions by 51 percent by 2030 and accomplishing carbon neutrality by 2050. While the strategy does not significantly alter Colombia's existing biofuels policy, it maintains biofuels as a key component of the energy transition framework.

Despite years of advancement, Colombia's biofuels program shows signs of stagnation, with few changes to blend mandates, environmental regulations, support policies, or innovation. The latest development involved Colombia's advanced fuels program including Sustainable Aviation Fuel (SAF). First beginning in 2023, the effort led to the creation of the January 2025 "SAF Roadmap," which aims to produce 450 gallons (1.7 billion liters) of SAF by 2050, including a 100-million-gallon production goal (378.5 ML) by 2035. Ecopetrol, Colombia's state-owned oil company, began test production in late 2024, aiming for sustained production by 2028 pending the creation of a regulatory framework and certification approvals.

In 2025, Colombia's biofuels sector continues to operate in an environment with unchanging blend mandates and modest growth in fuel demand. Ethanol production is estimated at 420 ML, with steady sugarcane yields and favorable weather conditions. Total fuel ethanol consumption will reach 955 ML, with 100 ML for industrial use, and assuming an unchanged national E10 mandate and sustained fuel ethanol imports, which are estimated to reach 440 ML, primarily from the United States.

FAS Bogota (Post) has updated the methodology used to calculate ethanol trade in this report, resulting in historical revisions to the ethanol estimates. In previous reports, only denatured ethanol (HS code 220720) was included in the analysis. For 2025, Post estimates for ethanol trade will also include undenatured ethanol (HS code 220710).¹

Post forecasts Colombian biodiesel production to reach 795 ML in 2025, driven by higher palm oil availability and steady domestic demand under the national B10 blend rate. Colombia neither imports nor exports biodiesel, relying entirely on local palm oil production. Current market dynamics have supported a largely unchanged blending rate over the past 2-3 years. Assessments by the World Bank's BioCarbon Fund Initiative indicate that Colombia's palm-based SAF has the potential to meet international standards, specifically the greenhouse gas emission reduction requirements under the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) and the EU Renewable Energy Directive (REDII). This is attributed to low deforestation rates and sustainable expansion practices in the Colombian palm sector. Additionally, the initiative offers an opportunity for Colombia to update carbon intensity values for palm oil-based biodiesel.

¹ As a result, ethanol import volumes are higher for all years, which demonstrates higher industrial consumption of ethanol and slightly higher stocks.

Section II. Policy and Programs

In early 2025, Colombia's Ministry of Mines and Energy (MME) released the "[Just Energy Transition](#)" strategy that attempts to outline energy transition and investments within President Petro's [National Development Plan 2022–2026](#). Although the strategy outlines a vision to move away from fossil fuel dependence and enhance energy democratization and climate action, it does not introduce any modifications to Colombia's existing biofuels policy. As a result, biofuels remain a component of the broader energy transition framework. So far, the developments in Colombia's *Just Energy Transition* remain at the development stage,² with definite implementation yet to be realized.

Biofuels in Colombia are recognized as renewable sources to reduce the transportation sector's carbon footprint. Colombia's biofuels strategies, first established over 20 years ago by [Law 693 \(2001\)](#) for ethanol and [Law 939 \(2004\)](#) for biodiesel, were designed to boost the rural economy by providing additional revenue streams for the sugarcane and palm oil industries. These laws aimed to diversify Colombia's energy sources, reduce dependence on fossil fuels, and lower GHG emissions. These policies remain largely unchanged, with limited updates to blend mandates, pricing systems, or carbon intensity standards.

Institutional and Regulatory Framework

The MME is the principal agency overseeing Colombia's biofuels policy. It collaborates with an inter-ministerial commission created under [Decree 2328 \(2008\)](#), which includes the Ministries of Agriculture, Environment, Transportation, Commerce, Finance, and the National Planning Department (DNP).³ Colombia regulates its biofuels market using a combination of blend mandates, price controls, and tax and environmental policies.

Despite this regulatory framework, biofuel blend mandates have been inconsistently applied due to fluctuations in domestic feedstock availability. Further, while Colombia offers tax incentives and exemptions, key instruments such as carbon intensity targets are only regulated for ethanol and are not applied to biodiesel.⁴

Programs Impacting the Fuel Pool Size

Colombia's fuel pool is shaped by several policies targeting vehicle fleet transformation, electric vehicle (EV) adoption, public transport modernization, and fossil fuel subsidy reforms. Despite government goals to reduce fossil fuel dependence, Colombia's total fuel pool is expected to continue growing, albeit moderately, through 2030⁵ primarily due to economic expansion and slow energy modal shifts. Under the 2021 Climate Action Law, Colombia set a target of 600,000 EVs by 2030 and to reduce emissions from land transport. EV adoption is supported by tax exemptions, including relief from value-added tax (VAT), customs duties, and vehicle registration fees. Despite these incentives, uptake remains low due to high vehicle costs and limited charging infrastructure, especially outside major urban centers. Post sources indicate that in 2025, EVs account for less than 2 percent of the total vehicle fleet and

² Several key policy frameworks have been established, including [CONPES 4075](#) (Energy Transition Policy) and [CONPES 4129](#) (National Reindustrialization Policy).

³ In Spanish, known as the *Departamento Nacional de Planeación* (DNP).

⁴ See "Carbon Intensity Standards" section for further information.

⁵ Source: [Liquid Fuels Economic Report](#): Current Energy Landscape and Future Outlook Sector Overview for 2024 and Projections for 2030. Colombian Petroleum and Gas Association; published February 2025.

approximately 96 percent of vehicles are liquid fuel dependent. Public transportation initiatives like electric buses in main cities like Bogotá and Medellín are expanding but have limited national impact. The 2025 “Just Energy Transition” strategy promotes decarbonization but does not implement short-term mechanisms to reduce gasoline or diesel demand.

Wholesale fossil fuel and biofuel prices are regulated by the government. Since 2007, Colombia has managed fossil fuel prices through the “Fund for Stabilization of Fuel Prices” to mitigate the impact of international price fluctuations on the domestic market.⁶ This policy shielded consumers from rising international fuel prices, but high oil prices have led to a significant fuel subsidy deficit.

In September 2022, the Petro Administration gradually raised gasoline prices for consumers. Market dynamics have supported the government’s long-term goal of aligning domestic and international gasoline prices. According to estimates⁷ from the Colombian Petroleum and Gas Association (ACP), gasoline demand in 2024 experienced a decline. This reduction was attributed to the gradual removal of the fuel subsidy implemented in 2023, which led to changes in consumption habits as households adjusted their spending to limit fuel expenses relative to their total income. For 2025, ACP projects a moderate increase in gasoline demand, and the anticipated growth is expected to result from market stabilization following the price adjustments caused by the subsidy removal, as well as positive economic growth projections.

Recently, the Colombian government has been cautious about increasing diesel prices owing to the potential for higher inflation, as most cargo in Colombia is transported by diesel-powered trucks. Despite these concerns, the government has decided to phase out diesel subsidies as part of its energy transition strategy. In September 2024, the Colombian government announced a plan to increase diesel prices by \$1,900 Colombian pesos (COP) (approximately USD \$0.45) per gallon, which led to significant protests from truckers who at the time blocked major highways into the country’s largest cities. The government reached an agreement with the truckers to suspend the protests by agreeing to a smaller increase of \$800 COP, to be incrementally implemented through 2024. Additionally, on June 18, 2024, President Petro issued Decree 0763, introducing a new pricing mechanism for large diesel users consuming over 20,000 gallons per month. Starting August 8, 2024, sectors like oil, mining, and cement are required to pay international parity rates. The decree led to a 15 percent drop in diesel consumption.⁸ In 2025, more moderate growth in diesel demand is expected due to uncertainty surrounding potential price increases aimed at further reducing the fiscal cost of the fuel price stabilization fund.

Renewable Energy and Greenhouse Gas Emissions Policy

The [Climate Action Law](#) (2021) institutionalized Colombia’s Nationally Determined Contribution⁹ (NDC) to reduce GHG emissions by 51 percent by 2030 and achieve carbon neutrality by 2050, using the 2010 national emissions inventory as a base year, with outlined steps to build climate resilience. The law includes nearly 200 specific climate actions, such as achieving net zero deforestation by 2030,

⁶ A more impactful development on fossil fuel consumption is the Petro Administration’s decision to phase out gasoline and diesel subsidies.

⁷ Source: Liquid Fuels Economic Report: Current Energy Landscape and Future Outlook Sector Overview for 2024 and Projections for 2030. Colombian Petroleum and Gas Association (ACP); published February 2025.

⁸ Source: Liquid Fuels Economic Report, February 2025.

⁹ See: [Nationally Determined Contribution \(NDC\) to the Paris Agreement: Colombia](#). The 21st session of the Conference of the Parties (COP 21) of the United Nations Framework Convention on Climate Change, 2016.

increasing electric vehicles by 600,000 vehicles by 2030¹⁰, reducing GHG emissions from agriculture, promoting “agro-energy crops” to increase GHG absorption, and using biomass to produce biofuels and bioenergy. Article 20 of the law states that the MME may support research and development on energy change from organic sources (animal or vegetable origin), but significant developments in this area remain pending.

Carbon Intensity Standards

In 2017, Colombia’s Ministry of Environment and Sustainable Development issued [Resolution 1962](#), which established a maximum carbon intensity (CI) value linked to the GHG inventory of fuel ethanol. This regulation mandated a 20 percent reduction in ethanol’s CI by 2021 from the 2016 baseline of 52.8 gCO₂e/MJ¹¹ for sugarcane-based ethanol. This made the ethanol emission-level target 42.3 gCO₂e/MJ, equivalent to about 780 kg CO₂e/m³, and translating into a 61 percent GHG reduction compared to gasoline.¹² Research conducted in 2020 by the Colombian Sugarcane Research Center (Cenicaña) estimated an even lower average CI value of 31.5 gCO₂e/MJ (or 580.88 kg CO₂e/m³) for Colombian ethanol.¹³ This figure places Colombia’s sugarcane-based ethanol below the current CI threshold, affirming compliance with national environmental standards and strengthening the potential for exporting ethanol to low-carbon fuel markets.

Colombia does not enforce carbon intensity standards for biodiesel, but the sector has taken voluntary steps toward sustainability. In late 2023, a biodiesel plant in Santander department became the first in Colombia to achieve carbon neutrality certification through a local third-party auditing process.¹⁴

A 2012 study by the Inter-American Development Bank and the Colombian government concluded that palm oil-based biodiesel could yield an 83 percent GHG reduction per vehicle-kilometer when compared to fossil diesel.¹⁵

More recent assessments¹⁶ supported by the World Bank’s BioCarbon Fund Initiative for Sustainable Forest Landscapes evaluated the life-cycle emissions of Sustainable Aviation Fuels (SAF) and Renewable Diesel (RD) derived from Colombian palm oil and its residues. Preliminary findings suggest that Colombia’s palm-based SAF could potentially meet international standards, specifically the greenhouse gas emission reduction requirements under CORSIA and the EU Renewable Energy Directive (REDII). The study indicates that Colombian palm oil demonstrates sustainable expansion practices, with all analyzed areas showing low or medium deforestation risks and none classified as high risk. Furthermore, palm-based fuels produced in regions like Orinoquía meet CORSIA’s GHG emission requirements, with the region even exhibiting negative GHG emissions in its carbon balance assessment.

¹⁰ In 2024, Colombia had 42,668 electric vehicles and hybrid electric vehicles. See: Hybrid and electric vehicle sales in Colombia reached a record high in 2024, Portafolio, published in January 2025.

¹¹ The CI score is measured by grams of CO₂e per megajoule (g/MJ).

¹² Both locally produced and imported ethanol must comply with third-party certifications that follow ISO Standard 14064-3.

¹³ Source: “[Ethanol helps reduce greenhouse gas levels](#).” Cenicaña, published on October 28, 2020.

¹⁴ Source: “[The first carbon neutral certified biodiesel company in Colombia is from Santander](#).” Vanguardia, published on November 27, 2023.

¹⁵ Source: “[Assessment of the life cycle of the biofuels production chain in Colombia](#).” Interamerican Development Bank, and the Government of Colombia, published January 2012.

¹⁶ Study initiated in 2024 with results pending to be published. Source: “[Project Presentation – Life Cycle Assessment of the Production of Sustainable Aviation Fuels \(SAF\) and Renewable Diesel \(RD\) from Oil Palm and its Crop Residues in Colombia](#)” published January 2024.

Critical practices, such as the adoption of closed pond Palm Oil Mill Effluent treatment systems and biogas plants at oil mills, are essential for achieving significant emission reductions and enhancing sustainability. While biodiesel carbon intensity (CI) data remains underreported at the national level, the study presents an opportunity to calculate a more accurate and updated CI value for Colombian palm oil-based biodiesel, further supporting compliance with international standards.

Sustainable Aviation Fuels (SAF)

Colombia’s activities in the SAF sector began in late 2023 when the MME and the Civil Aviation Authority of Colombia (Aerocivil) established a working group to develop a “SAF Roadmap.” This initiative, part of Colombia's broader energy transition commitment, involved multiple ministries, Ecopetrol, and the Colombian National Biofuels Producers Association (Fedebiocombustibles). The [SAF Roadmap](#) was issued in January 2025 with Aerocivil's resolution 00090, and focuses on three main pillars: decarbonization of the aviation sector, development of a productive and sustainable industry, and social transformation and inclusion. The plan aims to produce 100 million gallons (378.5 ML) of SAF by 2035 and 450 million (1.7 billion liters) by 2050.¹⁷ In late 2024, Ecopetrol began test production of 32,000 barrels (5 ML) of jet fuel with palm oil and used cooking oil at its Cartagena refinery.¹⁸ Ecopetrol intends to develop a sustainable production model by 2028, pending a national regulation, certification of raw materials and production processes, necessary investments, and other technological adjustments at its refinery.

Biofuel Blend Mandates

Colombia’s biofuel blending mandates have frequently changed due to irregular domestic supplies of sugarcane and palm oil feedstocks (Table 1). These fluctuations have caused market stagnation for both ethanol and biodiesel, including notable instances of backtracking on ethanol mandates.

Table 1. Colombia: Biofuel Blend Mandates, 2016-2025

Year	Ethanol Blend	Biodiesel Blend
2016	E8	B8 - B10
2017	E6 - E8	B9 - B10
2018	E10	B10
2019	E10	B2 - B6 - B8 - B10
2020	E10	B10
2021	E10 - E4 - E7 - E4	B10 – B12
2022	E6	B11 - B10
2023	E4 - E5 - E4 - E7	B10
2024	E8 - E10	B10 - B8
2025*	E10	B10

Data source: MME and the National Biofuels Producers Association.
Note: *2025 includes blending mandates from January to May.

¹⁷ Colombia has approximately 23 million hectares of potential new areas for oil palm expansion, primarily in the eastern, central, and northern regions. These areas are identified as suitable for oil palm cultivation based on their low carbon stock and agricultural suitability. The Land Suitability Map developed by the Colombian Unit of Agricultural Planning ensures that oil palm expansion does not jeopardize natural areas or ecosystem services, such as forests, moorlands, and water bodies. Source: Ramirez, Munar, Garcia, Mosquera, Faaij, “The GHG emissions and economic performance of the Colombian palm oil sector; current status and long-term perspectives.” Journal of Cleaner Production, published on June 10, 2020.
¹⁸ Source: “[Sustainable aviation fuel \(SAF\) production trial successfully completed at the Cartagena refinery](#).” Ecopetrol, published in November 2024.

Ethanol blend mandates have varied significantly, ranging from E4 to E10 in recent years. The highest mandate, E10, was introduced in 2018 and reinstated in February 2024 through [Resolution 40447 \(2022\)](#). This increase significantly boosted demand for ethanol in 2024, raising sales of domestically produced sugarcane ethanol and imports. The private sector has called for the Colombian government to review its current regulations and permit voluntary higher ethanol blending up to E14.¹⁹ Additionally, some automobile companies are conducting tests on flex fuel vehicles in Colombia using E100.

Biodiesel blend mandates have also fluctuated, with levels ranging from B2 to B12. In September 2019, low domestic palm oil production reduced the blend mandate to B2, which gradually increased to B10 by year-end and remained at the same level until April 2021, when it rose to B12 but was lowered to B11 in January 2022 and to B10 by March 2022. The biodiesel blend mandate remained at 10 percent until the Colombian government issued [Resolution 40431 \(2024\)](#) that temporarily dropped the rate to B8 for the last quarter of 2024, but returned to B10 in January 2025.

The Ministry of Mines and Energy has issued various regulations to promote biodiesel use in other sectors such as the mining and maritime sectors. Through [Resolution 40188 \(2019\)](#), the MME established a B5 biodiesel rate for transport vehicles used in mining activities. [Resolution 40111 \(2021\)](#) instituted a voluntary biodiesel blend rate up to 2 percent with marine diesel. Further, a pilot program through [Resolution 40178 \(2020\)](#) allows voluntary blend rates at or above B20 for use in cargo transportation fleets. Utilized primarily in Antioquia department and other central Colombian departments, *Fedebiocombustibles* estimates that currently approximately 1,500 trucks are registered in this program.

Biofuels Production Geography

Most of Colombia’s ethanol facilities are in the Cauca River Valley (Figure 1) where sugarcane production is highly concentrated. For biodiesel, production facilities are in mostly the northern departments and typically adjacent to palm oil plantations.

Figure 1. Colombia: Ethanol and Biodiesel Facilities by Department



Data source: Fedebiocombustibles.

¹⁹ Source: [Economic Report: Liquid fuels sector in Colombia](#),” ACP; published February 2024.

Tax Policy

Since 2002, the Colombian government has promoted biofuel production and its consumption through various actions, including the elimination of the biofuel value added tax (VAT) and exemptions on a fossil fuel global carbon tax (Table 2). Additionally, ethanol blended with gasoline remains exempt from local surcharge fees. Colombia's 2022 tax reforms extended the national carbon tax to include coal, which was not covered in the previous 2016 tax reform that pertained to other fossil fuels. The tax rate for each fuel unit depends on its GHG emissions and classified volume or weight.

Table 2. Colombia: Current Fuel and Biofuel Tax Rates and Fees

Tax	Gasoline	Diesel	Biofuels	Regulation
Global Tax	COP \$762.39 per gallon of gasoline (regular) (~USD \$0.18)	COP \$729.71 per gallon (~USD \$0.18)	Exempt	Art. 167,168,173 - Law 1607 of 2012 Art. 218,219,220 - Law 1819 of 2016
VAT	19 percent	19 percent	Exempt	Art. 183 - Law 1819 of 2016 Art. 477 - Estatuto Tributario
Carbon Tax	COP \$198 per gallon (~USD \$0.05)	COP \$224 per gallon (~USD \$0.05)	Exempt	Dec. 926 of 2017 Art. 221, 222, 223 - Law 1819 of 2016
Local Surcharge Fee	25 percent reference price Reference price for June 2024: COP \$10,456 per gallon (~USD \$2.52)	6 percent reference price Reference price June 2024: COP \$5,453 per gallon (~USD \$1.32)	Exempt on ethanol blended with gasoline. No surcharge tax relief on biodiesel	Art. 117 to 121 - Law 488 of 1998

Note: Values in both Colombian Peso (COP) and U.S. Dollar (USD). Specific tariffs valid for 2025 and updated on an annual basis. For purposes of this report: \$1 USD=4,145 COP (average exchange rate as of June 4, 2025).

Data source: Colombian Oil and Gas Information System ([SIMEC](#)), MME.

Regulated Biofuel Prices

Periodically, the MME sets the wholesale prices for gasoline and diesel, which encompasses the cost that fuel distributors or blenders must pay to domestic biofuel producers, which are calculated using a formula established by MME regulations.²⁰

Fuel ethanol price procedures are outlined in MME resolution [180643 \(2012\)](#). Through the formula, the ethanol price should be the higher of the opportunity cost of using refined sugar for ethanol or the international gasoline price, adjusted for technical factors. This resolution sets a ceiling value which is the average gasoline price in Bogota. Currently, the ethanol administered price follows MME's ethanol price resolution and does not exceed the Bogota gasoline price, as fuel prices have matched international rates. This administered price has created significant market opportunities for imported ethanol due to price decreases in international ethanol and a slight Colombian peso revaluation.

²⁰ Reference fuel prices vary across the country due to variable transportation and distribution costs in each department.

The biodiesel price methodology is established through MME's resolution [40400 \(2019\)](#), and based on the biodiesel import parity price. Colombian biodiesel maintains both a ceiling and floor price that depends on current crude palm oil prices.

The latest MME mandated price for ethanol (June 2025) is about USD \$1.01 per liter (USD \$3.86 per gallon). For biodiesel, the June 2025 price is approximately USD \$1.30 per liter (USD \$4.90 per gallon).

Import Duties and Policy

Under the U.S.-Colombia Trade Promotion Agreement (CTPA), Colombia eliminated import duties for un-denatured ethanol (HS 2207.10) in 2012 when the agreement took effect. For denatured ethanol (HS 2207.20), the 15 percent base rate duty was phased out over five years, resulting in zero duty for U.S. denatured ethanol since 2016.

In January 2019, Colombia's Ministry of Commerce, Industry and Tourism (MINCIT) launched a countervailing duty (CVD) investigation on U.S. fuel ethanol (HS 2207.20.00.10) at the request of Fedebiocombustibles. In 2020, MINCIT imposed a USD \$0.0665/kg duty on U.S. denatured ethanol imports, effective through May 7, 2022. Following a petition for review, MINCIT extended this duty for another five years on March 15, 2023, with a potential CVD review available in March 2026.

There is no specific biodiesel import policy. The Colombian market is open to import biodiesel without any regulatory restrictions, except for the compliance with quality standards and MME authorization to receive an import license.

Section III. Fuel Ethanol

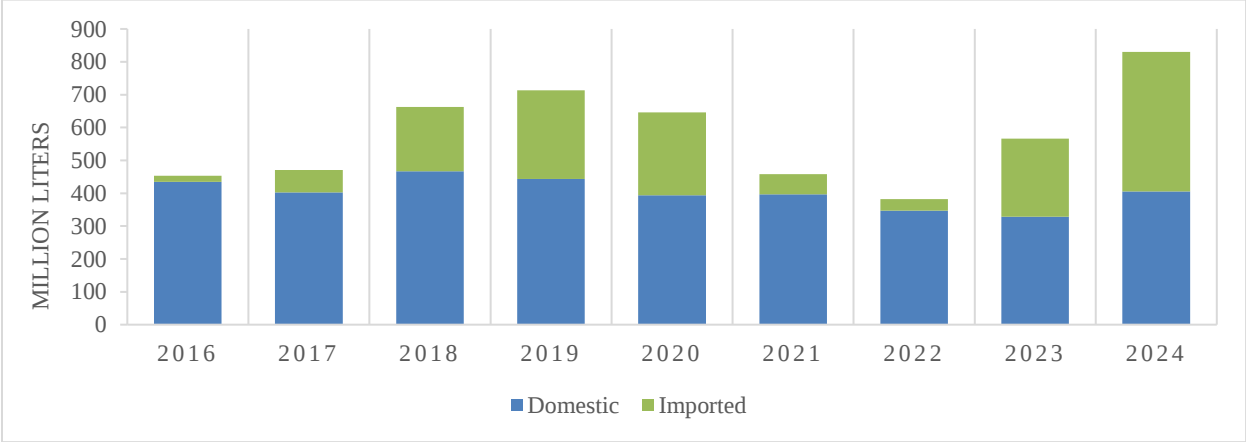
Consumption

For 2025, Post forecasts Colombia's fuel ethanol consumption to reach 855 ML, a 5.3 percent increase from the revised 2024 estimate of 812 ML, due to a stable E10 blend mandate and modest economic growth²¹ that will result in a slight increase in gasoline demand. Industrial ethanol consumption is projected to reach 100 ML, contributing to an anticipated total ethanol consumption of 955 ML in 2025. In 2024, total ethanol consumption amounted to 920 ML, with fuel ethanol consumption reaching 812 ML, a 46 percent year-on-year increase. This surge was driven by the Colombian government's decision to reinstate its ethanol blend mandate to E10 in February 2024, following nearly two years of lower and inconsistent levels. In addition, demand was supported by a rise in local production due to favorable weather conditions for sugarcane growth and competitive market conditions that enabled significant imports, despite the existing countervailing duty on U.S. ethanol.

Post estimates that Colombia's ethanol blend rate is expected to reach 9.3 percent by 2025, supported by higher ethanol production and imports, and considering the estimated gasoline fuel pool (Figure 2). Colombia's ethanol blend mandate is estimated lower than E10 nationwide as gasoline consumption is higher in the border departments, particularly those bordering Venezuela.

²¹ The Colombian economy will grow 2.6 and 3.4 percent in 2025 and 2026 respectively, according to Colombia Central Bank estimates. Source: [Monetary Policy Report - January 2025](#). Banco de la Republica, published on February 4, 2025.

Figure 2. Colombia: Annual Ethanol Demand, Domestic Production vs. Imports, 2016-2024 (ML)

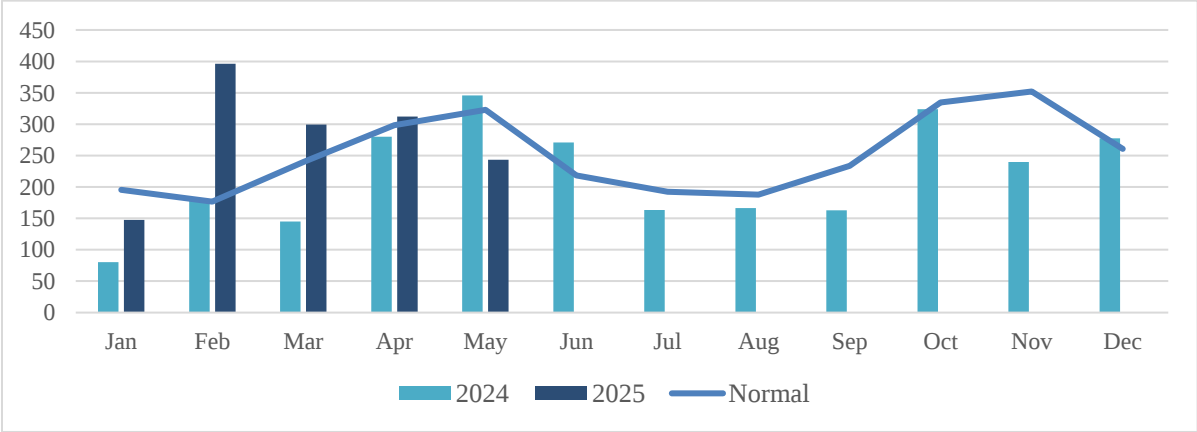


Data source: Biofuels Producers Association, Trade Data Monitor.

Production

Colombia’s ethanol production for 2025 is estimated to increase 3.7 percent to 420 ML. From January to March 2025, ethanol production has increased 19 percent year-on-year. Sugarcane production is expected to continue its recovery in 2025 as weather conditions normalize with a decreasing influence of the La Niña phenomenon.²² The Colombian sugarcane sector experienced above-average rainfall and temperature variability between February and April (Figure 3). Despite these anomalies, Cenicaña²³ forecasts that rainfall will return to average levels starting in May 2025.²⁴ Expected normalization of weather patterns and decreasing sugar prices are anticipated to improve sugarcane yields and sustain ethanol production.

Figure 3. Colombia: 2024-2025 Average Monthly Precipitation in the Main Sugarcane Producing Departments Against Historical Average (millimeters)



Data source: USDA Global Agricultural and Disaster Assessment System ([GADAS](#)) Climate Hazards Center InfraRed Precipitation with Station (CHIRPS) Monthly Precipitation dataset.

Note: Precipitation data is provided as the average value across a one-month period against historical averages (see Normal trend line).

²² USDA’s [Colombia Sugar Annual Report](#), April 17, 2025.
²³ See: [Seasonal Forecast Bulletin for the Sugarcane Agro-Industrial Sector](#), Cenicaña, March 2025.
²⁴ Rainfall is the most important weather parameter for sugarcane production as it directly influences the growth and health of the crop and affect the timing of various agricultural practices such as planting, fertilization, pest control, and harvest.

In 2024, sugarcane production increased 6 percent year-on-year showing signs of recovery due to drier weather conditions caused by the El Niño phenomenon, joined with improved agronomic management practices adopted by producers. There was a gradual increase in the tonnage of sugarcane per hectare (TCH), with 2024 starting at an average of 107 TCH and ending at 119 TCH.²⁵ For 2024, ethanol production is revised up 24 percent year-on-year to 405 ML, due to favorable weather allowing more sugarcane feedstock available for ethanol. The 10 percent ethanol blend implemented in February boosted domestic fuel alcohol sales.

Currently, Colombia's domestic ethanol production is supplied by seven distilleries all utilizing sugarcane ('B' molasses) as feedstock. According to industry sources, in 2025, the nameplate capacity of ethanol production is estimated to increase to 690 ML, up from 660 ML, due to technical enhancements implemented at the *Bioenergy* plant (located in Puerto Lopez, Puerto Gaitán Municipality, Meta department). Of the 14 sugar mills in Colombia, six operate ethanol refineries with an annual capacity of 540 ML, primarily located near Cali in southwest Colombia. The mills operate almost year-round, except for a brief period of technical maintenance. Presently, there is little land available in this region (Cauca River Valley) to expand sugarcane cultivation.

Bioenergy, located in the eastern plains of Meta department, is the only ethanol manufacturer without a complementary sugar mill. It sources sugarcane from 20,000 hectares cultivated near its facilities, which reported improved production capacity in 2024. However, due to unfavorable climate conditions, sugarcane harvesting is limited to eight months of the year in this region. There is ample land available to expand sugarcane cultivation in this suboptimal growing region.

Trade

In 2025, Colombian fuel ethanol imports are forecast to increase to 435 ML, to support the expected increase in gasoline demand and the ethanol blend mandate remaining stable at E10. Despite the ongoing CVD on U.S. ethanol, high import volumes will continue due to the stable E10 mandate, low international prices, Colombian peso appreciation, and a high domestic ethanol administered price compared to import prices. The United States will continue as the primary ethanol supplier.

In 2024, fuel ethanol imports reached 424 ML, driven by a higher and more stable blending mandate and competitive U.S. ethanol prices. Colombia became the fourth largest market for U.S. ethanol exports in 2024, with most U.S. product supplying the Colombian north coast. Favorable international prices have led importers to procure larger volumes to supply additional cities within central Colombia, while domestic ethanol production historically supplies the southern and central regions. Imports, accounting for nearly 50 percent of the market, are essential to complement local production and meet the ethanol blend mandate. This combination ensures a stable supply, supporting government energy policies and providing reliable ethanol for gasoline blending.

Stocks

Gasoline and diesel fuel regulations require sufficient stocks to supply the market for at least 10 days of maximum fuel demand. In 2025, total ethanol ending stocks are estimated at 40 ML. Fuel ethanol ending inventories are projected at 35 ML which represents 15 days of estimated fuel ethanol demand, assuming that E10 will be maintained in most regions.

²⁵ Colombia's sugar industry was underperforming due to extreme weather conditions during 2021 to early 2024 and only started to recover in the second half of 2024. See: [Cenicafé's Annual Report 2024](#), February 2025.

Table 3. Colombia: Ethanol Production, Supply and Distribution (Years 2016-2025)

Ethanol Used as Fuel and Other Industrial Chemicals (Million Liters)										
Calendar Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 ^f
Beginning Stocks	10	12	16	21	26	45	23	17	23	40
Fuel Begin Stocks	10	10	13	16	20	40	20	15	18	35
Production	434	403	467	444	395	397	347	328	405	420
Fuel Production	434	403	467	444	395	397	347	328	405	420
Imports	108	161	265	366	363	164	94	317	536	540
Fuel Imports	19	68	196	269	252	61	35	238	424	435
Exports	0	0	2	5	4	8	7	9	4	5
Fuel Exports	0	0	0	0	0	0	0	0	0	0
Consumption	540	560	725	800	735	575	440	630	920	955
Fuel Consumption	453	468	660	709	627	478	387	563	812	855
Ending Stocks	12	16	21	26	45	23	17	23	40	40
Fuel Ending Stocks	10	13	16	20	40	20	15	18	35	35
Refineries Producing Fuel Ethanol (Million Liters)										
No. of Refineries	6	7	7	7	6	7	7	7	7	7
Nameplate Capacity	540	600	660	660	540	660	660	660	660	690
Capacity Use (%)	80.4%	67.2%	70.8%	67.3%	73.1%	60.2%	52.6%	49.7%	61.4%	60.9%
Co-product Production (1,000 MT)										
Bagasse	1,482	1,376	1,595	1,516	1,349	1,355	1,185	1,120	1,383	1,434
Feedstock Use for Fuel Ethanol (1,000 MT)										
Sugarcane	5,293	4,915	5,695	5,415	4,817	4,841	4,232	4,000	4,939	5,122
Market Penetration (Million Liters)										
Fuel Ethanol Use	453	468	660	709	627	478	387	563	812	855
Gasoline Pool ⁽¹⁾	6,810	6,891	7,147	7,725	6,638	8,438	9,434	9,666	9,136	9,227
Blend Rate (%)	6.7%	6.8%	9.2%	9.2%	9.4%	5.7%	4.1%	5.8%	8.9%	9.3%

⁽¹⁾ Gasoline pool data sourced from the IEA June 2025 Oil Market Report, 2016-2023. Data for 2024 and 2025 are estimates based on Colombian Petroleum and Gas Association Economic Report, February 2025.

^f: Post forecast for 2025. Conversions: 1 metric ton (MT) sugarcane equals approximately 80-83 liters of ethanol; Bagasse production ratio: 28 MT/100 MT of sugarcane.

Section IV. Biodiesel

Consumption

In 2025, Colombia's total biodiesel consumption is expected to recover to 795 ML, driven by the reinstatement of the 10 percent blend mandate in January 2025 and a slight rise in diesel demand. On-road biodiesel demand is forecast to reach 783 million liters. Colombian biodiesel consumption primarily depends on domestic palm oil production, with minor volumes of used cooking oil as feedstock. Given current market dynamics, Colombia's realized biodiesel blend rate is estimated to reach 12.6 percent in 2025. Higher blending is supported by voluntary programs that allow up to 20 percent biodiesel in cargo vehicles. Since 2020, it is estimated that approximately 1 to 2 percent of biodiesel production has been destined for off-road use, such as mining (see: Biofuel Blend Mandate section). In prior years, all biodiesel was used exclusively for on-road transport.

In 2024, biodiesel demand decreased by 2 percent year-on-year to 777 ML, as the biodiesel blend mandate was lowered from 10 to 8 percent between October-December 2024, due to a significant drop in palm oil production that affected biodiesel inventories.

Production

For 2025, Colombian biodiesel production is forecast to increase to 795 ML owing to stronger demand and the expectation of high palm oil production due to favorable weather conditions in the primary oil palm-producing regions. In 2024, biodiesel production fell by 2 percent year-on-year due to reduced palm oil production, caused by lower fruit yields, adverse climatic conditions, and phytosanitary issues. This led to high prices and feedstock shortages, impacting the ability to maintain the B10 blend mandate.

There are 12 operational biodiesel facilities in Colombia using palm oil as biodiesel feedstock. However, six plants represent more than 90 percent of Colombia's biodiesel production. The remaining six plants are smaller in production volumes and operate intermittently based on palm oil availability. Only one biodiesel facility produces small quantities of biodiesel from used cooking oil. Six of the 12 plants are in Colombia's north coast departments, while the remaining six are in Meta (2), Santander (2), and one each in Cundinamarca and Antioquia (see Figure 1).

Trade

Colombia neither imports nor exports biodiesel. While there are select, authorized biodiesel importers,²⁶ to date, there have been no biodiesel imports registered under HS 382600 (biodiesel-diesel blends above B30 by volume to B100, or pure biodiesel) or HS 271020 (petroleum oils containing up to 30 percent biodiesel by volume). International biodiesel prices have remained unfavorable for imports.

The biodiesel industry operates under its nameplate capacity, but there are aspirations to export in the future employing full capacity operating facilities. However, prospects are bearish for palm oil-based produced biodiesel from Colombia with little opportunity for sales in the two largest biodiesel markets – Europe and the United States, due to specific regulatory restrictions. Palm oil biodiesel is presently not approved for use in the United States as it is not part of the U.S. Renewable Fuel Standard. Thus, the Colombian biodiesel industry cannot access Renewable Identification Numbers that would permit exports into the United States.

Stocks

Gasoline and diesel fuel regulations require stocks to adequately supply the market at 10 days of total fuel demand. In 2025, biodiesel ending stocks are estimated at 25 ML, assuming a stable B10 mandate and a growing diesel fuel pool.

²⁶ The last approved biodiesel importer was in 2017.

Table 4. Colombia: Biodiesel Production, Supply and Distribution (Years 2016-2025)

Biodiesel (Million Liters)										
Calendar Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025^f
Beginning Stocks	15	16	16	18	18	18	20	22	22	25
Production	576	583	627	605	583	720	779	794	780	795
Imports	0	0	0	6	0	0	0	0	0	0
Exports	0	0	0	0	6	0	0	0	0	0
Consumption	575	583	625	611	577	718	777	794	777	795
Ending Stocks	16	16	18	18	18	20	22	22	25	25
Production Capacity (Million Liters)										
Number of Biorefineries	6	8	8	12	12	12	12	12	12	12
Nameplate Capacity	600	700	700	900	900	900	900	900	900	900
Capacity Use (%)	96.0%	83.3%	89.5%	67.3%	64.7%	80.0%	86.5%	88.2%	86.7%	88.3%
Feedstock Use (1,000 MT)										
Crude Palm Oil	506	512	549	529	504	631	684	698	686	697
Used Cooking Oil	23	24	27	28	32	32	32	32	32	35
Market Penetration (Million Liters)										
Biodiesel, On-road use	575	583	625	611	577	707	765	782	765	783
Diesel Pool, On-road use	6,315	5,583	5,787	5,922	5,293	5,931	5,885	6,300	6,364	6,389
Blend Rate (%)	9.1%	10.4%	10.8%	10.3%	10.9%	11.9%	13.0%	12.4%	12.0%	12.3%
Diesel Pool ⁽¹⁾	8,541	7,318	7,936	8,023	7,153	9,124	9,054	9,693	9,790	9,829

⁽¹⁾ Total Diesel pool data sourced from the IEA June2025 Oil Market Report, 2016-2023. Data for 2024 and 2025 are estimates based on Colombian Petroleum and Gas Association Economic Report, February 2025.

Note: Diesel pool, on-road use is an estimate based on information from the MME.

^f: Post forecast for 2025.

Conversions: 1 MT crude palm oil = 1,087 liters biodiesel; 1 MT used cooking oil = 1,060 liters biodiesel.

Section V. Advanced Biofuels

There are ongoing research projects on advanced biofuels in Colombia, with some limited test production of SAF, but there is no market penetration yet.²⁷ In late 2023, the Colombian government, in partnership with private industry, initiated a working group to develop a SAF Roadmap, and published in January 2025. The plan aims to produce 100 million gallons of SAF by 2035 and 450 million by 2050, with Ecopetrol starting test production in late 2024 and targeting sustained production by 2028, pending regulatory framework and quality compliance (see: Policy and Programs Section II).

²⁷ Source: [Economic Report: Liquid fuels sector in Colombia](#), Colombian Petroleum and Gas Association, published February 2024.

Section VI. Notes on Statistical Data

Biofuel production data is sourced from Fedebiocombustibles, which collects information from the Colombian National Association of Sugar Producers (Asocaña) for ethanol and the National Federation of Palm Oil Growers (Fedepalma) for palm oil and biodiesel.

Colombian Customs Authority (DIAN) data is used for ethanol and biodiesel trade. Total ethanol trade is calculated for both denatured ethyl alcohol (HS 220720) and undenatured ethyl alcohol (HS 220710). Fuel ethanol trade data corresponds to trade under HS Code 2207200010 starting in 2022.²⁸ Prior to 2022, fuel ethanol import figures were based on estimates provided by the local ethanol industry, as no dedicated classification existed. Biodiesel trade is calculated using HS code 382600 and assuming all volume traded under this code is pure biodiesel.

Gasoline and Total Diesel Pool consumption statistics through 2023 are sourced from the International Energy Agency (IEA) forecasts from the June 2025 Oil Market Report. Gasoline and diesel pool consumption figures for 2024 and 2025 are based on Colombian Petroleum Association estimates. Diesel pool on-road use is an estimate from the MME historical data. In 2025, biofuel consumption is based on Post's fuel pool projections and assumed mandated blend rates.

Attachments:

No Attachments

²⁸ Modified by [Decree 1881 of 2021](#).