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Uruguay

Bio-Fuels

Uruguayan Biofuels Report

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Report Highlights:

Uruguay's biofuel production is very small. Only 4.5 million liters of biodiesel is estimated for 2008. However, in mid 2008 Uruguay will have its biofuel law in place. This law mandates mixes for diesel (from 2009) and gasoline (from 2015). ANCAP, the national oil company, is the only company investing in medium-size plants with the goal of complying with mandates. In 2009 it will begin ethanol and biodiesel production. Uruguay is expected to focus primarily on its domestic market.

Includes PSD Changes: No
Includes Trade Matrix: No
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I. Situation and Outlook

Uruguay's agricultural sector grew significantly in the past few years and is expected to continue its expansion because of high world commodity prices, the use of modern technology and official policy. The production of biofuels provides an excellent opportunity to add value to its agricultural production. The local processing of biofuels could reduce the total dependence from imported petroleum, and promote a cleaner environment. However, large investment will be needed to produce biofuels. The focus will be primarily on the domestic market.

A biofuel law was passed in October 2007. It mandates for the domestic market that diesel be mixed with 2 percent of biodiesel during 2009-2011 and with 5 percent thereafter. Gasoline will have to be mixed with 5 percent of ethanol beginning 2015; prior to this date blending is voluntary.

There is currently small-scale production of biodiesel which is exclusively used for the domestic market. ANCAP, the national oil company, will implement a program to encourage oilseed production in the area close to Montevideo city and will initially build two small biodiesel plants followed by a medium one that is expected to be in operation by 2010. Most contacts indicate that the 2 percent mix for biodiesel in 2009 may be somewhat optimistic given current production capacity. However, the government is pushing the sector to try to comply with it.

Uruguay does not produce ethanol for fuel. However, in mid 2009, ANCAP is expected to begin production in a new distillery built in a sugar cane area in the northern part of the country. Most contacts indicate that the ethanol mandate will be met, and a voluntary mix could begin before 2015.

Biofuel Policy

A new biofuel law was passed in the last part of 2007 to provide regulations for the development of this new industry that in the past was exclusively administered by ANCAP.

The objective of the law is to promote and regulate biofuel production, commercialization, and use. By mid-2008, the publication of the regulations for its implementation is expected.

Following are the main points of the law:

- Regulates the production, commercialization and use of biofuels (ethanol, biodiesel and blends).
- ANCAP, the national oil company, will no longer have the monopoly of producing and exporting biofuels. Imports and domestic commercialization will continue to be exclusively in the hands of ANCAP.
- Sets the percentages of mixes in diesel and gasoline. In the case of biodiesel, it can be voluntarily mixed at a 2 percent ratio with diesel until the end of 2008, and then it will become compulsory. Starting in 2012, the percentage of biodiesel will increase to 5 percent. In the case of ethanol, its use in gasoline will be voluntary until 2014. After 2015, it will become mandatory to be mixed in a 5 percent ratio.
- It allows small-scale production (4,000 liters/day) of biodiesel for self-consumption.
- Biofuel exports will need previous authorization.
- The Government of Uruguay (GOU) provides tax exemptions to biofuel investment and can exempt some taxes on biofuels.
- It establishes product standards and quality.

The previous biofuel law 17,567, of October 2002, was not operational because its regulations were never published. In 2005, the GOU created the National Biofuels Commission to advise on the framework for state policies related to biofuels production and use. It also established a National Bioethanol Program (Pronabio-E, administered by ANCAP) to coordinate the production of ethanol in different agricultural regions throughout the country. This program focuses primarily on sugarcane for the production of sugar and ethanol.

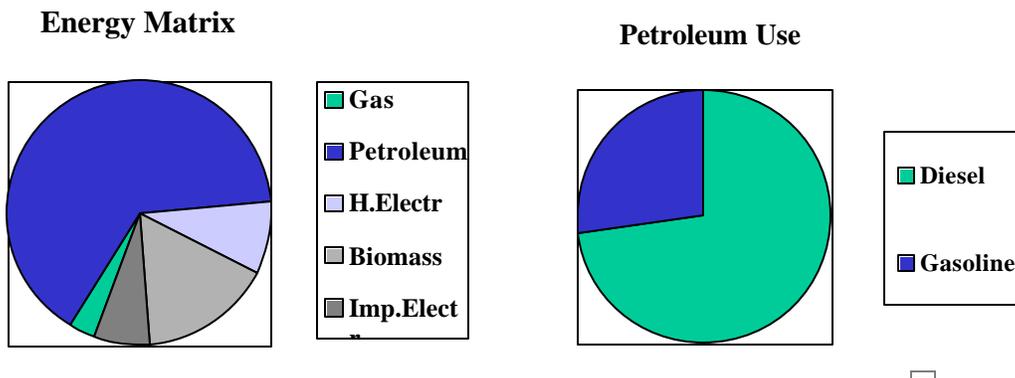
The Energy Market

Over half of Uruguay's energy consumption is oil, followed by biomass (primarily wood) and hydropower. Uruguay imports all its petroleum needs, which exceeds US\$1 billion annually. Annual diesel consumption for vehicles is about 850 million liters, while gasoline is over 300 million liters. When mandated mixes reach 5 percent, Uruguay will need over 16 million liters of ethanol and 45 million liters of biodiesel.

Of the country's total energy demand, transportation accounts for approximately 33 percent, residential use accounts for 28 percent, the industrial sector represents 22 percent, and the agricultural sector 8 percent.

The main objective of biofuel production is to partially replace petroleum used by cars and the transportation sector. However, depending on costs and price differences between petroleum and biofuels, Uruguay could utilize biodiesel to feed its electric power plants in the future.

Uruguayan Energy Matrix and Petroleum Use



Ethanol

ANCAP (which currently produces ethanol not used for fuel) has in progress a Biofuels Program. In early 2006 this company took over the Bella Union sugar mill and is currently building a new alcohol distillery (to begin commercial production during the first half of 2009). PDVSA, the Venezuelan oil company, owns 10 percent of the distillery. The program also includes the expansion of cane plantations to 10,000 hectares, of which over 70 percent have been planted. Official sources indicate that the distillery's capacity will be 22 million liters annually (with an estimated production of 15 million liters in 2009). This volume represents approximately 7 percent of Uruguay's gasoline consumption. ANCAP needs to build the blending and distribution infrastructure to market ethanol fuel at gas stations. Some contacts indicate that this would be possible by late 2009 or 2010.

The ethanol plant which ANCAP currently has operational is in Paysandu, and produces about 1.5 million liters per year. Its capacity is expected to double in the next two years. The main feedstock is sorghum and, to a lesser extent, molasses. Uruguay normally uses 5 million liters of ethanol per year for beverage and industrial use. The plant in Bella Union will use molasses as the feedstock. Approximately 75 percent will be used to produce sugar and the remainder will be used for ethanol.

ANCAP, so far the only player in the ethanol sector, is also promoting private investment to build an ethanol plant in southern Uruguay to complement the one in the north. Contacts indicate that a couple of companies have expressed some interest.

Biodiesel

Uruguay's biodiesel production is estimated at 4.5 million liters in 2008. Of the five largest plants, only four are expected to operate this year. There is an unknown number of small plants which process for their own consumption (with the new law in place, most of these plants will have to be registered). Of the country's total biodiesel output, roughly 60 percent uses tallow as feedstock, and the balance is primarily soybean oil. Most contacts believe that biodiesel in Uruguay will be focused mainly on the local market and to a lesser extent to supply niche export markets. In the past year, the interest in biodiesel plants has faded away. Some plants that were already producing closed and many projects that were waiting for the biofuel law to be enacted, will not likely be completed. The main reason is the high cost of feedstock, which caused producers in many cases to sell the oil directly and/or export the tallow.

The Uruguayan government, through ANCAP, is determined to try to comply with the biodiesel mandate mix of 2 percent by 2009. Therefore, it has established a program by which they will encourage small farmers near Montevideo city (where the largest diesel consumption takes place) to produce sunflower and soybeans. They will help producers who need financial and technical support. The production will be crushed in a private vegetable oil plant in Montevideo and then processed into biodiesel in two small modular plants (8 million liters/year each) which will be put into production at the beginning of 2009. Contacts estimate that these plants will produce about 15 million liters that same year. In the meantime, ANCAP is working on the incorporation of a 50 million liter/year plant which will come on line in 2010. The protein meal produced will replace some imports and be used to feed livestock.

The larger biodiesel producers are working in order to comply with quality norms enacted in 2005. The government will give current processing plants 6-8 months to bring their quality in-line with the new standards established in the law. ANCAP is building a new laboratory to analyze biodiesel.

Most biodiesel is currently being used for rural equipment, irrigation systems, and for bulk transportation or buses. Small producers use it for self-consumption. Blending percentages vary from small levels to 100 percent biodiesel.

Uruguay produces sunflower and soybeans, but little is processed. There is one large oil crusher in the country and currently has excess capacity. The small oil processing industry limits somewhat the growth of a large biodiesel industry, but at the same time, it provides good opportunities for investment. Oilseeds production is forecast to continue to grow because of the adoption of new technology, new land into production, and high world prices. Many believe that there will be a large development of small-scale biodiesel production at the farm level where output will be consumed on site. By doing this, producers can lower fuel costs (as they do not have to pay certain taxes and distribution costs) and will be able to integrate beef and milk production by feeding high-protein meal.

Uruguay is one of the world's largest beef exporters. Its industry is well developed, expanding year after year. It produces abundant tallow, of which part is consumed locally, and the rest is exported. Until now, local biodiesel producers use primarily tallow (which is less expensive than vegetable oil), processed in two plants. The other larger plants use primarily soybeans, sunflower and canola.

Sources indicate that Uruguay's biofuel sector has some disadvantages compared to its neighbor Argentina. Argentina's huge vegetable oil complex and the export logistics of that country make it difficult for Uruguay to compete as it has higher processing costs and small volumes to ship. In addition, Argentina currently has a differential tax in favor of biodiesel exports. However, these same sources believe that Uruguay provides other significant advantages (e.g., strong institutional framework).

Future Feedstock

There are several local institutions involved in research and development. These include the National University, through its science and agricultural schools, the National Agricultural Research Institute, the national oil company, and private universities.

Currently, the feedstocks for ethanol are molasses and sorghum, while tallow, sunflower and soybean are used for biodiesel. However, many contacts are confident that there is promising future in the use of rice husks and straw, wood residues, bagasse, sweet sorghum, switchgrass, elephant grass, and giant miscanthus for ethanol. For biodiesel there is interest expanding the use of sunflower and canola. The biofuel law states that biodiesel has to be produced from feedstock produced domestically, unless there are strong reasons to source from other countries.

Trade

Most contacts indicate that Uruguay, in the medium term, could export small volumes of biodiesel, focusing on niche markets in the region. The local industry does not have the storage infrastructure to load oil tankers for export (to the European Union for example). Therefore, exports will most likely be regional and transported by truck.

Once ethanol production increases, Brazil could also become a good market, as its ethanol output is located in the north. Sourcing product from northern Uruguay to supply the southern part of Brazil could provide strong cost advantages in transportation.

II. Statistical Information

Quantity of Feedstock Use in biofuel Production in MT						
		2004	2005	2006	2007	2008
Biodiesel						
Vegetable Oil						
	Soybean oil		265	620	880	1100
	Rapeseed Oil					
	Palm oil					
	Coconut oil					
	Animal Fats	500	1200	1800	2500	3200
	Recycled Vegetable oil					
	Other					
Ethanol						
	Corn					
	Wheat					
	Sugarcane					
	Sugar beat					
	Rye					
	Molasses					
	Wood					
	Cassava/tubers					

Biofuel production/Consumption/trade (million liters)					
	2004	2005	2006	2007	2008
Biodiesel					
Beginning stocks*					
Production	0.5	1.5	2.5	3.5	4.5
Imports	0	0	0	0	0
Total supply	0.5	1.5	2.5	3.5	4.5
Exports	0	0	0	0	0
Consumption	0.5	1.5	2.5	3.5	4.5
Ending stocks*					

Biofuel production/Consumption/trade (million liters)					
	2004	2005	2006	2007	2008
Ethanol					
Beginning stocks*					
Production					0
Imports					0
Total supply					0
Exports					0
Consumption					0
Ending stocks*					