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Report Highlights:

COVID-19 containment measures and the economic downturn dramatically curtailed Colombian motor fuel demand. Biofuels production and imports are estimated to fall in 2020. Ethanol production is estimated to decrease to 400 million liters as a result of lower gasoline demand and the closure of one ethanol facility not linked to the sugar industry. Biodiesel production is estimated to decrease to 550 million liters due to lower diesel demand and a downward trend in palm oil production. Other factors decreasing ethanol imports are Colombian policies such as a temporary ban on ethanol imports under the sanitary emergency and the imposed duty on ethanol imports from the United States. Colombia neither imports nor exports biodiesel.

I. Executive Summary:

Covid-19 lockdown measures are impacting the Colombian fuel market. On March 25, 2020, the Government of Colombia ordered all people to quarantine in response to the growing Covid-19 outbreak. The emergency measures will continue until September 2020 or later. As a result, during 2020, the gasoline pool (including ethanol) and on-road diesel pool (including biodiesel) are estimated to decrease 13 percent to 6,450 million liters and 5 percent to 6,100 million liters, respectively. Lower fuel consumption and no changes in biofuel blend mandates are forcing lower ethanol and biodiesel production.

In 2020, Colombian sugarcane-based ethanol production, all used as fuel ethanol, is estimated at 400 million liters assuming favorable weather conditions for sugarcane growth and the closure of one ethanol facility. Fuel ethanol imports are expected to resume but decrease to 230 million liters if the ban on imports under the sanitary emergency to protect sugar industry is lifted in the second part of 2020. Ethanol production, ethanol imports and gasoline consumption data suggest that the average ethanol blend in the country reached 9.6 percent in 2019. Colombia currently has an E10 blend mandate across most of the country which is expected to be at 9.8 percent in 2020.

In 2020, Colombian palm oil-based biodiesel production is estimated to decrease to 550 million liters. In 2019, biodiesel production decreased as a result of lower palm oil production discouraged by lower international prices. There is no international trade of biodiesel. Biodiesel production and diesel consumption data suggest that the average biodiesel blend in Colombia fell slightly from the previous year to 9.4 percent in 2019. A slight downward adjustment to 9.1 percent is forecast for 2020.

The fuel market in Colombia is managed by the government. The Ministry of Mines and Energy (MME) establishes the biofuel blend mandates, regulates fuel and biofuels prices and sets technical regulations on biofuel standards.

On May 7, 2020, the Colombian Ministry of Trade, Industry, and Tourism (MINCIT) issued a final ruling in its year and a half long countervailing duty (CVD) investigation into U.S. ethanol. The MINCIT determined that U.S. ethanol was subsidized and that Colombia's local industry was harmed. The ministry placed a \$0.066/kg duty on U.S. ethanol for the next two years as a compensation. There are no other duties placed on U.S. ethanol, denatured or undenatured. Imports of U.S. competitively-price ethanol used as fuel are expected to continue as long as the Colombian government maintains high domestic prices for ethanol.

II. Policy and Programs

The Ministry of Mines and Energy (MME) is the authority that regulates Colombia's biofuels policy. Colombia manages its biofuel markets using a system of mandates, tax relief, environmental regulations and price controls. Tax incentives have been in place since 2002, but the implementation of Colombia's mandates have changed over time and are not applied evenly across the country.

Biofuel blend mandates

Backsliding on blend mandates across the nation when domestic feedstock supply is inadequate as opposed to setting and reaching higher environmental goals for renewable energy has led to stagnation in the ethanol market from 2014 thru 2017 and a mostly stagnant biodiesel market over the past decade.

In some cases, the government has removed the blend mandate for periods of time due to a shortage of domestic production. In March 2018, the Colombian government introduced E10. Then in September 2019 the government introduced B12. These mandates apply to all areas except for three departments bordering where there is no blend mandate for ethanol and only two percent for biodiesel given smuggling issues. The E10 and B12 mandates, the highest ever established, were introduced to reduce high levels of pollution in major metropolitan cities, to contribute to Colombia's climate change commitments under the 2015 Paris Climate Conference (COP21) and to incentivize local production.

Since mid-2017, Colombia maintained ethanol blend mandate between E8 and E10 in most of the country due to increasing ethanol imports and steady local production. However, the biodiesel blend mandate decreased after 20 days of the B12 introduction. On September 20, 2019, MME, the Ministry of Agriculture and Rural Development (MARD) and the Ministry of Environment and Sustainable Development (MESD), issued Resolution 40730 to establish that the biodiesel blend mandate would decrease to B2 at the end of September 2019 and gradually increase to B10 to the end of December 2019. The decrease in biodiesel blend mandate was driven by lower production of palm oil. Current biodiesel blend mandate is B10.

Tax Policy

To promote biofuels use and production since 2002, the government eliminated the value-added tax (VAT) for biofuels and exempted them from a global tax. In addition, ethanol blended with gasoline is exempt from local surcharge fees. The most recent tax reform (Law 1819 of 2016) established a new tax imposed on fossil fuels. This tax is known as a "Green tax" or "Carbon tax." This bill creates a tax on the carbon content of all fossil fuels, including all oil derivatives and all types of fossil gas used for energy purposes. The rate is based on the release-of-carbon-dioxide (CO₂) factor for each fuel,

expressed as the volume or weight of the fuel. The table below illustrates the current taxes on fossil fuels and biofuels:

Table 1. Current fuel and biofuel tax rates in Colombia (In Colombian pesos)

Tax	Gasoline	Diesel	Biofuels	Regulation
Global tax	\$491.63 per gallon on regular gasoline (US¢13)	\$470.56 per gallon (US¢13)	Exempt	Art. 167,168,173 - Law 1607 of 2012 Art. 218,219,220 - Law 1819 of 2016
Value added tax (VAT)	19 percent	19 percent	Exempt	Art. 183 - Law 1819 of 2016 Art. 477 - Estatuto Tributario (Biofuels exempt)
Carbon tax	\$139.50 per gallon (US¢4)	\$156.60 per gallon (US¢5)	Exempt	Dec. 926 of 2017 Art. 221, 222, 223 - Law 1819 of 2016
Local surcharge fee	25 percent of the reference price. Reference price for June 2020: \$5,358.99 per gallon (US\$1.45)	6 percent of the reference price. Reference price for June 2020: \$5,736.10 per gallon (US\$1.55)	Exempt on ethanol blended with gasoline. There is not surcharge tax relief on biodiesel.	Art. 117 to 121 - Law 488 of 1998 MME's resolution 40090 of 2020

Note: Values are in Colombian pesos (COP). Specific tariffs are valid for 2020 and updated on annual basis. Exchange rate used 1USD=3,690 COP

Source: Fuel Information System (SICOM), MME.

Regulated biofuel prices have favored local industry

Colombia's biofuels policy gives an advantage to palm oil and sugarcane production. The government established formulas to calculate the price of biofuels based on the opportunity cost of using these raw materials to supply other markets. This mechanism of administered prices also creates market opportunities for biofuels producers abroad that use less expensive feedstock or in general are able to produce at lower costs.

The MME periodically sets the price for gasoline and diesel at wholesale markets. These prices include the price that fuel distributors or blenders must pay to domestic producers of biofuels and are calculated based on a formula previously defined by the regulation. The current fuel price structure is established through MME's resolution 41281 of 2016. Reference fuel prices change across the country depending on the transportation and distribution costs to each region.

The formula to calculate the ethanol price paid to producers is defined by the MME's resolutions 181232 of 2008 and 91865 of 2012. The fuel ethanol price is established as the higher of the following two calculations: the opportunity cost of using refined sugar to produce ethanol (the international price equivalence for refined sugar at the London market) and the international price for gasoline adjusted by technical factors (increased octane and reduction on sulfur content).

The formula to calculate the biodiesel price paid to producers is defined by the MME's resolutions 181780 of 2005, 181966 of 2011, and 181489 of 2012. The biodiesel price is established within a price band: the ceiling price is calculated as the import parity price of fossil diesel adjusted by technical factors, and the floor price is expressed as the export parity price of palm oil at the Rotterdam market adjusted by freight costs and technical factors.

The most recent MME mandated price for a liter of ethanol is approximately \$0.62, with no changes from the same period last year. For biodiesel, the most recent MME mandated price per liter is about \$0.82, five percent higher than a year ago. Imported biofuels are not subject to MME mandated prices.

Environmental and technical requirements

Since 2012, Colombia has been working on a Low-Carbon Development Strategy to identify and prioritize mitigation measures in different economic sectors. In addition, under COP 21, Colombia committed to reduce its GHG emissions by 20 percent with reference to the Projected Business as Usual Scenario (BAU) emissions by 2030. Environmental commitments were established given the potential increase in Colombia's GHG emissions as the economy and energy demand grows.

To meet its environmental commitments, Colombia has increased biofuel blend mandates and has established quality and environmental standards for ethanol and quality standards for biodiesel.

The quality standards for ethanol used as fuel (i.e., water content, acidity and conductivity) were established through resolution 789 issued in May 2016 and has been in place since May 2018. Through resolution 182142 of 2007, the MME issued the technical and safety requirements for the production, distribution and import of biofuels used in diesel engines.

Regarding the carbon footprint regulation, which only applies to fuel ethanol, the Ministry of Environment published a resolution on September 25, 2017, to be effective on December 29, 2017. This regulation establishes a maximum carbon intensity value associated with the greenhouse gas inventory of denatured anhydrous ethanol fuel. The Colombian sugar-ethanol industry committed to reach a 20 percent reduction of GHG emissions from base year 2016. According to the Ministry of Environment, a 20 percent reduction by 2021 would mean that the calculations for the biofuel index quotient would set a value of 780 kg of CO₂e/Cubic meter fuel ethanol. By 2021, the limit will represent an approximate 61

percent reduction in GHG emissions of ethanol relative to gasoline. The table below illustrates the gradation included in the regulation on fuel ethanol:

Table 2. Maximum allowable limit gradation of GHG emissions index

Year	Baseline	Year 1 (2017)	Year 2 (2018)	Year 3 (2019)	Year 4 (2020)	Year 5 (2021)
Limit: kg CO₂e/Cubic meter fuel ethanol	962	924	889	853	817	780
Relative GHG reduction of fuel ethanol relative to gasoline	51.8%	53.7%	55.5%	57.3%	59.1%	61%

Source: Ministry of Environment Resolution 1962, 2017.

Ethanol imports suspended due to Covid-19 emergency measures

On April 7, 2020, the Ministry of Agriculture and Rural Development (MARD), the Ministry of Commerce, Industry and Tourism (MINCIT) and the Ministry of Mines and Energy (MME) issued Decree 527. This measure banned ethanol imports beginning April 8, 2020, except for ethanol shipments in transit, until June 8, 2020. The ban on imports is aimed to prevent the collapse of domestic sugar production, linked to ethanol production, in light of the covid-19 sanitary emergency declared by President Duque. In April 2020, gasoline consumption reduced up to 70 percent due to lockdown measures that affected ethanol storage capacity of sugar producers. On June 5, 2020, MARD, MINCIT and MME issued Decree 820 that extended ban on ethanol imports until July 8, 2020. On July 8, 2020, a new Decree (982/2020) was issued to establish a transitions period for ethanol imports. This decree allows the importation of up to 1.6 million gallons of fuel ethanol (6 million liters) to supply Colombian north coast. During this transition period (July 9 - August 8), MARD will continue to monitor fuel supply and demand to determine any needs for additional imports. This decree also states that after August 8, all the conditions for free importation of ethanol will be restored nationwide.

Fuel distributors note that while gasoline and ethanol consumption remain reduced from pre-COVID levels, demand has started to recover as of June, 2020, because the government is reactivating various economic sectors. The import ban could be lifted as well because the current local ethanol supply will not be enough to meet the E10 blend mandate. At the end of June 2020, MME authorized the importation of 3.5 million liters of ethanol to meet the E10 blend mandate in Colombian northern coast.

The Colombian biodiesel market is entirely supplied by local production, therefore no similar measure to regulate imports has been proposed.

Import Policy

Under the U.S. Colombia Trade Promotion Agreement (CTPA), Colombia's import duties covering HS 2207.10 (un-denatured ethanol) were immediately eliminated when the agreement entered into force in 2012. In the case of HS 2207.20 (i.e., denatured ethanol) the 15 percent base rate duty was removed in five equal annual stages beginning in 2012. Therefore, since 2016, U.S. denatured ethanol, which is the one fuel ethanol falls under, has entered duty-free.

In January 2019, the Ministry of Commerce, Industry and Tourism of Colombia initiated a countervailing duty (CVD) investigation on U.S. ethanol at the behest of the National Biofuels Producers Association (Fedebiocombustibles). The incumbent stakeholders, including the U.S. government, U.S. industry and importers delivered the required information to MINCIT under the CVD investigation.

On May 8, 2019, MINCIT informed the U.S. government of the preliminary determination after reviewing the provided information. According to MINCIT findings, Colombia implemented an initial 4-month duty of 9.36 percent on U.S. ethanol exports, beginning May 9, 2019, with 20 days transition period for ethanol shipments in transit.

Finally, on May 7, 2020, MINCIT issued a final ruling in its CVD investigation into U.S. ethanol. It placed a \$0.066/kg duty on imports of ethanol from the United States for the next two years. FAS Bogota estimates this \$0.066/kg duty represents an ad valorem tariff between 10.5 and 12.1 percent assessed on the declared CIF value when compared to the prices of U.S. ethanol shipments in 2019 and in 2020 January thru March.

There are no specific biodiesel import policy. The Colombian market is open to biodiesel imports without any regulatory restrictions, except for the compliance with quality standards and the MME authorization to be an importer. There were no authorized biodiesel importers until July 12, 2017, when the MME issued resolution 31537 to authorize the first biodiesel importer.

III. Gasoline and Diesel Market

The Covid-19 pandemic halted the growing trend of Colombian on-road fuel demand. According to the MME, gasoline and diesel demand in 2020 was estimated (pre-COVID) at nearly 7,500 million liters and 6,500 million liters, respectively, driven by population and economic growth. However, on March 25, 2020, the Colombian government ordered all the people within the Colombian territory to quarantine and shelter in place due to Covid-19 pandemic. This measure resulted in a 70 percent reduction in gasoline demand and a 50 percent reduction in diesel demand in April. Since May, the government gradually authorized more sectors to operate and relaxed some lockdown measures. This has resulted in

a gradual recovery of fuel consumption. According to the Colombian Petroleum Association, in June 2020, gasoline demand is estimated at 80 percent and diesel demand at 90 percent of regular levels. The table below presents the history and outlook for the present year for gasoline and diesel fuel pools.

Table 3. Total Fuel Use in Colombia

Fuel Use (Million Liters)										
Calendar Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020f
Gasoline Total	4,696	4,869	5,104	5,456	6,159	6,816	6,905	7,143	7,421	6,450
Diesel Total	7,206	7,637	7,620	7,747	8,112	8,373	8,630	8,903	9,102	8,800
On-road	5,634	5,792	5,883	6,071	6,296	6,315	6,183	6,282	6,422	6,100
Agriculture										
Construction & Mining										
Shipping & Rail	943	1,000	1,029	1,057	1,085	1,111	1,144	1,174	1,201	1,100
Industry										
Heating										
Jet Fuel Total										
Total Fuel Markets	11,902	12,506	12,724	13,203	14,271	15,189	15,535	16,046	16,523	15,250

f: forecast

Source: Unit of Mining and Energy Planning (UPME), Ministry of Mines and Energy.

The 2020 estimates are calculated considering decreasing demand of recent months and the International Energy Agency projections released on the June 2020 Oil Market Report. In 2020, gasoline consumption is estimated to decrease by 13.1 percent to 6,450 million liters and on-road diesel consumption is estimated to decrease by 5.0 percent to 6,100 million liters, assuming that fuel demand will reach 80 percent or higher of regular levels of 2019 in the second part of the year.

The Ministry of Mines and Energy established temporary fleet efficiency goals for new vehicles in 2012, but that policy was eliminated shortly after its announcement due to domestic auto industry complaints. This was a disappointing development since auto manufacturers are meeting fleet efficiency improvement goals set by many countries, and this action is one of the most effective tools to slow fuel demand grow and otherwise reduce GHG emissions. The Colombian Vehicle Manufacturers Association only supports voluntary blends up to E10 and B5. However, tests performed by Colombian private universities in support of the national biofuels industry show that most vehicles on the road today can run on higher blends like E15 for gasoline engines. The E15 is approved for all model years 2001 and later in the United States, and virtually all diesel engines in the United States are approved for B20.

IV. Fuel Ethanol

Production

Colombian ethanol production is estimated at 400 million liters in 2020, a decrease of 11 percent from the previous year. From January to May 2020, ethanol production has fallen 2.8 percent from the year before. This decrease is tied to lower demand of gasoline and a modest expected decline in imports. One ethanol distillery has closed which is likely to result in a higher industry production capacity use rate of the combined remaining 6 distilleries. Weather conditions are expected to be favorable for normal growth and cane sugar content.

Sugarcane is the feedstock used for the production of ethanol in Colombia. Of the 14 sugar mills in Colombia, 6 own ethanol refineries. The six ethanol plants currently operating have an annual capacity of 540 million liters and are located near the city of Cali in south central Colombia. The plants in this region are able to produce almost year round, except for a period of 30 to 40 days when the plants close operations due to technical maintenance. One additional ethanol facility not linked to the sugar industry, called *Bioenergy*, is located in the eastern plains in the Meta Department. *Bioenergy*, managed by the state-owned Colombian Petroleum Enterprise (Ecopetrol), began operations in 2017. After only three years of operation, Bioenergy started a liquidation process. The decision was made due to imminent illiquidity given difficult market conditions that make the current debt level of the company unsustainable. Ecopetrol does not have the capacity to generate negative cash flow amid low oil and gas prices. With the closure of Bioenergy, Colombia's ethanol production capacity decreases from 660 million liters to 540 million liters per year.

While sugarcane juice is used for ethanol production, sugarcane bagasse is used to generate energy and produce paper. Most Colombian ethanol plants are energy self-sufficient and generate surplus power that is sold to the national electric grid. The current sugar sector capacity for electric power generation is at 237 megawatts (MW), of which 147 MW is for supporting self-sufficient plant operations with the remaining amount sold to utilities for public consumption. Bioenergy had an electric power generation capacity of 35 MW.

Consumption

In 2020, Colombia fuel ethanol consumption is estimated to decrease to 632 million liters, down 11 percent from the previous year, driven by lower gasoline demand due to pandemic restrictions. In 2019, 62 percent of domestic use was supplied by local production, while 38 percent was supplied by imports. Little change in this ratio is expected in 2020.

According to the MME, gasoline demand in normal conditions (without Covid-19 containment measures) is estimated at 610 million liters per month. This means 61 million liters of ethanol are

required to meet the E10 blend mandate. Colombia's ethanol production capacity is estimated at 55 million gallons when all plants are fully operational, including Bioenergy. However, historical production data shows that average ethanol production per month is at 37 million liters and it usually only supplies south and central Colombia due to geographical location of distilleries. It means that nearly 40 percent of the demand has to be supplied by imports. Imported ethanol is mostly consumed at Colombian north coast and part of the center.

The blend mandate changes with the ethanol industry growth and import supplies. In the three border departments with Venezuela no blend mandate is established due to ongoing problems with cross-border smuggling, but in the rest of the country E10 is in place. There is no official data on the nationwide blend level. However, Post calculations based on annual ethanol production and gasoline consumption show that the sugarcane-based ethanol industry has been unable to supply the country with enough biofuel to reliably meet the previous E8 blend mandate. Increasing imports have permitted the country to reach an average E9.6 blend rate in 2019, which is only just below the current E10 blend mandate covering most of the country. If imports are allowed to continue in the second part of 2020, the ethanol blend mandate is estimated to reach 9.8 percent.

Trade

Colombia fuel ethanol imports are forecast to decrease to 230 million liters in 2020 driven by the reduction in gasoline consumption resulting from Covid-19 containment measures and a temporary import ban. Imports are expected to continue if the import ban is completely lifted after August 8, 2020, being mostly sourced from the United States.

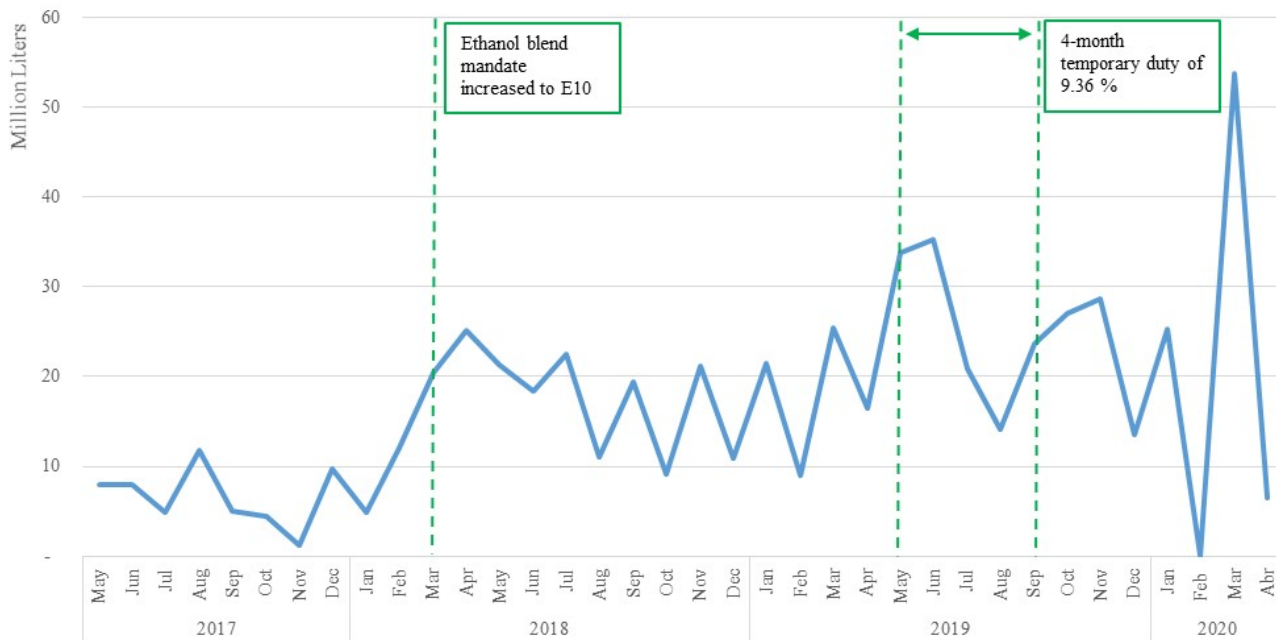
Although the imposed \$0.066/kg duty on imports of ethanol from the United States under the CVD investigation is discouraging for ethanol importers and exporters, the ad valorem value assessed on the declared CIF value continues to be lower than the difference between imported price and local administered price in most of 2019 and thus far the first few months of 2020. As long as the Colombian government maintains high administered prices for ethanol, Colombian ethanol market will be attractive for competitively-priced U.S. ethanol under normal U.S. market supply conditions. Most of the imported ethanol will be used to supply Colombian north coast due to high internal transportation costs. However, if international prices are favorable, importers may purchase larger quantities to supply more cities in the center of Colombia.

Graph 1 below illustrates the recent history of Colombia's imports of fuel ethanol from the United States which has been the supplier of the vast majority of denatured ethanol (HS 220720). As of May 2017 and following the full removal of import duties on U.S. ethanol in 2016, the Colombian market was open to ethanol imports without any regulatory restrictions, except for the compliance with fuel quality and carbon footprint standards. The price-setting formula for domestic ethanol and competitively-priced U.S. ethanol has resulted in increasing imports since 2017 that reached record levels in 2019. The

increase in U.S. ethanol imports was also supported by the ethanol blend mandate increase to E10 in early 2018, reaching 200 million liters in 2018 and 265 million liters in 2019.

MINCIT implemented a CVD preliminary determination of a four-month duty of 9.36 percent on U.S. ethanol exports, beginning May 9, 2019, with 20 days transition period for ethanol shipments in transit. In May and June 2019, U.S. ethanol imports reached high historical levels despite the temporary duty. Usually in the months of April, May and June, local production is lower due to sugarcane harvest conditions, therefore, importers make purchasing decisions in advance to supply the additional demand for these months.

Graph 1. Colombia’s imports of U.S. denatured ethanol (HS 220720)



Source: Colombian Customs Authority (DIAN) – Trade Data Monitor

Trade data shows that the imposed environmental standards, as well as the temporary duty did not slow U.S. ethanol imports into the Colombian market.

Stocks

Colombia does not have programs to encourage storage or long-term stocks of biofuels. However, gasoline and diesel fuel regulations require stocks to adequately supply the market at 10 days of total fuel demand, which represents approximately 18 million liters of fuel ethanol in 2020. Stock levels in the ethanol balance table assume this requirement is met.

Table 4. Colombia's Production, Supply and Demand for Ethanol

Ethanol Used as Fuel and Other Industrial Chemicals (Million Liters)										
Calendar Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020f
Beginning Stocks	8	11	12	15	11	10	10	13	15	20
Fuel Begin Stocks	8	11	12	15	11	10	10	13	15	20
Production	337	370	388	406	456	434	393	470	450	400
Fuel Production	337	370	388	406	456	434	393	470	450	400
Imports	55	89	138	98	108	108	160	265	275	260
Fuel Imports	7	8	21	18	7	23	75	201	265	230
Exports	0	0	0	0	0	0	0	0	0	0
Fuel Exports	0	0	0	0	0	0	0	0	0	0
Consumption	390	457	523	508	566	542	550	733	720	662
Fuel Consumption	341	377	406	428	464	457	465	669	710	632
Ending Stocks	11	12	15	11	10	10	13	15	20	18
Fuel Ending Stocks	11	12	15	11	10	10	13	15	20	18
Total BalanceCheck	0	0	0	0	0	0	0	0	0	0
Fuel BalanceCheck	0	0	0	0	0	0	0	0	0	0
Refineries Producing Fuel Ethanol (Million Liters)										
Number of Refineries	5	5	5	5	6	6	7	7	7	6
Nameplate Capacity	378	412	412	412	465	540	600	660	660	540
Capacity Use (%)	89.3%	89.7%	94.1%	98.7%	98.2%	80.4%	65.5%	71.2%	68.2%	74.1%
Co-product Production (1,000 MT)										
Bagasse	1,138	1,247	1,308	1,371	1,540	1,464	1,326	1,585	1,518	1,350
Feedstock Use for Fuel Ethanol (1,000 MT)										
Sugarcane	4,065	4,454	4,673	4,897	5,499	5,229	4,736	5,660	5,420	4,820
Market Penetration (Million Liters)										
Fuel Ethanol Use	341	377	406	428	464	457	465	669	710	632
Gasoline Use	4,696	4,869	5,104	5,456	6,159	6,816	6,905	7,143	7,421	6,450
Blend Rate (%)	7.3%	7.7%	8.0%	7.8%	7.5%	6.7%	6.7%	9.4%	9.6%	9.8%

Note: 2020 figures are FAS Bogota estimates.

V. Biodiesel

Production

Following a modest decline in 2019, Colombian biodiesel production is estimated to decrease further to 550 million liters in 2020, down 10 percent from the year before, driven by lower diesel demand, a steady blend mandate B10 and no change in trade which remains zero. Weather conditions are expected to be normal for crop development. In 2019, palm oil production decreased by six percent compared to the previous year due to lower prices that discouraged investments in crop harvesting affecting production levels.

There are 12 operational biodiesel plants in Colombia (up from 8 plants in 2016) using palm oil as the feedstock, and one of them produces small quantities of biodiesel from used cooking oil. Only six of the 12 plants are members of the National Biofuels Producers Association (Fedebioenergéticos). These six plants are fully operational and produced over 90 percent of the total Colombian biodiesel production.

The palm oil sector capacity for electric power is estimated at 340 MW. Palm oil producers generate energy from biomass and/or biogas to support self-sufficiency. Currently, there are only three palm oil plants that generate surplus, but there is no comprehensive information on quantity. The palm and ethanol industries claim to be capable of generating more power resources to sell to local utilities.

Consumption

Colombian biodiesel consumption is estimated to decrease to 555 million liters in 2020, down 8 percent from 2019, assuming lower diesel demand, blending mandates holding at B10, and no imports. The national average blend rate is estimated to be at 9.1 percent in 2020.

Colombia biodiesel consumption is dependent on changes in diesel pool size and local biodiesel production to meet the government blend mandate, which varies by location. On February 27, 2018, the MME increased the blend mandate on-road from B9 to B10 in Colombia's central region, Bogota and the eastern plains. The blend mandate for the Caribbean and Pacific coasts and the south-central part of the country stays at B10. Some remote areas and border departments with Venezuela are permitted to blend at a lower rate (B2) as there are constant issues with cross-border fuel smuggling. In September 2019, blend mandate was increased to B12 for most of the country; however, less than a month later the blend mandate was reduced to B2, gradually increasing to B10. The current blend mandate is B10.

Trade

Colombia neither imports nor exports biodiesel. Even though there is an authorized biodiesel importer since July 2017, to date there have been no biodiesel imports registered under the codes HS 382600 (biodiesel-diesel blends above B30 by volume to pure B100 biodiesel) or HS 271020 (petroleum oils containing up to 30% biodiesel by volume). Apparently, prices have not been attractive to import.

The biodiesel industry is running with a third of its production capacity unused and aspires to export with facilities running at full capacity, but the prospects are dim for palm oil-based biodiesel from Colombia with little opportunity for sales in the two largest biodiesel markets, the European Union (EU) and the United States. Colombia is one of seven countries threatening a trade dispute with the European Union because EU use of biodiesel made from palm oil (classified as a high-risk Indirect Land Use Change biofuel) is capped and then be phased out (with only potential for minor exceptions) by 2030 under RED II. In addition, Colombia's palm oil biodiesel does not meet obligations under the United States' Renewable Fuel Standard (RFS) and thus cannot generate Renewable Identification Numbers (RINs) because the U.S. Environmental Protection Agency (EPA) has not completed a carbon emissions lifecycle assessment for any plant in Colombia. Colombia has provided information to the United States and the EU claiming that the palm oil biodiesel produced in the country complies with all social and

environmental standards, as palm oil crops occupy existing agricultural land and are not driving land use change. The EPA is reviewing this information.

Stocks

Gasoline and diesel fuel regulations require stocks to adequately supply the market at 10 days of total fuel demand. In 2020, biodiesel ending stocks are estimated at 15 million liters given lower consumption.

Table 5. Colombia's Production, Supply and Demand for Biodiesel

Biodiesel (Million Liters)										
Calendar Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020f
Beginning Stocks	5	9	11	14	15	13	11	13	15	20
Production	506	557	573	590	583	530	545	627	610	550
Imports	0	0	0	0	0	0	0	0	0	0
Exports	0	0	0	0	0	0	0	0	0	0
Consumption	502	555	570	589	585	532	543	625	605	555
Ending Stocks	9	11	14	15	13	11	13	15	20	15
BalanceCheck	0	0	0	0	0	0	0	0	0	0
Production Capacity (Million Liters)										
Number of Biorefineries	5	5	6	6	6	8	8	12	12	12
Nameplate Capacity	525	525	590	590	590	590	700	900	900	900
Capacity Use (%)	96.4%	106.0%	97.1%	100.0%	98.8%	89.8%	77.9%	69.7%	67.8%	61.1%
Feedstock Use for Fuel (1,000 MT)										
Crude Palm Oil	466	512	527	543	515	463	480	550	530	480
Used Cooking Oil	0	0	0	0	22	25	26	30	30	30
Market Penetration (Million Liters)										
Biodiesel, on-road use	502	555	570	589	585	532	543	625	605	555
Diesel, on-road use	5,634	5,792	5,883	6,071	6,296	6,315	6,183	6,282	6,422	6,100
Blend Rate (%)	8.9%	9.6%	9.7%	9.7%	9.3%	8.4%	8.8%	9.9%	9.4%	9.1%
Diesel, total use										

Note: 2020 figures are FAS Bogota estimates.

VI. Advanced Biofuels

There is no production of advanced biofuels in Colombia. Some universities and private sector companies have conducted research on advanced biofuels without relevant results.

VII. Notes on Statistical Data

The source of production data for biofuels is Fedebiocombustibles, which receives 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. The Colombian Customs Authority (DIAN) and Trade Data Monitor are the primary sources for trade data. Fuel consumption data is sourced by the Ministry of Mines and Energy. Stocks are unknown and estimated by an average of 10-day fuel supply according to fuel regulations. In 2020, biofuels consumption is based on fuel pool projections and assumed blend rates.

Attachments:

No Attachments