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Argentina

Bio-Fuels

Argentine Bio-Fuels Report

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Report Highlights:

While Argentina's biofuel industry is in its infancy, Argentina has great potential to become an important producer and exporter of biofuels. Argentina is one of the world's agricultural exporters with abundant feedstocks which can be transformed into biodiesel and ethanol. The Biofuel Law of 2006 regulates the local industry. According to the provisions of this law, in 2010 all gasoline and diesel sold in the domestic market will have to be blended with 5 percent biofuel. The largest ethanol distillery will begin production in 2007 and by mid-2008 there should be at least four large biodiesel plants on line, whose operations will be geared to export markets.

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

Argentina has great potential to produce biofuels. It has abundant natural resources, a very efficient agricultural production sector, and good infrastructure. In 2007, the Argentine Government (GOA) published regulations formulated to implement the biofuel law, which was passed in 2006. This law provides the framework for investment, production and commercialization of biofuels. Biofuels fit well in Argentina's economy, because they can reduce dependence on petroleum, can add value to agricultural production and exports, and can promote a cleaner environment. Based on the current production structure, Argentina has great potential to become an important producer and exporter of biodiesel (using primarily soybean oil), and to a lesser extent, ethanol.

Biofuel Policy

Since 2007, Argentina has a framework that regulates and promotes the production and use of biofuels. The main objectives of this framework are to diversify the supply of energy, to become more environmentally friendly, and to promote the development of rural areas (primarily nontraditional production areas), especially in benefit of small and medium producers.

The law mandates the use of biofuels by 2010, with an obligatory mix of 5 percent of ethanol in gasoline and 5 percent of biodiesel in diesel. The GOA will control investment, production and marketing of biofuels for the domestic market. Companies which produce biofuels will have three alternatives: 1) to produce for the domestic market, taking advantage of various tax incentives; 2) produce for self-consumption, with similar advantages as in 1; and 3) produce for the export market, subject themselves to government controls, and not be eligible to receive the tax incentives.

Although most players indicate that it is very important to have a regulatory framework, they point out that current regulations are cumbersome, unclear, and many aspects of these regulations need to be defined. They would like to see modifications in the regulations which would stimulate investment and take advantage of the current favorable world situation. Local businessmen are optimistic that this will happen, as the GOA gains a better understanding of the importance of biofuels and their value for the national economy.

A summary of Argentina's biofuel law and regulation follows:

On April 2006, the Argentine Congress passed Law 26,093 which regulates and promotes the production and sustainable use of biofuels. In February 2007, the Executive Branch, through Decree 109, published the regulations for implementing the above law. Salient points of the Argentine biofuel law (and regulations) are:

- Chapter I creates incentives for production and use of biofuels in the domestic market with a duration of 15 years (beginning on the date of the enactment of the law). It establishes that the Secretariat of Energy will be the controlling authority, with the exception of oversight of tax breaks which will be under the control of the Ministry of Economy (every year this Ministry will set the maximum overall amount of the fiscal incentives directed to biofuels, and also the percentage of this total which will accrue to individual companies). Some of the responsibilities of the controlling authority in general, are to establish quality levels, security conditions, registration of participating companies, approval of projects which benefit from incentives, and the percentage mix of biodiesel with diesel and ethanol with gasoline for the domestic market. Every year the controlling authority will establish the

volumes of biofuels needed to comply with the law, determine and modify the percentage mixes, set prices of biofuels for the domestic market, establish volumes, terms and conditions for those producing for their own consumption, and approve exports.

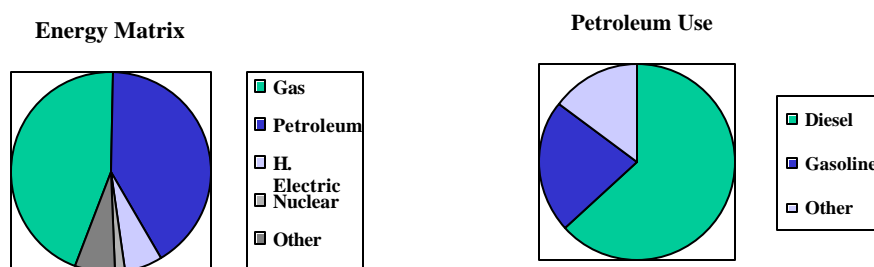
- Chapter II provides details concerning the incentives of the biofuels promotional regime. To be eligible for incentives, companies have to operate in Argentina and be dedicated exclusively to biofuel production, with the majority of the company's equity in the hands of the government (i.e. government at either the national, provincial, or municipal levels), or agricultural producers (and producers' cooperatives). Companies have to operate under the above regulations and specifications, and will be assigned a percentage of the total tax break granted by the GOA (the law gives priority to small and medium enterprises, farmers, and entities which operate in nontraditional production areas). Biofuels governed by this promotional regime will be exempt from three specific taxes on fossil fuels. Also biofuel producers for the domestic market will enjoy tax breaks and other advantages (e.g. exemption from the value added tax, and other taxes). Eventually, Chapter II leaves open the possibility for producers to receive direct subsidies.

The Energy Market

For the generation of energy, Argentina is very dependent on fossil fuels. Argentina continues to be a net gas and oil exporter, but energy analysts emphasize that if the country does not increase investment in this sector rapidly, Argentina could become a net importer of oil and gas in the future. In fact, with four successive years of strong economic recovery, Argentina has had to import diesel oil and fuel oil, with significant increases of these purchases in 2006.

Gas is used primarily by the industrial sector to generate electricity, and at a lesser extent, is used in households. Of the total local demand for petroleum, diesel accounts for the largest percentage. Diesel is used in most of the transport sector, and it also replaces gas in some cases. Gasoline usage is significantly smaller and is used primarily for cars.

Argentine Energy Matrix and Petroleum Use



To comply with the biofuels law which mandates a blending of 5 percent of ethanol in gasoline and 5 percent of biodiesel in diesel for the domestic market by 2010, private

analysts forecast that a volume of about 700 million liters of biodiesel and 250 million liters of ethanol will be needed. Most contacts are pessimistic about the fulfillment of the mandates as almost all current investment projects, in the different stages of development, focus on the export market. The main reasons for this are the official regulations (please refer to previous page) and low fuel prices in the domestic market as result of the GOA price controls and subsidies. To illustrate the higher cost of biofuels for domestic usage, one of the large oil companies recently launched a B1 biodiesel in a limited number of gas stations. The biofuel portion is imported and the cost at the gas station is 27 percent more expensive than regular diesel.

Some people believe that the mandated percentage mixes will be lowered, while others opine that the GOA could oblige exporters to redirect part of their exports into the local market. Some contacts estimate that export volumes of biodiesel and ethanol by 2010 would exceed the volumes necessary to comply with the mandate of the law.

Ethanol

In 2006, there was no ethanol production in Argentina for fuel usage. However, a large ethanol distillery was inaugurated in late 2006 in the province of Tucuman, with the twin objectives of producing ethanol for fuel for export and for the domestic market. The plant will begin operation in 2007 with the new sugar crop, whose harvesting is beginning, with a potential daily production of 350,000 liters per day. It will probably be the only one producing ethanol for biofuel, with an expected output of about 20 million liters in 2007. Molasses and some sugar cane will be the most important feedstocks, while corn will be used in the future after the sugar cane harvest is over. A sugar mill in Salta Province that is expanding its ethanol production capacity (for non fuel usage) is also focused on the export market. There are no plants for biofuel production using corn or sorghum projected to operate this year. There are many proposals, but almost none is in the construction stage.

Argentine ethanol production in 2006 was slightly over 200 million liters. The main producers were 15-16 sugar mills (using sugar cane) in the northwestern part of the country. There is a large local food manufacturer which produces small volumes of ethanol primarily from sorghum. Local beverage manufacturers, and the agricultural chemical and pharmaceutical industries consumed about 60 percent of the output. The balance was exported, but its use was not for biofuel.

Ethanol production capacity until 2006 was about 250 million liters per year. With the addition of the distillery in Tucuman, which will eventually add about 80-100 million liters, and the other in Salta Province, which will expand production by some 30 million liters, the potential capacity will grow to 350-400 million liters. There is interest in small to medium ethanol plants using corn as a feedstock, but investment is delayed primarily because companies providing technology have problems meeting the current strong demand. Last year one of the largest agricultural companies announced that it was going to build a closed operation, to produce ethanol, milk and gas from corn. The infrastructure for cattle is already under construction, while the ethanol plant is projected to commence operation in 3-5 years time. Once the total investment is finished, ethanol output would total about 200 million liters.

Most analysts believe that ethanol production in Argentina will grow significantly, but primarily focus on the export market. The local gasoline market is very small and well supplied with local product, while exports are very encouraging. The main feedstocks will likely be molasses, sugar cane, and corn. Sugar mills indicate that they will fulfill the mandated volume for the domestic biofuel program by 2010. Please note that ethanol

exports are taxed at 5 percent, but at the same time they benefit from a 4.05 percent rebate.

Argentina is the world's second largest corn exporter after the U.S. Production for 2007-2008 is forecast to increase, with exports projected at 17 million tons. There are several farmers groups interested in adding value to their corn production. They consider themselves to be one of the most cost competitive producers in the world and in some cases, their costs of production of ethanol equals or are lower than that from sugar cane. So far, they have formulated investment plans, which will take a number of years to implement.

The local sugar industry is in very good shape, having increased efficiency and production significantly in the past 3-4 years. In 2007, about 800,000 tons of sugar will be exported in order to maintain equilibrium in the domestic market. Many in the industry believe this situation presents a very good opportunity to divert part of the cane from sugar into ethanol production, providing mills more flexibility in their production mix, and increasing overall operational efficiency. Presently, returns are quite comparable, as world ethanol prices have increased significantly in the past months. Sugar cane production has been growing considerably in the past few years and it is expected to continue to do so at least a few more years. More sugar cane supply will likely put pressure on the market, making sugar mills want to expand their ethanol production.

From 1980-1989, there was a gasohol program in northwestern Argentina. This program was promoted by the sugar cane producing provinces, but the GOA lost interest and the program was discontinued. Many of the distilleries, which are currently operating, have obsolescent technology. Sugar mills wanting to expand their ethanol production capacity will have to wait, as there is a significant delay to supply technology and equipment because of Brazil's high demand.

Biodiesel

For 2007, biodiesel production is estimated at 200 million liters. In the last quarter of 2007 two large local investments are expected to come to fruition. Production in 2008 is forecast to surpass 800 million liters once these plants, plus two additional new ones, are operating at full capacity. The production of these companies is aimed exclusively at the export market.

As in the case of ethanol, large investments are geared toward exports. The local market with its mandatory biodiesel mix by 2010 is not very attractive since it is highly regulated and many of the key features (quotas per company, administered prices to sell the product, etc.) have yet to be defined. Exports have fewer regulations and have a strong foreign demand. There are over 20 announced biodiesel projects. If they come on line, production could exceed 2 billion liters by 2010.

The first biodiesel production in Argentina began just a few years ago as a cottage industry. Some rural schools, municipalities, cooperatives and even some growers began producing for self-consumption. However, in the past months, the market has gained momentum and a series of large investments have been announced (many are still under analysis and a few are being carried out). Apart from the two large plants that will be inaugurated at the end of 2007, both of them in hands of joint ventures between local and international companies, there will be two more inaugurated in early 2008. In all cases, they are vegetable oil crushers with large processing capacity and excellent logistics. All four are located near

Rosario, the area with the largest concentration of oil crushing plants in the world. The feedstock will be almost exclusively soybean oil.

Argentina is the world's third largest soybean producer and the world's top soybean meal and oil exporter. Its current crushing capacity is roughly 150,000 tons a day. Most local crushers see the production of biodiesel as an additional product which fits naturally in their global business. It provides them new opportunities for diversifying products and markets.

One component which makes biodiesel exports very attractive is the fact that soybean meal and oil exports are taxed with 24.5 percent, while biodiesel exports are only taxed with 5 percent, and benefit from a 2.5 percent rebate. Many contacts believe this situation will change as exports of biodiesel increase.

Private sources indicate that the cost of biodiesel in Argentina is a bit over US\$0.50 per liter. With current subsidized diesel prices in Argentina, this cost is high for the domestic market, but very competitive in the world market.

Future Feedstock

It is clear that Argentina will produce, in the short and medium term, ethanol from molasses, sugar cane and corn, and biodiesel primarily from soybean oil. There are several small plants which are currently using recycled vegetable oil, sunflower, and rapeseed oil for biodiesel. A Canadian company has recently announced a large investment to produce bio oil from sawdust and other agricultural residues in Corrientes Province. The bio oil can be used to generate electricity and also lends itself to various industrial uses. Sugar mills are improving efficiency to use their bagasse to produce energy for their own mills and to sell to surrounding towns.

There are many programs focused on developing new technologies which would rely on different feedstocks. Public universities, official entities and the private sector are all working on different projects. Some of these programs are based on the use of jatropha, algae, and castor oil plant. There is also research on feedstock which can be produced in areas not suited for agriculture and which do not compete with food productions.

The biofuel law mentions that the control authority will encourage cooperative agreements between the public and private sectors to promote and encourage the development of production technology, and the use of biofuels. In late 2006, the GOA created the Forum of Energy Feedstock to coordinate research and development projects together with the private sector. This forum has recently begun operation.

Up to now, the use of agricultural feedstocks in biofuel production has not had an impact on the local food/feed market. The main reasons for this is that biofuel production is still nascent and the largest demand for feedstock will most likely be soybean oil, which is one of the country's most important export products. Informed Argentines are aware of the potential for higher world commodity and food prices as result of an increase in biofuels. However, since Argentina is one of the world's major agricultural exporters, informed Argentines generally view the development of biofuels as a positive phenomenon.

Trade

Ethanol imports are assessed a 20 percent duty while biodiesel imports are assessed 14 percent. In both cases, there are neither quotas nor limitations to import.

Biodiesel exports are taxed at 5 percent and benefit from an export rebate of 2.5 percent. Ethanol exports are also taxed at 5 percent, but receive a 4.05 percent rebate. There are no restrictions on exports.

Most people in the sector believe that the European Union (EU) will be the best market for Argentina's biodiesel since the EU has to meet mandatory biofuel mixes which will probably not be covered by local production. Other exporters will focus on the U.S. market, primarily due to the subsidies blenders enjoy in that market. Argentine production could be used in the U.S. market or for re-export to the EU.

In a number of cases, the suppliers of the processing technology sign agreements with their clients by which they will market a large portion of the production of the new plant. Private analysts forecast Argentine biodiesel exports to be greater than 2 billion liters by 2010. Ethanol for biofuel will be exported primarily to Chile and Southeast Asia, which is a large importing region.

Statistical Information

Quantity of Feedstock Use in biofuel Production in MT						
		2003	2004	2005	2006	2007
Biodiesel						
Vegetable Oil						
	Soybean oil			22000	44000	176000
	Rapeseed Oil					
	Palm oil					
	Coconut oil					
	Animal Fats					
	Recycled Vegetable oil			150	250	250
	Other					
Ethanol						
	Corn					
	Wheat					
	Sugarcane					
	Sugar beat					
	Rye					
	Molasses					77000
	Wood					
	Cassava/tubers					

Biofuel production/Consumption/trade (million liters)					
	2003	2004	2005	2006	2007
Biodiesel					
Beginning stocks*					
Production			25	50	200
Imports			0	0	0.1
Total supply			25	25	200
Exports			0	0.3	150
Consumption			25	50	50
Ending stocks*					

Biofuel production/Consumption/trade (million liters)					
	2003	2004	2005	2006	2007
Ethanol					
Beginning stocks*					
Production					20
Imports					0
Total supply					20
Exports					20
Consumption					0
Ending stocks*					