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Report Highlights:

Peruvian total ethanol production in 2025 is forecast at 250 million liters, increasing 2 percent from the previous year. Total ethanol consumption for 2025 is forecast at 304 million liters, a slight increase from the previous year. Biodiesel consumption is forecast at 385 million liters in 2025, increasing slightly from the previous year.

I. Executive Summary:

Peruvian total ethanol production in 2025 is forecast at 250 million liters, increasing 2 percent from the previous year. Total ethanol consumption for 2025 is forecast at 304 million liters, a slight increase from the previous year. The ethanol blend rate is expected to remain steady at 7.8 percent in 2025, however, FAS Lima is actively working with the U.S. and Peruvian private and public sector partners to increase the national ethanol mandate.

Policy development and implementation in the biofuels sector have stagnated for more than a decade. As a result, Peru has not fully realized the significant benefits biofuels offer in mitigating climate change through lower greenhouse gas (GHG) emissions and improving public health by reducing air toxins and particulate matter—effects that have become increasingly pronounced over time. The legislation that established the current blend rates was enacted nearly two decades ago, in 2007, and has not been updated since. Since the biofuels law was approved establishing a blend mandate of 7.8 percent for ethanol and 5 percent for biodiesel, there have not been initiatives to increase these blend mandates. Additionally, no steps have been taken to introduce renewable diesel, a fuel that could address engine performance concerns associated with higher biodiesel blends in cold climates.

The absence of efforts to incorporate renewable diesel is not the only missed opportunity. Peru has yet to establish a national mandate for sustainable aviation fuel (SAF) blending or introduce other market support mechanisms for these emerging fuels. While the country is currently engaging in regional initiatives to assess the feasibility of SAF, it lacks the domestic policy framework needed to support its adoption. Moreover, Peru has not followed the example set by Europe, the United States, or Canada in introducing tax incentives and other measures aimed at progressively lowering the GHG emissions of fuels currently available in the market.

The expansion of fuel ethanol consumption in Peru slowed significantly after the country achieved its target blend rate in 2013. Since then, any further increases in ethanol use have been tied exclusively to the growth of the gasoline market. However, gasoline consumption itself faces strong competition from alternative, more affordable fuels such as natural gas and liquefied petroleum gas. Consequently, Peru exports a significant portion of its domestically produced ethanol to Europe and addresses the resulting gap between domestic supply and demand through imports.

Peru's Consumer Defense and Intellectual Protection Institute (INDECOPI) initiated a countervailing duty investigation against U.S. ethanol exports on April 25, 2017. On November 6, 2018, INDECOPI ruled in favor of the domestic industry and imposed countervailing duties ranging from \$47.86 to \$47.94 per ton (equivalent to 4 cents per liter). However, after an extensive appeals process, INDECOPI reversed its previous decision on January 29, 2021, and all duties were repealed. Fuel ethanol imports for 2025 are forecast at 205 million liters.

Biodiesel consumption in Peru slowed after the target blend rate was reached in 2012, with any further increases now dependent solely on the expansion of the diesel market. Subsequently, the implementation of countervailing (CV) and anti-dumping (AD) duties provided border protection, leading to a resurgence in production. As a result, both biodiesel output and capacity utilization have reached record highs. In 2024, Peru produced 120 million liters of biodiesel, marking a 4 percent increase over the

previous year. This growth was driven by higher carry-over stocks and increased imports. Looking ahead to 2025, supply and demand are expected to remain relatively stable with minimal changes year-over-year. Notably, Peru has never exported biodiesel.

Biodiesel imports continue to be tightly regulated through the renewal of anti-dumping (AD) and countervailing (CV) duties on U.S. biodiesel, as well as the more recently imposed CV duties on Argentine biodiesel. On September 6, 2022, Argentina initiated a challenge at the World Trade Organization (WTO) against Peru's imposition of AD and CV duties on its biodiesel exports. Argentina contends that these measures may be inconsistent with the provisions of the Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade 1994, as well as the Agreement on Subsidies and Countervailing Measures. The case remains pending.

Fuel prices in Peru were more stable in 2024 compared to recent years. Regular gasoline prices ranged from \$3.60 to \$5.10 per gallon, while premium gasoline was priced between \$3.80 and \$5.80 per gallon. Diesel sold for around \$3.90 per gallon. Fuel sales in Peru are subject to an excise tax of 1.17 to 1.70 soles per gallon (\$0.31–\$0.45), an 8 percent road tax, and an 18 percent value-added tax (VAT). Biofuels, however, do not benefit from any tax advantages relative to fossil fuels, such as carbon taxes, the proceeds from which could otherwise be used to support the development of additional biofuel production capacity.

FAS Lima has updated the methodology used to generate historical estimates and forecasts in the ethanol and biodiesel tables presented in this report. As a result, current estimates for ethanol and biodiesel supply, demand, and distribution may differ from those in previous reports. Previously, FAS Lima calculated ethanol consumption by applying the mandated 7.8 percent blend rate to gasoline consumption data from the Ministry of Energy and Mines. The new approach estimates ethanol consumption based on data from the Ministry of Energy and Mines that reflect actual use of ethanol-blended gasoline, capturing less consistent annual blend rates across the total gasoline pool. Similarly, for biodiesel, the blend rate is no longer fixed 5 percent. Instead, it is now calculated by dividing reported biodiesel consumption from the Ministry of Energy and Mines by total diesel pool consumption (diesel plus biodiesel). Additionally, all imports classified under HS code 2710.20 are assumed to contain 5 percent biodiesel by volume, which affects total biodiesel import estimates. FAS Lima believes that this updated methodology provides a more accurate representation of the Peruvian biofuel market.

In this biofuel report, significant downward revisions were made to the estimates for total ethanol, fuel ethanol, and biodiesel production compared to last year's report. These changes were based on a shift in data sources and a re-evaluation of production assumptions. The following outlines the rationale for the revisions.

Previous Source (Old Methodology): The earlier estimates primarily relied on industry-reported capacity and projections from national producer associations, press reports, and historical production potential data. These figures often reflected installed capacity or optimistic operational targets, rather than actual output. Additionally, some outdated data from earlier years was extrapolated forward without fully accounting for shifts in market dynamics, such as plant shutdowns, input shortages, or changes in domestic fuel blending mandates.

New Source (Updated Methodology): This year's report instead uses updated official government statistics from the Peruvian Ministry of Energy and Mines (MINEM), cross-referenced with actual output data from: The National Superintendency of Tax Administration (SUNAT) for fuel distribution and taxation records, customs and trade statistics for biodiesel and ethanol imports/exports, International Energy Agency (IEA) and verified reports from major producers.

This shift ensures that the estimates are now more closely aligned with measured output and fuel market flows, rather than installed capacity or announced production potential.

The downward revisions in ethanol and biodiesel production figures do not necessarily reflect a decline in industry capacity or interest in biofuels, but rather a methodological correction. By grounding our estimates in verified production and distribution data, we now present a more realistic and policy-relevant snapshot of Peru's biofuel sector.

II. Policy and Programs

Peru does not offer tax incentives or establish set prices to directly support profitable biofuel margins, measures that could give biofuels a competitive advantage over fossil fuels. Instead, the country relies exclusively on mandatory blend rates, with any additional costs above those of fossil fuels being passed directly to consumers. At COP21 of the United Nations Paris Climate Change Conference, Peru committed to achieving a 30 percent, economy-wide reduction in emissions by 2030. Although much of this reduction is expected to come from the forestry sector, the national strategy also includes a law promoting the investment, development, and use of biofuels (Supreme Decree 012-2009).

In December 2020, Peru updated its Nationally Determined Contribution (NDC) for 2030 to include an unconditional commitment to limit emissions to 208.8 million tons of carbon dioxide equivalent (MTCO₂Eq) and a conditional commitment of 179 MTCO₂Eq, contingent on international cooperation. By comparison, in 2015, Peru's NDC set an unconditional target of 238.6 MTCO₂Eq and a conditional target of 208.8 MTCO₂Eq. According to PetroPeru, palm oil-based biodiesel solidifies rapidly at lower temperatures, often experienced at higher altitudes, which can clog fuel filters and damage truck engines. This issue is the primary reason the biodiesel blend rate has not been increased beyond B5. Furthermore, there have been no initiatives to produce renewable diesel (HDRD), a fuel that could overcome this operational constraint.

A. Renewable Energy and GHG Emissions

In the context of life cycle assessment (LCA) for bioethanol production in Peru, the carbon intensity (CI) values typically vary depending on the feedstock, production methods, energy sources, and other factors throughout the product's life cycle. As Peru primarily produces ethanol from sugarcane, reported CI values for Peruvian sugarcane ethanol generally fall within the following range:

Low range: Approximately 25–40 gCO₂e/MJ. These values are observed in highly efficient systems where there is significant use of renewable energy—such as bagasse for energy generation—and the adoption of low-emission agricultural and production practices. In some studies, particularly those focused on more sustainable methods, carbon intensity values as low as 25 gCO₂e/MJ have been reported.

Higher range: Approximately 50–70 gCO₂e/MJ. This range reflects more conventional production systems, particularly in areas with a greater reliance on fossil fuels for energy or where less efficient practices are employed.

FAS Lima, in collaboration with the U.S. Grains Council, has been engaging with government officials and ethanol blenders to advocate for an increase in the ethanol blend mandate. Both major blenders, Petroperu and Repsol, have expressed support for raising the blend rate. However, any change to the mandate must be approved by the Ministry of Energy and Finance.

B. Policy & Programs Aimed Specifically at Biofuels

Supreme Decree 013-2005 EM - *Regulation for Biofuels Market Promotion*: The 2005 decree establishes the required biofuel content in fuels distributed and sold in Peru. Gasoline must contain a minimum of 7.8 percent ethanol, while diesel must include at least five percent biodiesel. This minimum blend mandate applies to all diesel end-use markets, including on-road, off-road, and uses for heat and power.

<https://www.minem.gob.pe/minem/archivos/file/Hidrocarburos/Legislacion/Biocombustibles/Decreto Supremo No 013-2005-EM.pdf>

Law 28,054 – *Biofuels Market Promotion*:

This law, enacted on April 20, 2007, establishes the legal framework for promoting the use of biofuels in Peru. The legislation aims to increase employment, diversify the country's fuel sources, strengthen agricultural development, reduce environmental pollution and degradation, and provide alternative income opportunities to discourage illicit coca cultivation and drug production. It encourages investment in biofuel production and commercialization and created the PROBIOCOM program within the national investment agency, PROINVERSION, to attract private investment into the sector.

Although the framework of the law remains in effect, no new investments have been made beyond the initial years following its passage. The Biofuels Market Promotion legislation also establishes a technical committee responsible for setting blend rates and schedules, recommending regulations for production and commercialization, and promoting public awareness of biofuels' benefits. This committee includes representatives from the Ministries of Energy and Mines, Economy and Finance, and Agriculture, as well as PROINVERSION, DEVIDA (the alternative development agency), and the private sector. <https://www.minam.gob.pe/wp-content/uploads/2017/04/Ley-N°-28054.pdf>

Supreme Decree 021-2007 EM – *Regulation for the Commercialization of Biofuels*: This law, enacted in April 2007, establishes the legal requirements for trading and distributing biofuels in Peru. It also sets quality standards and procedures for registering biofuel blends with the Ministry of Energy and Mines. The decree outlines a schedule for minimum biofuel blend levels in fossil fuels. Starting in 2010, all gasoline sold in Peru was required to contain at least 7.8 percent ethanol, with full implementation reached over a three-year period. This mandated blend level has been maintained annually since 2013. Similarly, since 2011, diesel fuel in Peru must include a minimum of five percent biodiesel, although this target was achieved one year later than planned..

<https://www.minem.gob.pe/minem/archivos/file/Hidrocarburos/Legislacion/Biocombustibles/Decreto Supremo No 021-2007-EM.pdf>

Supreme Decree 014-2021 EM – *Regulation that establishes sulfur content for diesel and gasoline and simplifies gasoline commercialization*: This regulation consolidates gasoline octane ratings—previously 84, 90, 95, 97, and 98—into two categories: ‘Regular’ gasoline at 91 octane and ‘Premium’ gasoline at 96 octane. The regulation took effect on January 1, 2023. It also sets a sulfur content limit of 50 ppm for both diesel and gasoline. By the first quarter of 2024, this limit is further reduced to a maximum of 10 ppm sulfur content.

<https://cdn.www.gob.pe/uploads/document/file/1963869/DS 014-2021-EM.pdf.pdf?v=1624399256>

These regulations delineate responsibilities among the different agencies:

Ministry of Agricultural Development and Irrigation: Responsible for promoting the development of the agricultural areas necessary for biofuel production.

Ministry of Energy and Mines: This ministry authorizes the commercialization of biofuels and blends thereof with gasoline and diesel fuels.

Ministry of Production: Authorizes the operation of biofuel production facilities.

OSINERGMIN: Supervises and controls operations throughout the production chain.

PROINVERSION: Promotes investment in the biofuels sector.

Supreme Decree 012-2009 MINAM, National Environmental Policy: The Mining and Energy chapter of this Supreme Decree establishes as a priority the promotion of investment, development, and use of biofuels as a substitute for petroleum and natural gas to reduce carbon emissions.

C. Environmental Sustainability and Certification

Peru does not impose environmental sustainability standards, such as greenhouse gas (GHG) emission limits or certification requirements for biofuels. While all ethanol plants in Peru produce sustainability reports certified by third parties to meet export market standards, there are no domestic policy incentives aimed at reducing the GHG emissions of biofuels currently sold in the country. GHG emissions from biofuels can be influenced at every stage of the production cycle, including agronomic practices, feedstock selection, and energy use or technology at the biorefinery. However, Peru lacks incentives to encourage the collection and processing of wastes, such as palm oil mill effluent (POME) or used cooking oil, into lower carbon intensity biodiesel, renewable diesel, or sustainable aviation fuel (SAF).

Peru does not have national regulations specifically dedicated to the disposal of POME in the context of biodiesel production. However, broader environmental laws are in place that indirectly govern POME management. Any project with potential environmental impacts—including biodiesel production facilities, must undergo an Environmental Impact Assessment (EIA) under Peruvian law. The EIA process covers aspects such as the management and disposal of waste streams, including POME. Some palm oil producers in Peru have adopted measures for effective POME management, such as implementing biogas recovery systems from POME ponds. These systems generate thermal energy and

help reduce greenhouse gas emissions, aligning with international sustainability standards and demonstrating commitment to responsible waste management in biodiesel production. In its original and updated NDC commitments, Peru did not include any references to how or if bioenergy or biofuels would contribute to meeting its NDCs.

Pan-American Liquid Biofuels Coalition (CPBIO)

Peru is an active member of the Pan-American Liquid Biofuels Coalition (CPBIO). Established in 2023 with support from the Interamerican Institute of Cooperation on Agriculture (IICA), the coalition comprises twenty-five private sector associations involved in the production and processing of sugar, alcohol, corn, sorghum, soybeans, vegetable oil, and other agricultural crops. CPBIO's objective is to coordinate the sustainable production, promotion, and consumption of clean energies across the Western Hemisphere.

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

Under the U.S.-Peru Trade Promotion Agreement, U.S. ethanol and biodiesel have been imported into Peru duty free since 2018. Biodiesel imports, classified under HS codes 3826.00 (blends above B30 to B100) and 2710.20 (petroleum oils containing 1–30 percent biodiesel), enter Peru without import duties. For ethanol, both undenatured and denatured forms (HS codes 2207.10 and 2207.20) were originally subject to a six percent import duty plus an 18 percent value-added tax. However, as part of the Agreement, U.S. denatured ethanol underwent a ten-year tariff phase-out, achieving duty-free status in 2018, while undenatured U.S. ethanol has entered duty free since the Agreement came into force in 2009. Peru mainly exports undenatured ethyl alcohol (HS 2207.10).

On January 29, 2021, Peru's Consumer Defense and Intellectual Protection Institute (INDECOPI) lifted the countervailing duty that had been imposed on U.S. ethanol exports to Peru since 2017. In December 2009, Peru imposed temporary anti-dumping and countervailing duties on U.S. biodiesel in response to significant imports that began in December 2008. In 2009, U.S. shipments reached 85 million liters, accounting for half of Peru's annual biodiesel consumption. Following the imposition of these duties, U.S. biodiesel exports to Peru stopped immediately, except for two shipments in March and June 2010. On August 23, 2010, Peru's INDECOPI issued Resolution 151-2010-CFD-INDECOPI, establishing permanent countervailing and anti-dumping duties on all U.S. exports of B51-100 blends, set at \$0.16 and \$0.19 per metric liter, respectively. These duties were renewed in 2016 after the original measures expired. U.S. biodiesel exports to Peru resumed in 2013 under HS code 2710.20, which is not subject to the higher duties.

On February 18, 2024, INDECOPI renewed the antidumping and countervailing duties on Argentinean biodiesel for an additional five years.

Table 1

Countervailing Duties Against Argentinean Biodiesel		
Producer	\$/MT	\$/Liter
LDC Argentina	15.4	0.014
Molinos Rio de la Plata, Renova Vicentin	17.1	0.015
Cargill	24.1	0.021
Aceitera General Deheza, Bunge Argentina	31.3	0.028
Others	208.2	0.183

Source: INDECOPI

Biodiesel Antidumping Sunset Investigation

On February 5, 2025, the Consumer Defense and Intellectual Property Right Institute (INDECOPI) issued Resolution 008-2025/CBD-INDECOPI, initiating a “sunset” review of the antidumping tariffs imposed on U.S. biodiesel. Interested parties have six months from the date of publication to submit relevant information, with the possibility of a three-month extension for comments. This review will determine whether the tariffs will be renewed or eliminated.

Biodiesel Countervailing Duty Sunset Investigation

On March 23, 2025, INDECOPI published Resolution 037-2025-CDB-INDECOPI, initiating a “sunset” review of the countervailing duties imposed on U.S. biodiesel. Interested parties have 30 days to submit relevant information, with a possible extension of an additional 30 days.

III. Ethanol

Peru began producing fuel ethanol in 2008 and was able to meet domestic demand until 2014, when one of its production plants temporarily closed due to financial difficulties. Since then, domestic ethanol production has fallen slightly short of national consumption. Throughout this period, Peru has exported high-value, sugar cane-based ethanol to the European Union, which has increased the need for imports to meet local demand. The country has a mandated E7.8 blend requirement; however, the blend percentage fluctuates slightly from year to year.

Table 2

Ethanol Used as Fuel and Other Industrial Chemicals (Million Liters)										
Calendar Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025f
Beginning Stocks			30	40	48	64	54	14	36	14
Fuel Begin Stocks	2	18	7	23	8	9	19	10	32	5
Production			172	222	212	190	195	228	245	250
Fuel Production	175	115	116	132	158	145	164	155	160	170
Imports			193	208	190	234	218	238	211	223
Fuel Imports	113	112	173	190	153	181	169	214	195	205
Exports			142	171	131	139	159	148	176	175
Fuel Exports	92	53	68	142	124	130	145	127	160	150
Consumption			213	251	255	295	294	296	302	304
Fuel Consumption	180	185	205	195	186	186	197	220	222	225
Ending Stocks			40	48	64	54	14	36	14	8
Fuel Ending Stocks	18	7	23	8	9	19	10	32	5	5
Refineries Producing Fuel Ethanol (Million Liters)										
Number of Refineries	2	2	2	2	2	2	2	2	2	2
Nameplate Capacity	350	350	350	350	350	350	350	350	350	350
Capacity Use (%)	50	33	33	38	45	41	47	44	46	49
Co-product Production (1,000 MT)										
Bagasse	722	474	479	545	652	598	677	639	660	763
Feedstock Use for Fuel Ethanol (1,000 MT)										
Sugar cane	2,188	1,438	1,450	1,650	1,975	1,813	2,050	1,938	2,000	2,313
Market Penetration (Million Liters)										
Fuel Ethanol Use	180	185	205	195	186	186	197	220	222	225
Gasoline Pool 1/	2,630	2,761	2,665	2,934	2,385	3,254	2,936	2,821	2,946	2,950
Blend Rate (%)	6.8	6.7	7.7	6.6	7.8	5.7	6.7	7.8	7.6	7.8

f: forecast

1/ Covers gasoline and all additives including any biocomponents (ethanol). Source: Ministry of Agriculture, Private Sector, Ministry of Energy and Mines, FAS Lima analysis (Some small volumes of ethanol traded may be for beverage use.)

Consumption:

Total ethanol consumption in Peru for 2025 is forecast at 304 million liters, roughly unchanged from the previous year. Fuel ethanol use is estimated at 225 million liters. Unless the ethanol blend mandate increases, overall ethanol consumption will only rise with greater gasoline use. However, any prolonged increase in gasoline prices due to higher international oil prices or a devaluation of the Peruvian Sol could lead consumers to switch from ethanol-blended gasoline to less expensive alternatives like natural gas.

Growth in gasoline demand and consequently for E7.8 ethanol-blended gasoline, has slowed in recent years as a significant portion of Peru's public transport sector, especially taxis and passenger vans, has shifted to liquefied natural gas (LNG) and liquefied petroleum gas (LPG). By 2020, these alternative fuels accounted for about 50 percent of total light-duty vehicle fuel consumption in Peru. This trend has directly curtailed gasoline and ethanol demand, limiting growth opportunities for fuel ethanol.

FAS Lima projects that, despite the rising popularity of LNG and LPG as transportation fuels, increased vehicle ownership and the ongoing E7.8 ethanol blend requirement will drive continued growth in gasoline and ethanol demand in Peru in the near term. According to the International Energy Agency's baseline model, the annual growth rate for Peru's gasoline-ethanol fuel pool is expected to slow to 1–2 percent over the next decade—significantly slower than in previous years, but still positive. Currently, gasoline represents 22 percent of total fuel consumption in Peru, while liquefied petroleum gas accounts for 23 percent.

Lima and its surrounding areas account for approximately 65 percent of Peru's ethanol and gasoline demand. The primary gasoline suppliers in the Peruvian market are REPSOL (Spain) and the state-owned PetroPeru. While these companies initially opposed raising the ethanol blend rate above the current 7.8 percent, they are now more receptive to such discussions, likely anticipating that a higher blend will help reduce costs.

PetroPeru, Peru's state-owned oil company, is facing a major financial crisis caused by inefficiency, poor investments, and overspending. This situation led to the resignation of the board of directors on September 10, 2024, with no replacements appointed so far. In response, the government has continued to inject funds, most recently approving \$1.75 billion on September 14, 2024, which includes a \$1 billion short-term credit line and \$750 million in "transitory" financial support. However, these measures appear to merely delay the company's inevitable decline, worsening Peru's fiscal deficit.

In March 2025, another leadership change further contributed to instability and chaos within PetroPeru, complicating efforts to stabilize the company and restore confidence. Ongoing turmoil raises serious concerns about PetroPeru's long-term viability and its impact on the broader national economy.

Production:

Peru's total ethanol production in 2025 is forecast at 250 million liters, with fuel ethanol production estimated at 170 million liters. The country's nameplate production capacity is expected to remain unchanged at 350 million liters, resulting in a capacity utilization rate of about 50 percent.

Peru's two ethanol production facilities are in the state of Piura in northern Peru. Coazucar's Aurora facility, owned by Grupo Gloria (the country's largest dairy processor), manages about 6,500 hectares of sugarcane and can switch between sugar and ethanol production based on market conditions. The other plant, Caña Brava, is a \$210 million facility owned by the Romero Group, with approximately 8,000 hectares of sugarcane fields and a production capacity of 127 million liters per year.

Peru's bioethanol production uses sugarcane as the primary feedstock, cultivated on previously idle, non-irrigated desert lands, mainly in the Piura region. Companies benefit from favorable climatic conditions, including abundant sunlight near the equator. Although the region receives only about 25 millimeters of rainfall annually, year-round sugarcane cultivation is made possible through advanced drip irrigation systems. Irrigation water is sourced from the Chira River, which is supplied by the Poechos Reservoir. This reservoir, located 30 kilometers from the Peru-Ecuador border, has a capacity of one billion cubic meters and a discharge rate of four cubic meters per second.

Several sugarcane mills in Peru are assessing the economic viability of redirecting some of their feedstock to ethanol production. However, according to sources, there are currently no immediate plans to begin commercial ethanol operations.

Sugarcane yields in Peru can reach up to 200 metric tons (MT) per hectare, though average yields are typically around 140 MT per hectare, with a harvest cycle of 13 to 18 months. In contrast, Brazil's shorter 180-day growing season results in lower yields of about 70 MT per hectare. In Piura, sugarcane cultivation requires approximately 17,000 cubic meters of water per hectare annually.

Trade:

FAS Lima forecasts Peru's fuel ethanol exports for 2025 at 150 million liters, representing a slight decrease from the previous year. Attractive prices in the European Union market have supported production growth in Peru in recent years. Meanwhile, fuel ethanol imports in 2025 are expected to reach 205 million liters, all sourced from the United States.

Table 3

Peruvian Undenatured Ethyl Alcohol Exports (220710) (Million Liters)			
	2022	2023	2024
World	159	148	176
Netherlands	145	127	157
Ecuador	14	21	9

Source: Peruvian Customs (SUNAT)

Table 4

Peruvian Undenatured Ethyl Alcohol Imports (220710) (Million Liters)			
	2022	2023	2024
World	50	23	16
Bolivia	37	23	16
U.S.	12	0	0

Source: Peruvian Customs (SUNAT)

Table 5

Peruvian Denatured Ethyl Alcohol Imports (220720) (Million Liters)			
	2022	2023	2024
World	169	214	195
U.S.	168	214	195
Ecuador	1	0	0

Source: Peruvian Customs (SUNAT)

In 2024, the average export price for Peruvian ethanol dropped by 19 percent to \$0.65 per liter. Ethanol imports into Peru averaged \$0.53 per liter, down 20 percent from the previous year. Peruvian ethanol exported to the European Union (EU) enjoys duty-free access under the EU–Peru Free Trade Agreement. Additionally, certain growers can earn price premiums by adopting environmentally friendly practices, such as green harvesting (harvesting without burning cane fields) and biological pest control.

Peruvian ethanol does not meet the biofuel land use change requirements set by the U.S. Energy Act of 2007 (EISA 2007), making it ineligible for the Renewable Fuel Standard (RFS) and disqualifying it from generating Renewable Identification Numbers (RINs). RINs add value to biofuels sold in the U.S., so this limits Peru’s market opportunities—especially since Peruvian ethanol is costlier than U.S. corn ethanol. For years, the only consistent U.S. market for higher-priced sugarcane ethanol has been California, but that market is dominated by imports from Brazil.

IV. Biodiesel/Renewable Diesel

Consumption:

FAS Lima forecasts that biodiesel consumption in Peru will reach 385 million liters in 2025, a one percent increase over the previous year. Peru achieved the B5 blending requirement in 2012, one year after the mandate took effect. The biodiesel blend rate is expected to remain steady in the coming years.

Production:

Peru is forecast to produce 122 million liters of biodiesel in 2025, maintaining production at about the same level as the previous year. The country manufactures biodiesel primarily using crude palm oil (CPO) as the main feedstock.

Table 6

Biodiesel (Million Liters)										
Calendar Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025f
Beginning Stocks	9	34	51	52	23	5	12	31	8	8
Production	0	20	54	70	107	120	120	115	120	122
Imports 1/	377	354	289	252	180	236	251	237	260	260
Exports	0	0	0	0	0	0	0	0	0	0
Consumption	352	357	342	351	305	349	352	375	380	385
Ending Stocks	34	51	52	23	5	12	31	8	8	5
Production Capacity (Million Liters)										
Number of Biorefineries	2	2	2	2	2	2	2	2	2	2
Nameplate Capacity	350	350	350	350	350	350	350	350	350	350
Capacity Use (%)	0%	6%	15%	20%	30%	34%	34%	33%	34%	35%
Feedstock Use (1,000 MT)										
CPO	0	18	50	64	98	110	110	106	110	112
Market Penetration (Million Liters)										
Biodiesel	352	357	342	351	305	349	352	375	380	385
Diesel Pool 2//	6,750	6,900	6,750	7,020	5,700	7,800	7,367	7,590	7,750	7,870
Blend Rate (%)	5.2%	5.2%	5.1%	5.0%	5.4%	4.5%	4.8%	4.9%	4.9%	4.9%

f: forecast

1/ 2710.20 is assumed B5

2/ Covers diesel and all biocomponents (biodiesel). Source: Ministry of Agriculture, Private Sector, Ministry of Energy and Mines, FAS Lima analysis

Table 7

Peruvian Biodiesel Imports – 3826.00 (Million Liters)			
	2022	2023	2024
World	103	134	131
China	44	78	83
Spain	0	0	24
Indonesia	50	45	24
Others	9	11	0

Note: Assume all product is B100

Source: Peruvian Customs (SUNAT)

Table 8

Peruvian Petroleum Oils and Preparations Containing up to 30 percent Biodiesel Imports – 2710.20 (adjusted to B100-equivalent, Million Liters)			
	2022	2023	2024
World	148	103	129
U.S.	148	103	129

Note: The assumed average blend rate for imports is B5.

Source: Peruvian Customs (SUNAT)

Trade:

Peru does not export biodiesel since domestic demand exceeds production capacity. Biodiesel imports in 2025 are forecast at 260 million liters, unchanged from the previous year. Biodiesel imports under HS codes 3826.00 (blends above B30 to B100) and 2710.20 (petroleum oils with 1–30 percent biodiesel) enter duty-free. Imports classified under 2710.20 (all from the United States) contain 5 percent biodiesel. Soy oil biodiesel performs better in colder temperatures than crude palm oil (CPO)-based biodiesel at the same blending levels, primarily due to its naturally lower fatty acid content.

V. Advanced Biofuels

Peru participates in the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), a global initiative led by the International Civil Aviation Organization (ICAO) to reduce CO2 emissions from international flights. Peru’s Ministerial Resolution 435-2024-MTC, which establishes new Regulations on Aeronautical Infractions and Sanctions, now includes violations related to environmental protection, such as non-compliance with CORSIA.

Peru has not set national blending mandates for sustainable aviation fuel (SAF) but is involved in regional efforts to explore SAF feasibility. In February 2025, Airbus and the International Civil Aviation Organization (ICAO) launched a partnership to conduct SAF feasibility studies in Peru, Argentina, and Panama. These assessments are part of ICAO’s Assistance, Capacity Building, and Training for

Sustainable Aviation Fuels (ACT-SAF) program, which supports countries in developing the capabilities needed to produce and implement SAF. Lima Airport Partners (LAP), the operator of Jorge Chávez International Airport, has launched the LIMFuel project, which will design, build, operate, and maintain a new aviation fuel system capable of delivering Sustainable Aviation Fuel (SAF). Exolum, a Spanish company experienced in SAF management, has been chosen as a long-term partner. The project's first phase involves an investment of over USD \$80 million, with infrastructure rollout planned in stages through 2041. Construction of a new hydrant network and its integration with the existing system is underway, with the facility expected to become operational by 2025. The project aims to reduce congestion and emissions by replacing over 100 daily tanker truck deliveries with dedicated fuel pipelines.

VI. Notes on Statistical Data

Ethanol production in Peru uses the diffusion method, a technology adopted from Brazil. In this process, harvested sugarcane stalks are finely shredded and then passed through thirteen sequential showers of warm water (70–80°C). The liquid resulting from the final shower undergoes fermentation with alcohol-producing yeast, and the resulting “liquor” is then distilled to produce ethanol. This diffusion method is considered more efficient than traditional milling, as it enables continuous processing and minimizes plant idle time.

For a plant producing 350,000 liters of ethanol per day to operate efficiently, it must process 20 hectares of sugarcane daily. On average, sugarcane contains 17 percent sugar; from one metric ton of sugarcane, about 170 kilograms of sugar can be extracted, or enough to yield approximately 80 liters of ethanol. One metric ton of sugarcane yields about 330 kilograms of bagasse, the fibrous material left after extracting juice from the stalks. This bagasse is used to produce 660 kilograms of steam, which powers turbines to generate electricity for the processing plant. Ethanol operations typically consume around eight megawatts of electricity per month. Any surplus electricity generated (usually two to four megawatts) is sold to the national power grid.

Additional detailed information is available in the following tables.

Table: Ethanol Used as Fuel (Million Liters)

Conversion: 1MT of sugar cane = 80 liters of ethanol
1MT of sugar cane = 330 kilograms of bagasse

Ethanol Trade: In this report, all Peruvian exports under HS codes 2207.10 and 2207.20 to Europe are assumed to be used exclusively as fuel. Exports to other countries are considered destined for beverage or other industrial uses. Likewise, all imports of HS 2207.20 from the United States are regarded as fuel-grade ethanol, while imports from other countries are assumed to be for beverage or industrial purposes.

Table: Biodiesel Used as Fuel (Million Liters)

Conversion: 1MT of Crude Palm Oil = 1,080 liters of biodiesel

Attachments:

No Attachments