USDA Foreign Agricultural Service
GAIN Report
Global Agricultural Information Network

Required Report - public distribution

Date: 9/20/2017
GAIN Report Number:

Peru

Biofuels Annual

Peru's biodiesel production expected to resume amidst a CVD investigation of U.S. ethanol

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Report Highlights:
Peru's Consumer Defense and Intellectual Protection Institute (INDECOPI) initiated a countervailing duty (CVD) investigation of U.S. ethanol on April 25, 2017. Peru continues to export fuel ethanol to the European Union at a premium price and imports less expensive U.S. ethanol to satisfy the 7.8 percent gasoline blending mandate. Peru's biodiesel production is resuming in 2017 as a result of an antidumping and countervailing duties applied to Argentinean biodiesel. The biodiesel blending mandate in diesel fuel remains at 5 percent.

Post:
Lima

I. Executive Summary

Peru's Consumer Defense and Intellectual Protection Institute (INDECOPI) initiated a countervailing duty (CVD) investigation against U.S. ethanol exports to Peru on April 25, 2017. Peru continues the process of gathering information from the U.S. government and private sector.

Peru does not provide tax incentives or set prices to directly support profitable biofuel margins that would give biofuels an advantage over fossil fuels like in many countries. Instead, Peru relies on the mandatory blend rates of 7.8 percent for ethanol and 5 percent for biodiesel.

Production of fuel ethanol in Peru fell in 2015 and 2016 as a result of the closure of one of two existing production plants. Imports rose both years to meet the gap in supply with exports and domestic consumption holding mostly steady. Peru is forecast to continue exporting ethanol, but in lower volumes than previous years due to increased domestic consumption. Fuel ethanol production for 2017 is forecast at 118 million liters, down slightly from 2016. Fuel ethanol consumption for 2017 is forecast up 6 percent from 2016 at 182 million liters. Little to no year-over-year change is forecast in 2018 production and consumption.

Peru closed domestic biodiesel plants during the 2014 to 2016 time period. However, domestic biodiesel production is forecast to resume in 2017 due to countervailing duties levied against Argentina in January 2016. As a result, biodiesel production is forecast to reach 60 million liters in 2017. Imports are forecast to fall 33 percent to 250 million liters due to higher duties on the major foreign supplier and resumption of local production.

Increases in the blend rate for both ethanol and biodiesel are unlikely at this time. As a result, increased biofuel consumption will depend solely on increased fuel use. There is currently no policy in place to support advanced biofuels research.

II. Policy and Programs

Peru does not provide tax incentives or set prices to directly support profitable biofuel margins, which would give biofuels an advantage over fossil fuels. Peru relies instead solely on mandatory blend rates. As a result of the U.S.-Peru Trade Promotion Agreement, U.S. ethanol is assessed an import duty of only three percent and will be duty free by 2018. Peru imports U.S. biodiesel duty-free. Since biodiesel production stopped in 2014, Peru met 100% of market demand through imports until 2017. At COP21 of the United Nation’s Paris Climate Change Conference, Peru committed to a 30 percent reduction in emissions by 2030. While it plans to obtain this primarily through its forestry sector, a national law promoting the investment, development, and use of biofuels is included in this strategy (Supreme Decree 012-2009). Peru’s biofuel sector is governed by the following four regulations that provide the legal framework.

Supreme Decree 013-2005 EM - Regulation for Biofuels Market Promotion: This 2005 decree sets the biofuel content in fuels distributed and sold within Peru. Gasoline must contain at least 7.8 percent ethanol. Diesel must have a biodiesel content of no less than 5 percent. This minimum blend level mandate applies to all diesel end-use markets, both on and off-road as well as heat and power.

Law 28,054 – Biofuels Market Promotion: This law (April 20, 2007) establishes the legal framework for promoting the use of biofuels in Peru. The legislation seeks to increase employment, diversify the country's fuel sources, strengthen agricultural development, reduce environmental contamination and degradation, and provide an alternative source of income to illicit coca cultivation and drug production. This law promotes investment in biofuel production and its commercialization.

The law established the PROBIOCOM program within Peru's investment agency (i.e., PROINVERSION) in order to attract investment in the local biofuel sector. While the framework of this law remains in force, no new investments have been made beyond the initial years.

The Biofuels Market Promotion legislation establishes the technical committee responsible for determining blend rates and schedules, as well as recommending biofuel production and commercialization regulations. The committee is also responsible for enhancing public awareness of the benefits of biofuels. The Ministries of Energy and Mines, Economy and Finance, Agriculture, PROINVERSION, DEVIDA (alternative development agency) and the private sector compose the technical committee's membership.

Supreme Decree 021-2007 EM – Regulation for the Commercialization of Biofuels: This law (April 2007) establishes the legal requirements for trading and distributing biofuels in Peru, while also establishing quality standards and procedures for registering biofuel blends with the Ministry of Energy and Mines. The decree sets the schedule for biofuel blending minimums in fossil fuels. Since 2010, when the blend wall was finally phased in nation-wide, all gasoline sold in Peru is required to contain at least 7.8 percent ethanol. From 2011 onwards, diesel fuel sold in Peru must contain a minimum five percent biodiesel component.

The following regulations delineate responsibilities among the different agencies:

- Ministry of Agriculture 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 an opportunity of substitute petroleum and gas to reduce carbon emissions.

Peru does not have certification requirements for biofuels.

III. Gasoline and Diesel Markets

Fuel Use History (Liters - Million)										
Calendar Year	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Gasoline Total	1,478	1,495	1,505	1,658	1,843	1,931	2,047	2,147	2,223	2,259
Diesel Total	4,393	4,471	4,487	4,842	5,464	5,687	5,943	5,809	6,303	6,514
On-road	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Agriculture	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Construction/mining	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Shipping/rail	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Industry	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Heating	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Jet Fuel Total	668	685	701	781	850	883	964	1,063	1,120	1,220
Total Fuel Markets	6,518	6,651	6,693	7,281	8,157	8,501	8,954	9,019	9,646	9,993
Fuel Use Projections (Liters - Million)										
Calendar Year	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
Gasoline Total	2,277	2,280	2,398	2,422	2,495	2,570	2,647	2,690	2,715	2,769
Diesel Total	6,566	6,573	6,597	6,728	6,863	7,000	7,140	7,250	7,340	7,486
On-road	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Agriculture	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Construction/mining	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Shipping/rail	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Industry	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Heating	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Jet Fuel Total	1,225	1,226	1,228	1,235	1,281	1,332	1,385	1,410	1,440	1,468
Total Fuel Markets	10,068	10,079	10,223	10,385	10,639	10,902	11,172	11,350	11,495	11,723
* Note: N.A.= Not Available. The Peruvian Government does not track end use of diesel.										
Source: Ministry of Energy and Mines										

Industry sources indicate that growing demand for E7.8 gasoline has slowed in recent years as taxis and buses increasingly turn to natural gas and liquefied petroleum gas (LPG). Demand for these two alternative fuels in 2016 accounted for about 45 percent of total fuel use. This trend directly affects gasoline and thus ethanol consumption. Nonetheless, FAS Lima forecasts that despite growing demand for biogas (methane) and liquefied petroleum gas (LPG) as transportation fuels, increased automotive ownership and the continuation of the E7.8 requirement will lead to increased demand for ethanol.

Peru's gasoline producers oppose any increase in the current ethanol blend rate of 7.8 percent to 10 percent. Peru is a relatively efficient producer of gasoline and raising the blend rate leads to revenue loss for gasoline producers who supply the market. The surplus gasoline in the market would have to be exported, potentially at a loss.

The city of Lima and its immediate surroundings account for roughly 65 percent of the country's ethanol and gasoline demand. REPSOL (Spain) and Petro Peru (state-owned) are the Peruvian market's main gasoline suppliers.

IV. Fuel Ethanol

Peru finally met the E7.8 requirement in 2013 after a three-year delay. Since Peru's ethanol production began in 2008, the country produced fuel ethanol in sufficient volumes to supply domestic consumption through 2014. After that, one plant was shut down greatly reducing production capacity to below consumption E7.8 consumption requirements. Augmenting the domestic market supply shortfall, Peru exports 'high-value,' sugar cane-based ethanol to the European Union which raises the demand for imports to meet its domestic demand.

Ethanol Used as Fuel (Million Liters)										
Calendar Year	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017 e**	**2018 e**
Beginning Stocks										
Fuel Begin Stocks	0	0	0	0	12	16	8	5	1	2
Production										
Fuel Production	68	70	195	142	204	190	152	122	118	120
Imports										
Fuel Imports	14	12	38	115	114	63	112	160	105	105
Exports										
Fuel Exports	58	64	211	122	149	102	94	113	40	40
Consumption										
Fuel Consumption	24	18	21	123	165	160	173	173	182	182
Ending Stocks										
Fuel Ending Stocks	0	0	0	12	16	8	5	1	2	5
Balance Check	0	0	0	0	0	0	0	0	0	0
Production Capacity (Million Liters)										
Number of Refineries	1	1	2	2	2	2	2	1	1	1

Nameplate Capacity	126	126	230	350	350	350	350	127	127	127
Capacity Use (%)	54%	56%	85%	41%	47%	54%	43%	96%	93%	94%
Co-product Production (1,000 MT)										
Bagasse	281	289	805	586	633	550	504	459	459	461
Feedstock Use (1,000 MT)										
Sugar Cane	850	875	2,438	1,775	1,919	1,668	1,528	1,391	1,391	1,395
Market Penetration (Million Liters)										
Fuel Ethanol	24	18	21	123	165	160	173	173	182	182
Gasoline	1,505	1,657	1,843	1,931	2,047	2,147	2,223	2,259	2,277	2,280
Blend Rate (%)	1.6%	1.1%	1.1%	6.4%	8.1%	7.5%	7.8%	7.7%	7.9%	7.9%

Source: Ministry of Agriculture, Private Sector, Ministry of Energy and Mines, FAS Lima analysis
Note: Forecasts are based on the assumption that Peru will continue to reach the E7.8 mandate. Some small volumes of ethanol traded may be for beverage use.

Production:
Production is forecast at 118 million liters for 2017 and 120 million liters for 2018. Capacity is forecast to remain the same for the foreseeable future at 127 million liters.

Peru began producing ethanol in August 2008. By the end of 2011, two production facilities were operational, both located in the state of Piura (roughly 1,000 kilometers north of the capital city of Lima). Coazucar, owned by Grupo Gloria (Peru's largest dairy processor), purchased one of the production facilities in 2015, Maple Ethanol, renaming it Aurora. The facility produced 110 million liters of ethanol in 2014, about 60 percent of Peru's total ethanol production for that year. However, the company decommissioned the plant in 2015 and its 6,000 hectares of sugar cane fields are now used to produce sugar for human and industrial consumption. Nevertheless, the Aurora facility retains ethanol production capabilities.

With the closure of the Aurora plant, the only remaining ethanol plant in Peru is Caña Brava, a $210 million facility owned by the Romero Group. Caña Brava began operations in August 2009 and maintains approximately 7,000 hectares of planted sugarcane fields with a production capacity of 127 million liters per year. Caña Brava plans to expand planted area by an additional 2,000 hectares in 2018.

Peru uses sugarcane as the feedstock for bioethanol production. This sugarcane is cultivated on formerly idle, non-irrigated desert lands. Production is centered in Piura where companies take advantage of the favorable weather conditions (i.e., ample sunlight due to proximity to the equator). Despite an average annual rainfall of only 25 millimeters, sugarcane is cultivated year-round using modern irrigation technology. The sugarcane fields are drip irrigated with water drawn from the Chira River. The river is also fed by the Poechos Reservoir, which has a one billion cubic meter capacity and a discharge rate of four cubic meters per second. The reservoir is 30 kilometers from the Peru-Ecuador border.

A number of sugarcane growers are evaluating the economic feasibility of diverting part of their crop to ethanol production. But sources indicate that there are no immediate plans to initiate commercial operations.

Sugarcane yields can be as high as 200 metric tons (MT) per hectare, although average yields normally are around 140 MT per hectare, with 13 to 18 months between cuts. Brazil's shorter 180 day growing season produces lower yields of 70 MT per hectare. Sugarcane cultivation in Piura absorbs about 17,000 cubic meters of water per hectare per year compared to rice that takes upwards of 22,000 cubic meters of water per hectare per season (or about 44,000 cubic meters of water per hectare per year). Rice farmers plant two rice crops per year in Piura's desert environment.

Consumption:
Ethanol consumption for 2018 is forecast at 182 million liters, unchanged from 2017 and a five percent increase from 2016 due to rising gasoline use. Peru met its ethanol mandate for the first time in 2013, and has continued to reach it since that year. FAS Lima forecasts that Peru will achieve a blend rate of 7.8 percent again in 2017 and 2018. Unless there is an unforeseen increase in the ethanol blend mandate, ethanol consumption will only increase as gasoline consumption increases. There is no current discussion within the government to increase the ethanol mandates.

Trade:
FAS Lima forecasts Peru's 2018 fuel ethanol exports at about 40 million liters, the same as 2017 but a 65 percent drop from the 113 million liters it exported in 2016 due to lower production and lower imports. Fuel ethanol imports in 2018 are forecast at 105 million liters, remaining at the same levels as the forecast for 2016 and sharply lower than 2015.

Ethanol imports of both undenatured and denatured ethanol (HS codes 2207.10 and 2207.20) are assessed a six percent import duty plus an 18 percent value-added tax. However, due to the U.S.-Peru Trade Promotion Agreement, a ten year tariff phase our schedule was applied to U.S. denatured ethanol (2207.20). In 2017 it is only assessed a 1.2 percent import duty and will be duty free in 2018. Undenatured U.S. ethanol (2207.10) was granted duty free entrance when the agreement entered into force. Peru exports undenatured ethyl alcohol (2207.10). In 2016 it exported 113 million liters (of which 84 million liters were fuel exports destined to the European Union). The largest markets are the Netherlands, Colombia, and Ecuador.

Peruvian Undenatured Ethyl Alcohol Exports (220710)
(Million Liters)

	2014	2015	2016
World	102	94	113
Netherlands	52	51	84
Colombia	18	24	14
Ecuador	6	14	7

Source: Peruvian Customs Authority as collected and reported by Global Trade Atlas

Peruvian Undenatured Ethyl Alcohol Imports (220710)
(Million Liters)

	2014	2015	2016
World	10	32	47
U.S.	3	19	35
Bolivia	8	12	10
Ecuador	1	1	2

Source: Peruvian Customs Authority as collected and reported by Global Trade Atlas

Peruvian Denatured Ethyl Alcohol Imports (220720) (Million Liters)			
	2014	2015	2016
World	54	80	113
U.S.	54	80	113

Source: Peruvian Customs Authority as collected and reported by Global Trade Atlas

Peru's ethanol producers receive higher prices in foreign markets than domestically. Peruvian ethanol exported to the European Union (EU) benefits from price premiums for green harvesting (i.e., harvesting without cane field burning) and biological pest control among other more environmentally-friendly measures. Additionally, estimated domestic sea freight charges (e.g., Paita to Lima/Callao) at $0.27 per gallon of ethanol are extremely high compared to the international sea freight charges (Paita-Rotterdam) of $0.34 per gallon of ethanol.

Peru's ethanol sales to the U.S. market are impeded because it does not qualify to meet biofuel "obligations" (mandates) under the Renewable Fuel Standard (RFS). Peru ethanol is therefore ineligible for RINs (Renewable Identification Numbers) which adds value to biofuels sold in the United States. Ethanol from Peru can be marketed in the United States, but in reality there is little to no market opportunity for biofuels that cannot meet RFS obligations. Biofuels coming from overseas can fulfill RFS obligations and thus generate RINs if the biofuel plant was "grandfathered in" because it supplied the market prior to 2007 (a situation that does not apply to Peru ethanol producers) or foreign producers can certify that the biofuel: 1) comes from feedstock grown on lands that were cultivated prior to 2007; 2) is covered by a feedstock tracking and certification scheme that insures ineligible feedstock are excluded; and 3) meets a minimum environmental sustainability standard of 20 percent greenhouse gas savings over fossil fuel or 50 percent to qualify for an advanced non-cellulosic fuel. Desert lands in Peru used to produce ethanol were converted after 2007, and therefore ethanol produced using feedstock from those lands, cannot meet RFS obligations as defined under the Clean Air Act.

The U.S. Clean Air Act defines the types of renewable biomass used to produce biofuel eligible to meet RFS obligations. The passage relevant to the case of ethanol currently produced in Peru defines renewable biomass as "planted crops and crop residue harvested from agricultural land cleared or cultivated at any time prior to the enactment of this sentence (e.g. November 2007) that is either actively managed or fallow, and non-forested." The intent of this rule is to ensure that the cultivation and harvest of feedstock used to produce biofuels to meet RFS obligations does not result in massive atmospheric carbon releases which can occur when virgin lands, especially primary forests or high-carbon content peat and grasslands, are cultivated for the first time. The Clean Air Act did not provide specific exclusions for land types like deserts or maximum soil content for organic material. The U.S. EPA, the RFS implementing agency, does not have the latitude to interpret this rule further to exclude

desert lands.

Peru's Consumer Defense and Intellectual Protection Institute (INDECOPI) published Resolution 107-2017/CDB-INDECOPI dated April 25, 2017. The Resolution determines that there is enough evidence to begin a countervailing duty (CVD) investigation on U.S. ethanol exports to Peru. Currently, the investigation is in the process of gathering information from the U.S. government and private sector. See the following report (http://fasintranetapps-gain.fas.usda.gov/Applications/FileDownLoad.aspx?FileID=23411). The hearing for the case will occur on October 5, 2017.

V. Biodiesel/ Renewable Diesel

Production:
While Peru did not produce biodiesel between 2014 and 2016, FAS Lima forecasts that Peru will produce 60 million liters of biodiesel in 2017 and 90 million liters in 2018. This production recovery is due to some decline in imports in 2017 and a further decline in imports in 2018 because antidumping duties assessed to Argentinean imports that will dampen imports from that country and thus total exports with the expectation that the other key suppliers (Indonesia and the EU) will not make up the difference. Industry sources indicate that despite the existence of a biofuel promotion law (Law 28054) that prioritizes domestic biodiesel production and procurement, local fuel distributors will continue to import more affordable Argentine and Indonesian (and even to some extent EU) biodiesel.

Prior to 2014, Peru produced biodiesel using crude palm oil (CPO) as a feedstock. PetroPeru, the entity that regulates biodiesel production and imports, notes that palm diesel quickly solidifies as temperature drops at higher altitudes, clogging fuel filters and damaging truck engines.

Biodiesel (Million Liters)										
Calendar Year	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017 e**	**2018 e**
Beginning Stocks	2	3	2	2	7	12	10	16	16	1
Production	10	32	32	18	10	0	0	0	60	90
Imports	166	162	178	271	304	315	337	335	250	220
Exports	0	0	0	0	0	0	0	0	0	0
Consumption	175	195	210	284	309	317	331	335	325	310
Ending Stocks	3	2	2	7	12	10	16	16	1	1
Balance Check	0	0	0	0	0	0	0	0	0	0
Number of Biorefineries	1	2	2	2	2	2	2	2	2	2
Nameplate Capacity	200	350	350	350	350	350	350	350	350	350

Capacity Use (%)	5%	9%	9%	5%	3%	0%	0%	0%	17%	26%
Feedstock Use (1,000 MT)										
Crude Palm Oil	9	29	29	17	9	0	0	0	55	82
Market Penetration (Million Liters)										
Biodiesel, total use	175	195	210	284	309	317	331	335	325	310
Blend Rate (%)	3.9%	4.0%	3.8%	5.0%	5.2%	5.5%	5.3%	5.1%	4.9%	4.7%
Diesel, total use	4,487	4,842	5,464	5,687	5,943	5,809	6,303	6,514	6,566	6,573

Source: Peruvian Customs, PetroPeru, Private Sector, Global Trade Atlas, FAS Lima Analysis

Peruvian Biodiesel Imports – 3826.00 (Million Liters)				
	2013	**2014**	**2015**	**2016**
World	289	298	330	330
Argentina	212	298	275	194
Netherlands	6	0	0	95
Indonesia	10	0	40	19

Note: Assume all product is B100.
Source: Peruvian Customs Authority as collected and reported by Global Trade Atlas

Peruvian Petroleum Oils and Preparations Containing up to 30 percent Biodiesel Imports – 2710.20 (adjusted to B100-equivalent, Million Liters)				
	2013	**2014**	**2015**	**2016**
World	15.3	16.5	6.8	4.47
U.S.	15.3	16.4	6.8	4.47

Note: The assumed average blend rate for imports is B10.
Source: Peruvian Customs Authority as collected and reported by Global Trade Atlas

Consumption:
Before and after the legal requirement for blending went into effect in 2011, consumption has remained heavily dependent on imports. From 2014 to 2016 all consumption was based on imports. Peru met the B5 requirement in 2012, just one year late, after the blending requirement went into effect. The blend rate has remained quite steady at or just slightly above B5 since 2012, and FAS Lima expects this blend rate remain near the same level for the foreseeable future. FAS Lima forecasts biodiesel consumption at 342 million liters in both 2017 and 2018 given little expected change in fuel pool size

Trade:
PetroPeru imported100 percent of the nation's biodiesel between 2014 and 2016. FAS Lima forecasts

Peru's biodiesel imports in 2018 at 220 million liters, down 12 percent from the 2017 forecast due to the projected increase in domestic production. Biodiesel imports, both 3826.00 (covering blends above B30 to B100) and 2710.20 (petroleum oils containing 1-30% biodiesel), enter Peru duty free. Post believes that product imported under 2710.20, all of which comes from the United States, contains 10% biodiesel. If this is the case and soy oil biodiesel is used (the most common type of U.S. biodiesel), it will perform better in colder temperatures than domestic CPO-based biodiesel blended at B10 or somewhat lower.

Peru imposed temporary anti-dumping and countervailing duties on U.S. biodiesel in December 2009 in response to large shipments that began in December 2008. From that date until the imposition of temporary duties, U.S. shipments totaled 85 million liters, which was equal to half of Peru's consumption in 2009. U.S. shipments stopped immediately following the imposition of these temporary duties, with the exception of two final shipments in March and June of 2010. On August 23, 2010, Peru's INDECOPI published Resolution 151-2010-CFD-INDECOPI imposing permanent countervailing duties and anti-dumping duties on all U.S. shipments of B51-100 of $178 per metric ton and $212 per metric ton, respectively. This was renewed in 2016 after the expiration of the initial counter vailing and anti-dumping duties. U.S. biodiesel shipments to Peru resumed in 2013, under Chapter 2710.20 which avoid the higher duties.

INDECOPI published resolution 011-2016/CDB-INDECOPI on January 25, 2016, establishing countervailing duties on all Argentinean biodiesel. This process was initiated after allegations from Palmas del Espino (Grupo Romero), who halted production at its Tocache plant, claiming unfair competition from biodiesel from Argentina. As a result of these countervailing duties, FAS Lima forecasts that B100 Chapter 38 imports from Argentina will be limited, but access for blends above 30 and including B100 Chapter 38 imports from Indonesia could rise although are not expected to fully offset the drop in shipments from Argentina. The outcome should create an opportunity for Peru biodiesel plants to resume production in 2017. The countervailing duties will be as follows:

Countervailing Duties Against Argentinean Biodiesel

Producer	**$/MT**
LDC Argentina	15.4
Molinos Rio La Plata Renova Vicentin	17.1
Cargill	24.1
Aceitera General Deheza Bunge Argentina T6 Industrial	31.3
Other producers/exporters	208.2

Note: These penalties compare to the price of soy oil biodiesel shipped from Argentina, Rosario (fob, excluding export tax) ranging from $785-865/ton from March through August 2016.
Source: INDECOPI

VI. Advanced Biofuels

There is currently no ongoing research on advanced biofuels in Peru. There is also no policy in place to

support advanced biofuels research.

VII. Notes on Statistical Data

Ethanol production in Peru utilizes the diffusion method, adopted from Brazilian technology. This method consists of shredding harvested sugarcane stalks very thinly, then moving the shreds through thirteen consecutive warmer water (70-80°C) showers. The water from the final shower is allowed to ferment with alcohol producing yeast. Once the fermentation process is completed, the ensuing "liquor" is distilled. Industry sources clarify that this procedure is more efficient than traditional milling. The continuous flow also reduces plant idle time to a minimum. In order for a 350,000 liter per day ethanol plant to operate efficiently, 20 hectares of sugarcane must be processed per day. With an average sugar content of 17 percent, one metric ton of sugarcane produces roughly 170 kilograms of sugar or an amount equivalent to 80 liters of ethanol.

One metric ton of sugarcane also produces some 330 kilograms of bagasse (i.e., fibrous material that remains after sugarcane stalks are crushed to extract their juice). The bagasse, or sugarcane fiber, is used to produce 660 kilograms of steam. Steam-turned turbines generate the processing plant's electricity needs. Ethanol operations utilize about 8 megawatts per month. The excess energy produced (normally 2-4 megawatts) is sold to the national power grid. The following is provides additional information on 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 exports of HS 2207.10 and 2207.20 to Europe is for use as fuel, while exports to other countries are for beverage or other industrial use. All imports of HS 2207.10 and 2207.20 from the U.S. are fuel grade ethanol, while imports from other countries are for use as beverage or other industrial uses. Domestic sea freight charges: Private Sector Sources.

Table: Biodiesel (Million Liters):
Conversion: 1MT of CPO = 1,087 liters of biodiesel