

# THE STATE OF THE ARGENTINE BIODIESEL INDUSTRY

## First Quarter 2009 report:

*Weak markets, increasing trade conflicts and protectionism,  
and proposed solutions for Argentina*

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**Este documento también puede verse en español bajo el título, *El estado de la industria argentina de biodiesel: Reporte del primer trimestre 2009*, en [www.argentinarenovables.org](http://www.argentinarenovables.org)**

## Summary

- Argentina is now one of the five largest biodiesel producers in the world and is among the two largest exporters (*page 3*).
- The Argentine biodiesel industry is currently operating at half of its installed capacity (*page 4*).
- Since October 2008 the Argentine biodiesel industry has suffered a sharp decline in demand coupled with softening prices that largely follow the price of fossil fuels (*page 6*).
- Argentina is looking for the European Union to take into account studies that show that soy-based biodiesel reduces to greenhouse gas emissions far more than estimated by the EU (*page 8*).
- The European Commission has put into place a series of additional tariffs that increase the cost of American biodiesel in Europe, which opens a window of opportunity for the Argentine industry (*page 12*).
- Argentine biodiesel is made from a byproduct of soy: its oil. From each soybean that is crushed, at best 18% is converted into soy oil and at least 82% of the bean is converted into soy meal to make food. *The more soy that is harvested, the greater the supply of food. The use of soy oil to make biodiesel does not result in greater world hunger.*
- In the last two years alone, Argentina has spent almost US\$1 billion importing diesel; this hard currency could be kept in the country by replacing diesel for domestically-made biodiesel (*page 18*).
- The Argentine Renewable Energies Chamber proposes the following to launch the domestic biodiesel market:
  - Allow biodiesel producers (currently only able to export production) to supply the domestic market for an initial 18-month period (*page 19*);
  - Advance the start date of the domestic B5 requirement by six months to keep the existing export-focused industry operational in these difficult times (*page 20*);
  - Creation of a Biodiesel Stabilization Fund to allow for an orderly development of the domestic market (*page 20*).

## Introduction

In our October 2008 study, *The State of the Argentine Biodiesel Industry* (published by the Chamber and available free of charge at [www.ArgentinaRenovables.org](http://www.ArgentinaRenovables.org)), we outlined our intention to report periodically on the industry's evolution.

This brief report analyzes market events since then and through the first quarter 2009; it addresses the decline of the global economy and how this has affected biodiesel demand and prices in Argentina.

***Argentina finished 2008 among the five largest biodiesel producers in the world<sup>1</sup> and among the two largest exporters.<sup>2</sup> Total industry production reached 1.07 million tons in 2008, with sales in excess of US\$1.3 billion.*** Our estimates made last October of total 2008 production of 1.2 million tons was not met because beginning that month (see Graph 1, below) a rapid decline in demand and pricing took effect. Some of the reasons behind this can be explained away with the softening of global economy and concurrent falling commodity prices, as well as by the decisions of the European Union that have taken measures to protect their internal markets -- but which increasingly appear headed towards protectionism.

This topic merits special attention: Argentina's advantage in biodiesel production lies in our abundance of feedstock and a large and sophisticated crushing complex. Biodiesel export taxes (known locally as "retenciones") were *quadrupled* in 2008 from 5% to 20%, adding over US\$200 million to the government's coffers. However, the European Union continues to argue that Argentine biodiesel production is sold at below cost, an accusation lacking in merit as it is an industry that has no incentives, no direct subsidies, a weak legal framework and virtually no access to bank financing or venture capital, but rather a heavy tax burden.<sup>3</sup>

Additionally, in our October 2008 study we concluded that the most efficient way to develop the market was to defer the beginning of the E5 ethanol mandate in order to focus on biodiesel, where the industry has greater economic advantages and greater supply needs. The first part has come to fruition and the domestic ethanol mandate has been pushed back by six months to mid-2010 to allow the sugar cane industry to complete construction of its ethanol refineries.

We are placing greater focus on an early commencement of the domestic B5 biodiesel mandate for a variety of reasons: installed capacity is already double that required for internal market demand; the industry – currently only allowed to export – is operating at only half its capacity. Given this weakness, production (and jobs) should be focused on allowing these plants to temporarily service the local market. Additionally, the country is a net importer of diesel,

<sup>1</sup> We await official confirmation from other countries regarding their production levels, but we expect that the number one spot will be retained by Germany, followed by the United States, France and then Argentina.

<sup>2</sup> The entirety of Argentina's 1.07 million ton production was exported in 2008. We await figures from Germany to confirm if Argentina is the largest or second-largest exporter of biodiesel.

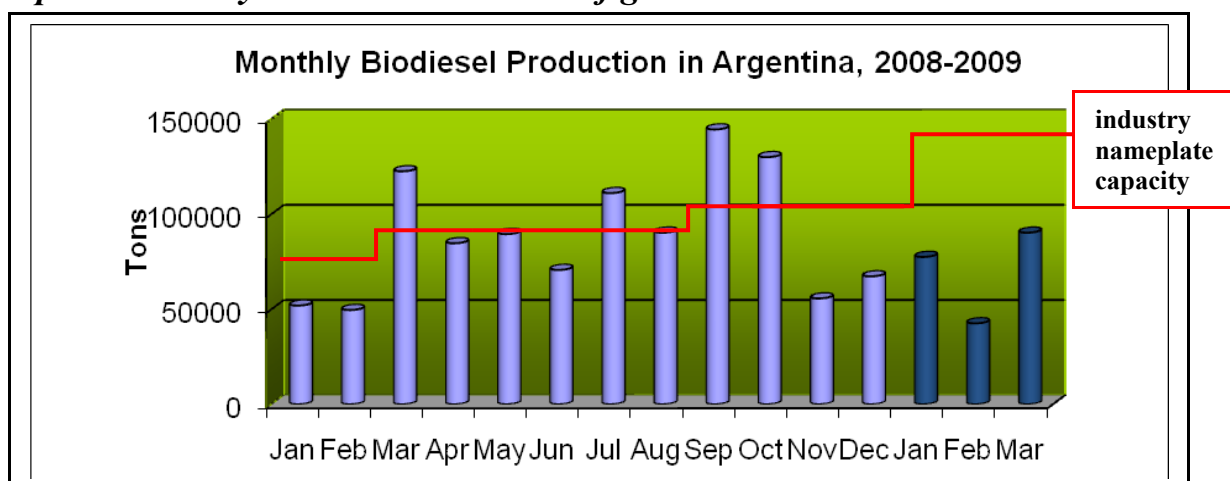
<sup>3</sup> Data from the Argentine government's tax agency, AFIP (*Administración Federal de Ingresos Públicos*/Federal Revenue Administration, [www.afip.gov.ar](http://www.afip.gov.ar)) shows that biodiesel incurs an Export Tax of 20% with a subsequent reimbursement of 2.5%. The specific page is: <http://www.afip.gov.ar/aduana/arancelIntegrado/arancelVerConsulta.asp>. Additionally, biofuels law No. 26.093 offers neither tax incentives nor subsidies for biodiesel that is exported. The full text of the law and its regulations can be found on our website (albeit in Spanish).

annually spending hundreds of millions of dollars on imports which could be replaced by locally-produced biodiesel: in the last two year alone, for example, Argentina spent almost US\$1 billion importing fossil fuel diesel, and this hard currency should be kept within the country to help develop a strong domestic market. And given a current weak export market for biodiesel, advancing the start of the B5 mandate (currently set for January 1<sup>st</sup>, 2010) by six months to July 2009 would allow plants to operate optimally by selling into the domestic market.

## Biodiesel Production in Recent Months

Graph 1 below shows the volatility of a nascent industry which has not yet established consistent production levels. It shows the success that was 2008, when during some months production even exceeded installed capacity (see red line). However, in the last quarter demand dropped dramatically. Complicating matters further, in early 2009 the country's largest plant<sup>4</sup> became operational, adding 300,000 tons annual capacity to the industry into a weak market: the Argentine biodiesel industry is now operating at half of its capacity.

**Graph 1: Monthly Biodiesel Production figures**



Sources: Argentine Federal Revenue Administration and Argentine Renewable Energies Chamber

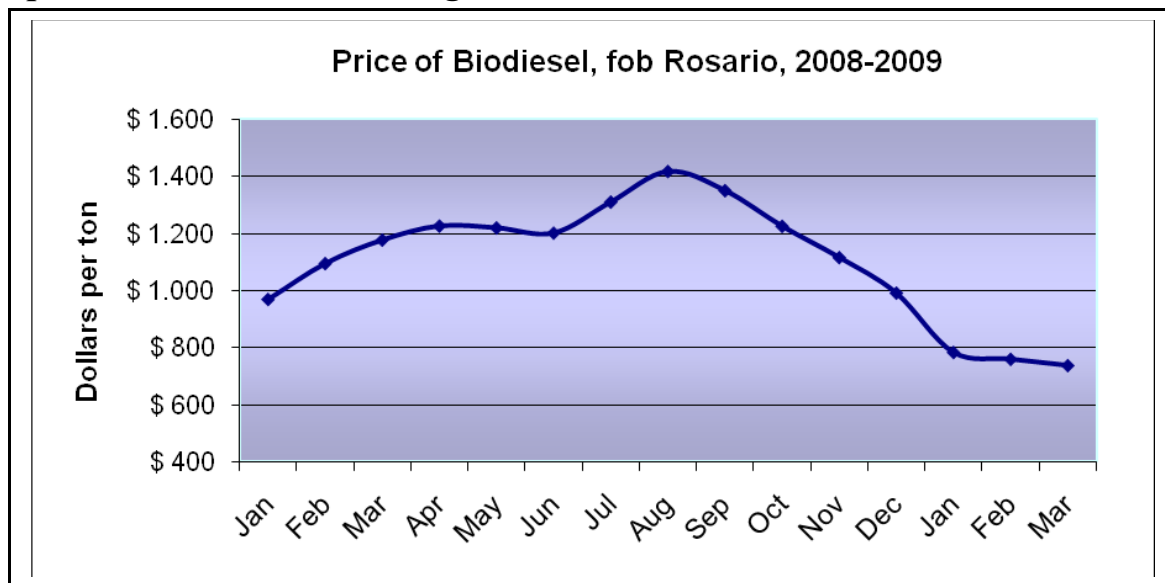
Concurrently, the price of biodiesel (fob Rosario, Santa Fe province) also fluctuated considerably with a marked downward trend beginning in September 2008 (see Graph 2, below). In January 2008, for example, 52,000 tons of biodiesel were exported at an average price of US\$969 a ton. In August 2008 the average price peaked at US\$1,417/ton. However, after this a clear decline is visible, ending the year at US\$991/ton in December 2008.

The trend continues into 2009 with an average price of US\$758/ton in January, US\$745/tons in February, and US\$737/ton in March – although it is interesting to note that that price ranges obtained in recent months have broadened. In February 2009, for example, biodiesel sales were closed at prices as high as US\$1,151/ton and as low as US\$607/ton. These reflects the uncertainty in the marketplace and the effects of earlier contracts at higher prices as well as lower ones that merely serve to move inventory.

<sup>4</sup> Owned and operated by LDC Commodities (Dreyfus), in General Lagos, Santa Fe province

During the first quarter of 2009, then, the industry continues to suffer the consequences of a weak global market and a double blow to the sector: production levels for the quarter were 53% of installed capacity sold at prices that do not cover costs, especially after the 20% export tax. To summarize, the industry is operating at half its capacity and at a loss. If this is not addressed quickly and the market remains weak it can have grave consequences for the industry, job market and investment returns.

**Graph 2: Biodiesel Price Changes**



Sources: Argentine Federal Revenue Administration and Argentine Renewable Energies Chamber

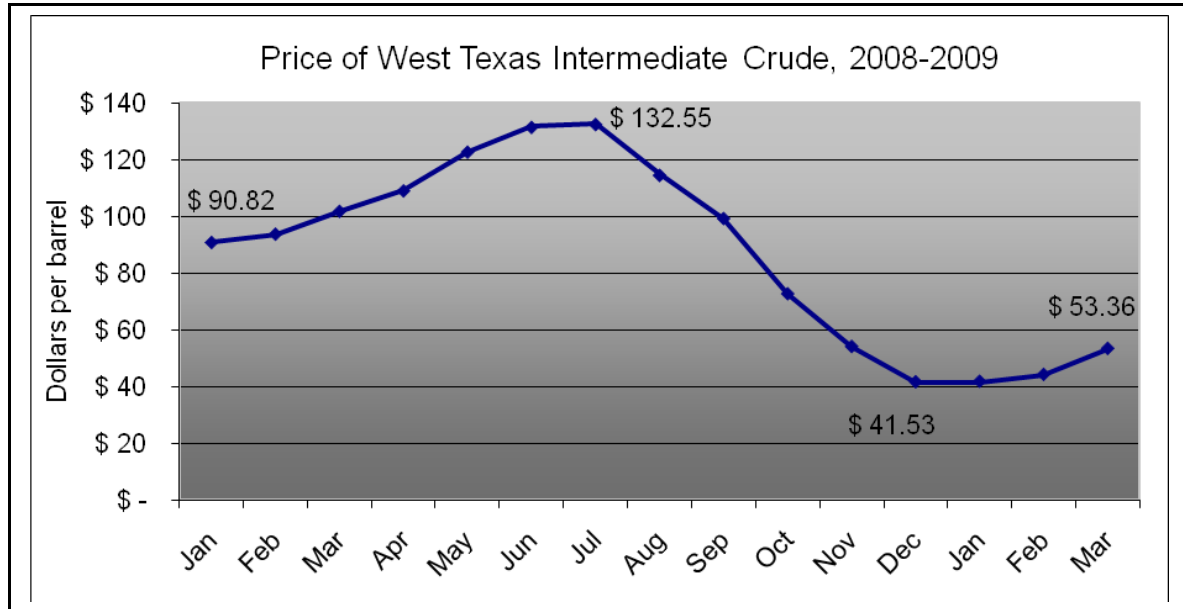
## Reasons for Market Softness

The variables affecting these events are many and varied. We cannot discard that the industry sold almost exclusively to Europe and thus concentrated its geographic risk. In 2008, for example, over 80% of Argentine biodiesel was sold to Europe. And because of the EU's recent protectionist moves, Argentina has quickly had to move to reduce that risk and has begun to do so successfully, proving its ability to maneuver effectively in difficult times: in February 2009 sales to Europe had fallen to 54% of the total, with the rest exported primarily to the United States. But the industry has also recently managed to break into new markets such as Brazil, Chile, Peru and Australia, and opportunities in Asia are on the rise: in June of this year our chamber has been invited to China to speak at an industry event which we expect will begin to open doors in that region as well.

Additionally, the much-discussed global economic crisis has had its effects on the industry; we will not dwell on this as it is amply addressed regularly in newspapers around the world. But one clear indicator is a rapid fall in the price of crude oil beginning in the second half of 2008. *West Texas Intermediate Crude*, used as a benchmark in the United States, began 2008 at US\$90.82 a barrel in January, rising steadily until reaching a peak of US\$132.55/barrel in July.

From there on a quick decline took place, ending the year at US\$41.53/barrel, a 68% drop from its high in five months (see Graph 3, below).

**Graph 3: Crude Oil Prices**

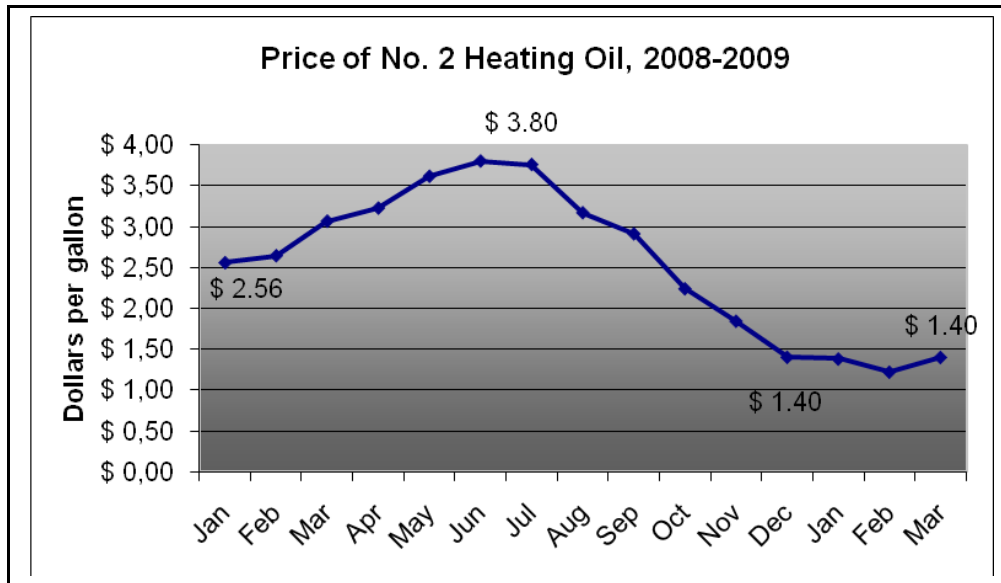


Source: US Department of Energy

The drop in crude oil resulted in the immediate fall of all of its refined products at the retail level, and this began to affect the biodiesel industry. This was even truer of the biodiesel industries of mature economies with large biodiesel industries since they, unlike Argentina, typically operate with government subsidies and tax incentives without which they often not commercially viable.

The drop in fossil fuels can be best appreciated if we compare biodiesel to its closest kin in the fossil fuel industry, *Number Two Heating Oil*. The following graph summarizes how pricing for this product also fell sharply in the second half of 2008 (see Graph 4, below), falling from a peak of US\$3.80 a gallon in June to US\$1.40/gallon by December. This is a 63% drop in less than a year, hard for any industry to withstand.

**Graph 4: Heating Oil #2 Prices**



Source: US Department of Energy

## International Trade Conflicts in the Biodiesel Industry

To date, Argentine biodiesel is exported in its entirety and we have met with success, becoming one of the largest exporters in the world. Thus as an industry it is important that we take on a leadership role also help develop the vision and direction for the industry on a global basis. This is why our chamber recently joined the Global Renewable Fuels Alliance, a recently established industry association based in Toronto, Canada, which already represents over 60% of the world's biofuels production with 30 countries represented. From here Argentina should be able to play a significant role in the direction of an industry in which it is already a major player.

During 2008, some Argentine biodiesel was acquired by industry traders -- typically in the United States -- and shipped to a US port, where they found ways to have it qualify for US tax subsidies (reimbursements of US\$1/gallon or US\$300/ton), then re-exporting the biodiesel to Europe. This process was dubbed "splash & dash": a shipment of non-US biodiesel arrived at a US port, a dash of American fuel was added and the entire shipment then qualified for the US\$300/ton subsidy. *It is important to note that this advantage was not created by the non-US biodiesel producer nor were they the primary beneficiaries.* This was a trading opportunity enjoyed by traders, and the European Union recently took matters into their own hands seeking formal satisfaction through the World Trade Organization and by establishing penalties to specific US companies accused of being involved in *splash & dash* (see Chart 3, page 13).

At the end of 2008 the US government finally closed this loophole, a necessary move for the efficient development of free trade and more efficient markets. However, this decision arrived somewhat late, as the European biodiesel industry – the largest in the world with an installed capacity of 16 million tons/year<sup>5</sup> distributed throughout 241 plants in Europe.<sup>6</sup> As a

<sup>5</sup> Data from the European Biodiesel Board, [www.ebb-eu.org](http://www.ebb-eu.org).

<sup>6</sup> This represents an average plant size of some 66,000 tons/year. As a comparison, Argentina has an installed capacity of 1.6 million tons in 18 plants, which results in an average size of 88,000 tons/year per plant.

consequence, the EU began a twofold process to protect its industry: legal procedures through the WTO accusing the United States of biodiesel dumping (see page 12), and legislated calculations of greenhouse gas reductions for soy-based biodiesel used by its two largest competitors, the United States and Argentina.

### ***The European Union's Greenhouse Gas Reduction Definitions for Soy-based Biodiesel***

Given the market penetration of soy-based biodiesel coming primarily from Argentina and the United States (and in the case of this last country, due to subsidies that should not have been exported), Germany, which has the biggest installed capacity in the world at 5.3 million tons/year,<sup>7</sup> pushed for the EU to take measures to restrict the entry of biodiesel made with soy oil, making the case that greenhouse gas (GHG) reductions from soy-based biodiesel were inadequate.

Section 2 of article 15 of the *Climate-energy Legislative Package* of the European Union dated December 11, 2008, says in summary that for a biofuel to be accepted into the European market it should have a minimum reduction of GHG emissions of at least 35% when compared to fossil fuels, with this floor rising to 50% in 2017 and 60% in later years.

Since its inception, our chamber has defended the need to establish a framework that leads to a cleaner and sustainable planet, and in this regard applaud the EU's initiative as long as it doesn't become politicized. However, Annex IV of the above-mentioned document details the specifics and rules to calculate GHG reductions based on feedstock, using as its benchmark the fossil fuel equivalent (in the case of ethanol, gasoline is used; in the case of biodiesel, diesel). The default percentage for soy-based biodiesel was established at 31% (that is, below the minimum of 35%). As a comparison, palm oil GHG reductions were established at 56%<sup>8</sup> by the EU, sunflower seed oil at 51%, rapeseed (used by EU) at 38%, and tallow at 83%, among others. Chart 1 below includes a summary of their conclusions.

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<sup>7</sup> Data from the European Biodiesel Board, [www.ebb-eu.org](http://www.ebb-eu.org)

<sup>8</sup> in the case of palm biodiesel (Palm Methyl Ester), GHG reductions were established at 19% if no methodology was specified. However, if the process included methane capture at the plant, the reduction level rises to 56%, thus establishing a significant incentive to efficiently use energy derived from this type of biodiesel.

**Chart 1: Percentage Reductions in GHG for biofuels according to Feedstock: the European Proposal**

Feedstock Used <sup>9</sup>	% Reduction in GHG
Biodiesel from animal fat (TME) (Paraguay, Uruguay, USA)	83%
Ethanol from sugar cane (Brazil)	71%
Biodiesel from palm (PME) (Malaysia, Indonesia, Colombia)	56%
Biodiesel from sunflower	51%
Biodiesel from rapeseed (RME) (Europe)	38%
<b>MINIMUM REQUIRED TO ENTER THE EUROPEAN MARKET:</b>	<b>35%</b>
Biodiesel from soy (SME) ( <b>Argentina</b> , USA, Brazil)	31%

Source: Council of the European Union document 17086/08, dated Dec. 11, 2008

Our chamber, working with other industry institutions and using studies by the Argentine Nacional Institute of Agronomy Technology (“*Instituto Nacional de Tecnología Agropecuaria*”, or INTA), has provided a significant number of data and studies that refute the conclusions reached by the EU. This resulted in a letter from the Argentine ambassador to the EU in Brussels to the EU informing them that studies completed in Argentina<sup>10</sup> show that the reduction in GHG emissions of soy-based biodiesel are actually between 73.6% y 74.9%, thanks in part to the usage of no-till farming commonly practiced in Argentina and not contemplated in the European analysis. These figures, far more favorable to Argentina, would place soy-biodiesel in an excellent position compared to other oilseeds. And further confirming data from INTA, a study jointly commissioned by the US Department of Energy and Department of Agriculture published in May 1998 (before this issue was remotely political) found that GHG emission reductions from soy-based biodiesel were 78.4%.<sup>11</sup>

However, these studies were rejected by the EU, arguing that they arrived too late to be considered and that the Union had passed on to the legislative stage.

In order for soy-based biodiesel to exceed the 35% floor and be allowed to enter the European market, Germany has proposed a certification process of biodiesel production on a case-by-case basis, where the entire chain of sowing, harvesting, crushing, production and transportation of soy-biodiesel be analyzed, thus allowing for Argentine biodiesel to enter Europe in each case on an exception basis, presumably after demonstrating in each instance that GHG reductions are greater than 35%. Further, the German government has already set aside funds to help in the creation of German consultancies specialized in this area, some of which are already in Argentina seeking clients. We believe that these are tricky waters that need to be navigated with care. If Argentina accepts these terms, it is not unreasonable to assume that before long the next logical step will be for Europe to require certification of *all* agricultural crops without which markets will be closed. Clearly, Argentina needs to further diversify its agricultural customer base around the world, and in the specific case of biodiesel, the industry is already seeking to

<sup>9</sup> TME: Tallow Methyl Esther; RME: Rapeseed Methyl Esther; SME: Soy Methyl Esther; PME: Palm Methyl Esther.

<sup>10</sup> *Energy Production Study of Crops with Biodiesel Potential in Argentina*, Lidia Donato, Ignacio Huerga and Jorge Hilbert (that last is the Coordinator of the National Bioenergy Program at INTA); also *INTA IIR-BC-INF-05-08, Emissions Calculations Based on EU Annexes*, Jorge Hilbert and Juan Jose Muzio.

<sup>11</sup> *Life Cycle Inventory of Biodiesel and Petroleum Diesel for Use in an Urban Bus*, prepared for the National Renewable Energy Laboratory, May 1998, <http://www.nrel.gov/docs/legosti/fy98/24089.pdf>

establish new contacts in other markets that even have higher growth rates as a preventive measure. While undoubtedly Europe will always remain an important market for Argentine biodiesel, here we have an opportunity to find ways for Argentina and our region to satisfy local needs and to take leadership of markets that operate with increasing amounts of renewable energies.

#### **An Opportunity for some Argentine Biodiesel Plants**

The text of the EU paper includes an opportunity for some biodiesel plants in Argentina that have been operational for some time. For those that were operating in January 2008, many of the new requirements from the EU do not commence until April 1<sup>st</sup>, 2013. Interestingly, biodiesel plants such as those owned by Vicentin SA, Biomadero SA, Soyenergy SA, AOMSA, Diferoil SA (part of Integrated Biodiesel Industries, Inc.), Energía Sanluisenseña Refinería Argentina SA and Pitey SA may be able to take advantage of this loophole. The installed capacity of these plants adds up to 262,000 tons/year and it can be argued that they may have greater commercial value in the medium term because of their longevity.

While in difficult times the desire to install protectionist measures may be politically valuable, economic theory and practice shows it has been counterproductive. The measure taken by the EU against soy-based biodiesel is similarly unhelpful to all parties. According to a Dutch study published in October 2008,<sup>12</sup> fully one-third of Europe's biodiesel production uses soy and palm oil as feedstock (see Graph 5, below). Of the total 6,813 tons of feedstock used by the EU to make biodiesel in 2007, 26% came from soy oil (1,761 tons). Almost half of this soy oil was sourced in Latin America, principally Brazil and Argentina.

Because European rapeseed is close to reaching its limits as a crop, the elimination of this feedstock will only worsen Europe's ability to produce biodiesel. Also, a study by the US Department of Agriculture<sup>13</sup> shows that in the coming years it will be difficult for Europe to reduce its palm and soy usage for biodiesel production.

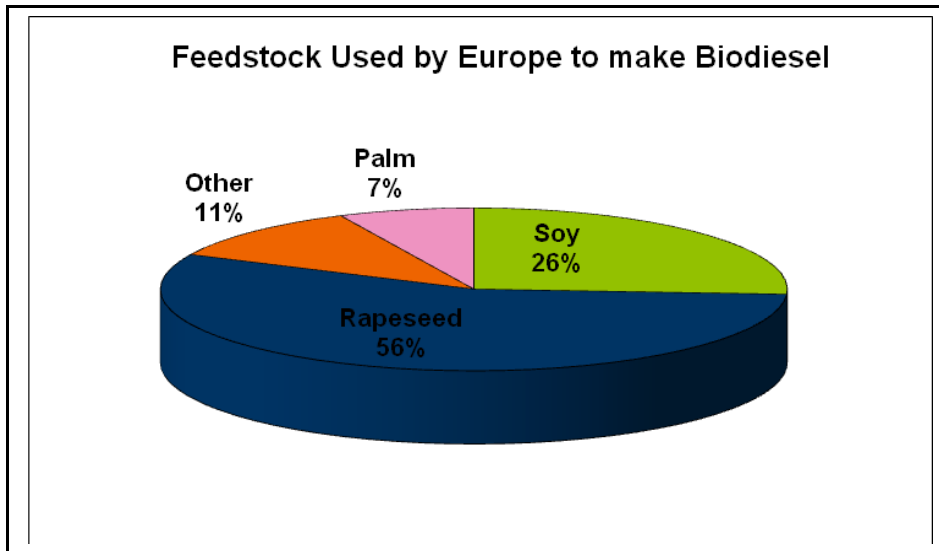
Yet this complication is just the beginning of the adverse effects for Europe. The EU's restrictions on soy oil as feedstock for biodiesel could affect an industry that is far more important to Europe than biodiesel: the animal food sector. On one hand, Europe is a key market for soy in Latin America. Fully 25% of Argentina's soy exports (this figure encompasses a figure that combines grains, meal and oil into one equivalent) went to the 27 countries that comprise the European Union, while in Brazil the figure is even more significant: in 2007, 32% of its soy harvest ended up in the EU-27.

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<sup>12</sup> *Soy consumption for feed and fuel in the European Union*, Profundo Economic Research, October 28, 2008, The Netherlands

<sup>13</sup> USDA Foreign Agricultural Service, May 2008 study

**Graph 5: Feedstock Used by Europe for Biodiesel Production**



Source: Profundo Economic Research, Netherlands

But the other side of the coin is critical to understanding the danger that their restrictions represent to EU-27. As seen on Chart 2 below, in 2007 European livestock consumed 35.8 million tons of soymeal. Over 87% of this soy came from Brazil and Argentina alone. The Dutch study assumes an average yield of 2.61 tons/hectare<sup>14</sup>, which translates into the need to use almost five million hectares of Brazilian soil and more than 4.2 million hectares (about 10.5 million acres) of Argentine soil to feed European livestock.

In the case of Argentina, as highlighted by the study, this means that *each European inhabitant needs 86 square meters (almost 1,000 sq. ft.) of Argentine soil to feed their livestock.*

**Chart 2: Importance of Argentine Soil and Soy to the European market**

Country of Origin	Soymeal ('000 tons)	%	Hectares Needed	M <sup>2</sup> required per European
Brazil	16,591	46%	4,995,608	101
<b>Argentina</b>	<b>14,854</b>	<b>41%</b>	<b>4,240,559</b>	<b>86</b>
USA	2,726	8%	781,256	16
Paraguay	759	2%	263,553	5
Canada	601	2%	182,290	4
Uruguay	68	0%	26,319	1
Other countries	234	1%	76,791	2
<b>Totals</b>	<b>35,834</b>	<b>100%</b>	<b>10,566,377</b>	<b>213</b>

Source: Profundo Economic Research, Netherlands

One possible conclusion to be reached from this analysis is a Europe that benefits from keeping Argentina (and Latin America generally) from developing value-added industries such as

<sup>14</sup> Although Argentine soil has noticeably higher yields.

biodiesel with the economic growth, developmental opportunities and new job sources it entails by closing its doors to all products except raw commodities. But this same Europe has no problem in making use of an area equivalent to more than the size of Switzerland to feed its livestock.

Commercial ties between Europe and Argentina are solid and have been mutually beneficial for many years. We are confident that this matter will also be resolved without major *contretemps* and our industry, thanks to diplomatic channels, will continue to grow in a manner satisfactory to all parties. The contrary is a loss for all concerned: Argentine products such as biodiesel that will be forced to find new and more rapidly growing markets and a potential increase in the cost of food for European livestock as the byproducts of soy cannot be adequately developed in Argentina, while Europe becomes ever more dependent on Latin America for food.

### ***Europe Punishes United States Biodiesel Industry for Dumping***

After a prolonged investigation about US biodiesel producers and traders, as well as its federal and individual state biofuels production incentives, the European Commission recently announced specific measures to offset the adverse impact on the European biodiesel industry from US dumping. The document in question, *Commission Regulation (EC) 194/2009* dated March 11, 2009<sup>15</sup> imposes a differential tariff on biodiesel imports coming from the United States during an initial period of four months on a list of US companies.

To ensure fairness, the Commission invited American firms to participate in this analysis, asking them to share their data on production, sales, blending, etc., during a specific period. They obtained a high percentage of participation: over 50 companies – which represent 80% of biodiesel imported into the EU – identified themselves and delivered the requested information. The study revealed that due to practices such as “splash & dash”, the illicit market share of US biodiesel in Europe rose from 0.4% in 2005 to 17.2% in 2008, and that the differential between US export prices and European ex-works prices varied between 18.9% and 33.0%; therefore, the European Commission would impose additional tariffs to US biodiesel to bring equilibrium back to these differentials.

The Published report established three broad categories of temporary tariffs (see Chart 3, below):

- Specific tariffs for individual companies (ranging from € 211.2 to € 237 per ton);
- Another tariff for all other companies that participated in the study of €219.4 per ton; and
- Finally, a higher tariff for all other US companies of € 237 per ton.

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<sup>15</sup> The complete text of this European regulation can be found on our website, [www.argentinarenovables.org](http://www.argentinarenovables.org).

**Chart 3: U.S. Companies Listed by European Union for Biodiesel Dumping**

Company	Additional Tariff, in Euros/ton
Archer Daniels Midland Company	237,0
Imperium Renewables, Inc.	216,8
Cargill, Inc.	213,8
Green Earth Fuels of Houston, LLC	213,4
Peter Cremer North America, LP	211,2
Vinmar Overseas Limited	211,2
World Energy Alternatives, LLC	211,2
Remaining companies in the study	219,4
All other US companies	237,0

Source: European Commission Regulation 194/2009

Given that at present the price of biodiesel placed in Rotterdam is near US\$800/ton, these additional tariffs are a hard blow to the US biodiesel industry – which may represent an opportunity for Argentine biodiesel, and especially the more established ones (see box, page 10).

Nonetheless, the suffering of the European biodiesel industry is very real. The situation in Spain illustrates what is happening on the continent as a whole. According to a report from a fellow industry association in Spain, the *Asociación de Productores de Energías Renovables* (APPA), over half of the 36 biodiesel plants in Spain are currently shut down or operating at less than 10% of their installed capacity. Worse, during 2009 another 18 plants are expected to become operational doubling the country’s capacity to four million tons, which will also suffer the consequences of the “unfair trade practices” of the United States. According to APPA, 71% of the Spanish biodiesel market is supplied by foreign biodiesel producers and the balance by Spanish companies.<sup>16</sup>

It is important to note that the Spanish industry also accuses Argentina, Malaysia and Indonesia of unfair trade practices, and Spain has asked the European Commission for greater protection. We cannot opine on the economics of these Asian producers (who use palm oil to make biodiesel) but here we must insist that the Argentine biodiesel industry, very efficient because of its twice-annual soy crops, actually has many disadvantages when compared to those of more mature economies:

- ❖ Argentine biodiesel pays an export tax (“*retencion*”) of 20%,<sup>17</sup> while the European and American industry enjoy many deferred and significantly reduced taxes.
- ❖ Exported Argentine biodiesel is not subsidized; the US industry, for example, enjoys a US\$300/ton subsidy.
- ❖ Europe and the United States have coherent legal frameworks that drive the industry; Argentina has a confusing and counterproductive biofuels law, which restricts who may invest in the industry thus reducing an already limited potential investment pool. The only sector that has access to any fiscal incentives are those producing for the domestic market -- and no one has signed up for that option to date.

<sup>16</sup> “El 60% de las plantas españolas de biodiesel siguen paradas”, Diario *Cinco Dias*, www.cincodias.com, 1 de abril de 2009.

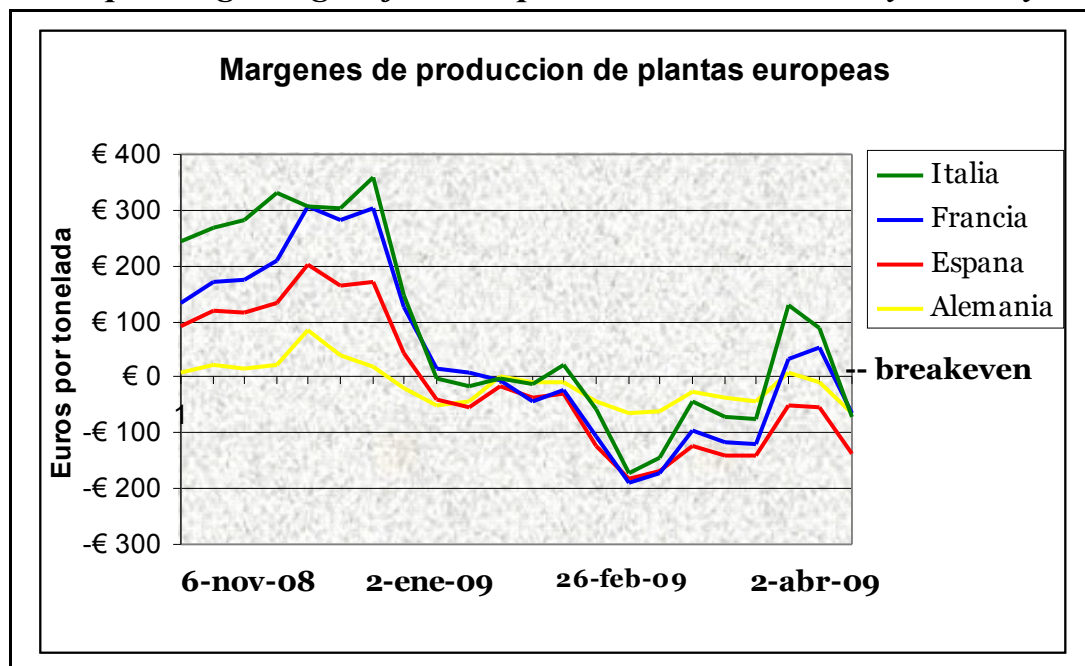
<sup>17</sup> And in March 2008 the export tax was quadrupled from one day to the next without warning, from 5% to the current 20%.

- ❖ Financial markets in the mature economies can count on bank financing and access to a well-developed venture capital industry to give birth and development to a solid and healthy industry, as well as the use of working capital financing (an important consideration in this industry), all at attractive (and even subsidized) interest rates. Argentina has a terribly ineffective banking sector that has done little for the industry: our biodiesel industry has been built using equity as virtually its only financial tool. And we are unaware of any plant that uses bank working capital financing for its regular operational needs.

To summarize, the development and growth of the Argentine biodiesel industry is something that should be celebrated by our industry brethren overseas for having overcome no shortage of hurdles -- and not seek ways to destroy it because it is more efficient.

The weak operating margins of biodiesel producers in Germany, France, Spain and Italy can be seen in Graph 6 below. Here we can see that margins are always thin and often negative, but this is not the fault of foreign producers. What we are glimpsing at here is the fact that in the 21<sup>st</sup> century, emerging market countries with large land masses and excellent climates such as Argentina will be among the drivers of the industry.

**Graph 6: Operating Margins for European Biodiesel Plants, by Country**



Source: Mer-7 Information Services, Paris, France

## The Domestic Market for Biodiesel in Argentina

History shows that in recessionary times, protectionism tends to rise as a political solution, although its economic benefits are short-lived. We are clearly at the beginning of what may be a

prolonged battle of protectionist moves by the great consumer and producers of biodiesel: Europe and the United States.

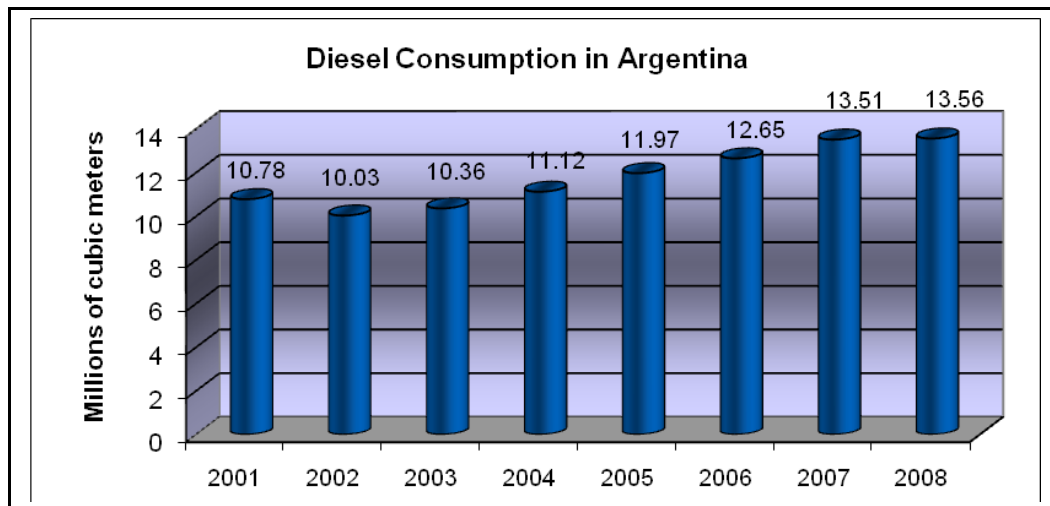
Argentina, as one of the largest exporters of biodiesel in the world, finds itself exposed to this economic crisis and must seek its own solutions and path.

Fortunately there is a solution that has many advantages for all stakeholders: producers, government, employees and citizens. The seeds of the following ideas were planted in our initial study of October 2008 and which we have presented to various agencies of the Argentine government since the beginning of the global crisis, and which culminated in a workshop last March in Buenos Aires organized by our chamber as part of a consortium of European and Latin American institutions which are studying the potential of the biofuels industry in our region.<sup>18</sup> We propose:

- 1) To accelerate the start date of the B5 mandate for domestic market by six months, to July 2009;
- 2) That Argentine biodiesel producers (currently allowed only to export production) be permitted to supply domestic market for a temporary period; and
- 3) The creation of a Biodiesel Stabilization Fund (“BSF”) whose goal will be to reduce price volatility for the domestic market.

To understand the logic and background of this proposal we must first explain briefly the workings of the fuel markets in Argentina as well as the legal framework provided by the Argentine biofuels law.

### ***Graph 7: Historical Diesel Consumption in Argentina***



*Source: Secretariat of Energy of Argentina*

Since the economic recovery that began after the crisis of 2001-2002 in Argentina, fossil fuel diesel consumption has steadily risen (see Graph 7, above). The 13.56 million cubic meters that comprise the entire diesel market in 2008 equal 13.5 billion liters, or 3.6 billion gallons. (And

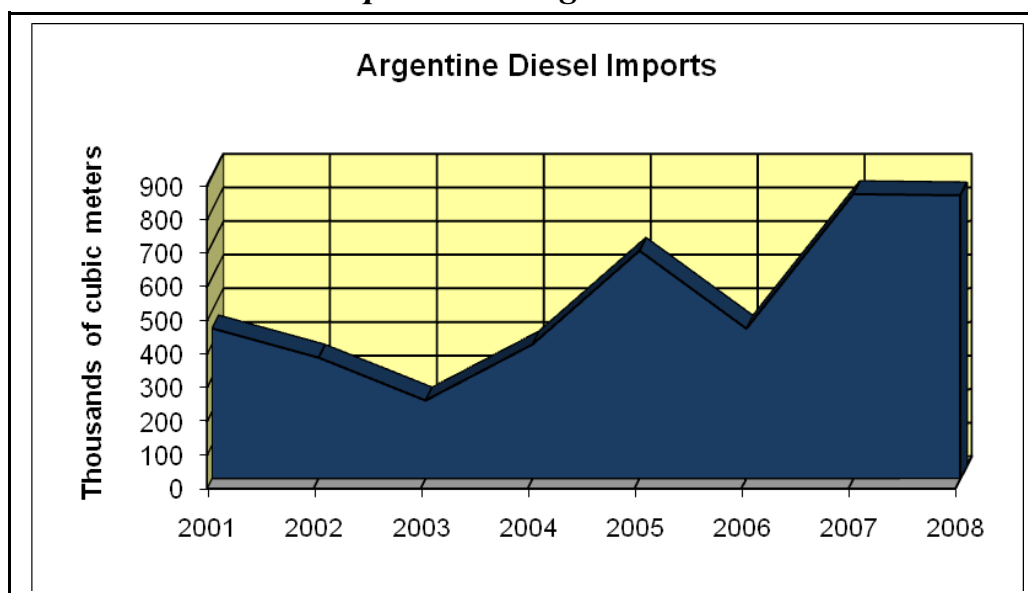
<sup>18</sup> See [www.top-biofuel.org](http://www.top-biofuel.org)

therefore, 5% of that figure, 678 million liters or almost 180 million gallons, constitutes the annual upcoming B5 domestic market requirement for biodiesel.)

Due to the kind of petroleum obtained from Argentine oil reserves as well as the nuances of the refineries and the transportation mix of the country, Argentina has historically been a net exporter of gasoline and a net importer of diesel. To wit, Argentina rarely exports diesel: in 2008, for example, a minimalist 5,700 cubic meters were sold overseas. But since the economic recovery that began in 2003, the tendency has been to import greater and greater quantities of diesel each year, as seen in Graph 8 below, with more than 840,000 cubic meters (840 million liters; 222 million gallons) imported in both 2007 and 2008. The lack of investment in petroleum oil refineries in our country<sup>19</sup> can only lead to one outcome: the volume of imported diesel will tend to continue to increase in the coming years to satisfy domestic demand.

It is a well-known fact in Argentina that during harvest season there tends to be a shortage of diesel in the interior of the country. The farm sector -- together with transportation -- comprises the lion's share of diesel consumption in Argentina; we find it unacceptable that now in mid-harvest season in the southern hemisphere, once again we begin to see news items addressing this problem.<sup>20</sup> Here we have an opportunity to begin changing the country's energy matrix to one that has increasing amounts of renewable energies. While most countries with great access to feedstock for biofuels have first sought to develop their internal market, later seeking to find markets for their surpluses, Argentina has done the opposite. Yet now that we are here we can turn this into an advantage that works to Argentina's benefit.

**Graph 8: Historical Diesel Imports into Argentina**



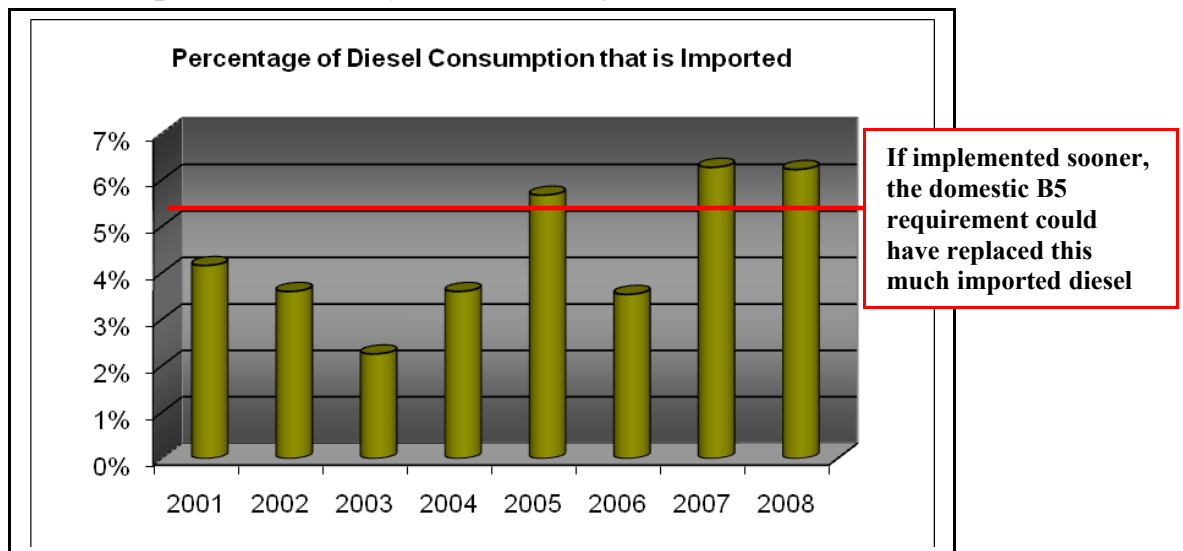
*Source: Secretariat of Energy of Argentina*

<sup>19</sup> Due to a combination of a lack of a national energy plan and inconsistency in our political leadership – necessary to attract long term foreign investment such as is the case of an oil refinery, for example.

<sup>20</sup> “Advierten en Córdoba que falta gasoil en plena cosecha”, *La Nación* newspaper, page 5 Economy section, April 10, 2009.

At the same time, the percentage of diesel imported as a percentage of total consumption has also been increasing. As seen in Graph 9 below, since 2003 Argentina has imported annually between 2.3 and 6.3% of its diesel demand, showing an increasing trend. Note that in three of the last four years, Argentina has had to import more than 5% of its diesel needs.

**Graph 9: Diesel Imported Annually as Percent of Total Market**



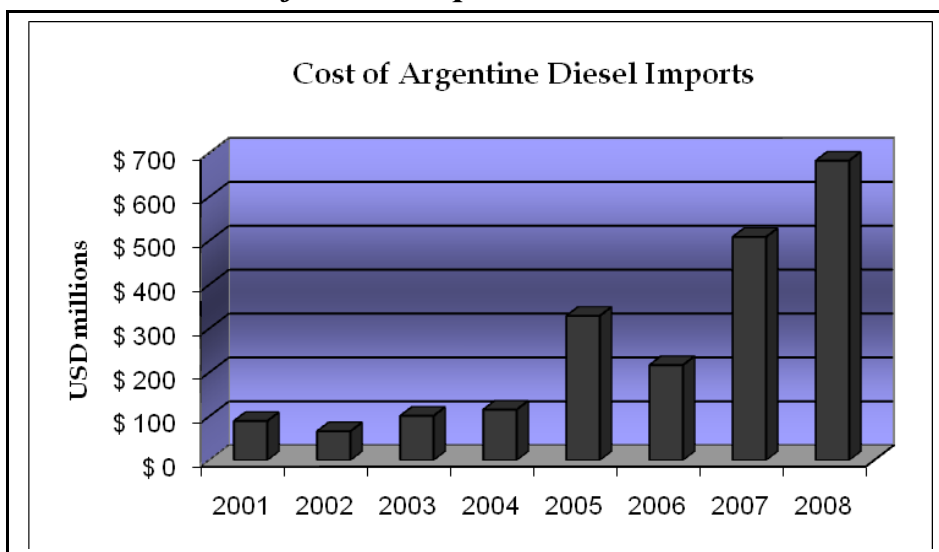
*Source: Secretariat of Energy of Argentina*

Upon seeing this situation, a call for action is obvious: replace as soon as possible the imported diesel for domestically-produced biodiesel, applying the legally mandated B5 requirement sooner rather than later. The red line on Graph 9 above shows the amount of diesel that wouldn't have needed to be imported if we had begun earlier with the domestic biodiesel mandate.

The cost of this imported diesel has fluctuated according to international market prices, but in the last two years has risen considerable: US\$509 million in 2007 and US\$683 million in 2008 (see Graph 10, below).

It was this spirit that drew our political leaders to create the biofuels legislation in 2006: creation of an internal market using readily available feedstock that reduces foreign dependence on fossil fuels, burns cleaner, and creates jobs locally. It reduces expenditure of hard currency and helps in the development of a new industry, creator in turn of wealth and a new source of jobs.

**Graph 10: Historical Cost of Diesel Imports**



Source: Secretariat of Energy of Argentina

The framework for the development of an internal (domestic) biofuels market was set with Biofuels Law No. 26.093 in 2006 and its subsequent regulations, Decree 09/2007 the following year. One of its many peculiarities is that biodiesel producers – before building their plants – must choose between supplying export markets or the B5 domestic market beginning in 2010.<sup>21</sup> *They cannot be active in both markets.* (Copies of the text of the Argentine Biofuels law and its regulations can be found in Spanish on our website, [www.ArgentinaRenovables.org](http://www.ArgentinaRenovables.org), and in printed copies of the second edition of the *Directorio de la industria de energías renovables*, an industry directory published by our chamber and available free of charge by writing [info@cader.org.ar](mailto:info@cader.org.ar).)

The fact that to date there have been multimillion dollar investments for the construction of biodiesel plants to export reveals much about Argentina’s economic advantages driven by our abundance of feedstock in the form of soy oil, but it also reveals the failure to jumpstart the domestic market option: no project has been approved for the domestic market even though it comes with tax incentives and accounting benefits such as accelerated depreciation. This is due to a number of reasons, but primary among them is the restrictions placed on ownership of the plants and the fact that the government establishes the price of biodiesel (which the government has yet to make public). Furthermore, downstream petroleum companies as well as the larger multinational vegetable oil crushers, for example, are discouraged from operating in this segment.

As set by the biofuels law, the domestic B5 mandate is to begin January 1st, 2010. Beginning that day, all diesel sold is to be blended with a B5 biodiesel component. However, it is clear that this deadline will not be achieved as there are no approved producers for the internal market. Even in the hypothetical case that sufficient projects were approved today for the 678 million liters (220 million gallons) that represent the annual domestic B5 market, they still need to raise capital, build the plants, obtain the Secretary of Energy’s approvals, meet quality specs, and negotiate contracts with the downstream oil companies that must do the blending (in summary,

<sup>21</sup> Ver Artículo 13 de la ley de biocombustibles 26.093.

YPF/Repsol, Petrobras, Esso and/or Shell). This will require no less than twelve months, probably 18 or more.

### ***Proposed Solutions to Launch the Domestic Biodiesel Market***

As per above, the domestic B5 requirement will not be achieved as envisioned by January 2010 unless we get creative and find ways to benefit all stakeholders and interests. The industry's proposal includes three components:

- a) Allow those biodiesel producers currently authorized to export biodiesel to have the option to also sell into the domestic market during a pre-determined and temporary period. This will help those investors that have already invested in the industry and are currently operating at only half of installed capacity on average and will help them navigate the current economic crisis as well as the increasing protectionist movements taking place;
- b) Advance the start date of the domestic mandate by six months to July 1st 2009; and
- c) Create a "Biodiesel Stabilization Fund"<sup>22</sup> using the hard currency that would have gone into importing diesel to help smoothen biodiesel price changes domestically and allow for better planning.

This proposal will allow investors that have already invested in the industry in Argentina to keep their doors open in these difficult economic times – as well as the jobs. It will reduce the need for hard currency to import diesel as it can be used instead to create the domestic biodiesel industry.

#### ***a) Allow Biodiesel Exporters to sell in the Domestic market***

The Secretariat of Energy has currently approved twelve biodiesel plants for the export market.<sup>23</sup> These plants have a combined installed capacity of 1.5 million tons/year, more than twice what is needed to satisfy the B5 requirement. Given that the industry is operating at half of capacity, this would appear to be an optimal solution to keep the industry working efficiently, albeit as a temporary solution only to the biofuels law, and would exist during an eighteen month period beginning July 1<sup>st</sup> 2009.

Our proposal is that existing producers approved by the Secretariat (according to Article 5 of law 26.093) be given the option to sell biodiesel to those companies authorized by the government to perform the blending into B5 using the same formula that will be available to those approved specifically for the domestic market. The price formula for biodiesel, still unpublished, is expected to be very similar to the one already established for domestic ethanol production as per Resolution 1294/2008, with prices established ex-works (the blenders will have to absorb the transportation costs from the biodiesel plant to their blending facilities). If this price is attractive, biodiesel producers will have the option but not the obligation to sell their

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<sup>22</sup> The proposal is conceptually similar to the Chilean Copper Stabilization Fund and the Malaysian Palm Oil Stabilization Fund; both successful programs that have helped develop long term industries in both cases.

<sup>23</sup> The complete list can be seen at this page of the Secretariat's website:  
<http://energia3.mecon.gov.ar/contenidos/verpagina.php?idpagina=3037>

biodiesel into the domestic market. Facilitating free trade – or as close to it as possible – is a basic tenet of our institution.

### ***b) Advance the Start Date for the Domestic Market Mandate by Six Months***

This proposal complements the above proposal and has as its objective to help an industry operating in difficult economic times with the added benefit of protecting existing jobs. What's more, if achieved, *Argentina would become the first and only country (to our knowledge) that advances the start date of a biofuels mandate*, showing great organizational ability as well as a government that is concerned about an industry that is large and still holds enormous prospects for the future. The Argentine Biofuels law No. 26.093 indicates that the domestic market begins on January 1<sup>st</sup> 2010;<sup>24</sup> we propose that it be advanced to July 1<sup>st</sup> 2009.

In this case, the biggest hurdle is the legal one, since it would require changes at the legislative level. Given that there are congressional elections in late June 2009 it will be difficult to achieve. A solution would be to have the Executive Branch make the changes given the economic crisis at hand, an alternative that is oft-used in Argentina. Another alternative circulating the halls of government is to allow the downstream oil companies to use biodiesel not as a blend or part of the B5 mandate but as an additive to diesel because of its lubrication and lower sulphur emissions, which would achieve the same aims in the short run and become a quick and viable alternative solution.

### ***c) Create a Biodiesel Stabilization Fund***

The BSF would be set up as a *Commodity Stabilization Fund*. These are investment funds set up governments whose budgets are highly dependent on the price of commodities – such as copper in Chile, oil in Norway, diamonds in South Africa, palm in Malaysia, etc. This fund would operate slightly differently, as the country is not “highly dependent” on biodiesel, although its feedstock, soy, is of critical importance to the overall economy: Argentina is the world's third largest producer of soy and the number one exporter of soy oil. Studies have shown<sup>25</sup> that creating Commodity Stabilization Funds is positive for countries as long as properly managed, and in this case it could be used for the domestic biodiesel market.

As discussed earlier, Argentina could have saved almost US\$1 billion in the last two years alone if the domestic biodiesel market has been implemented earlier; any delays in instituting this will continue to cost the country hard currency. We propose that the government establish a Biodiesel Stabilization Fund; its objective would be to reduce the volatility in the price of biodiesel, entering the market to acquire forward contracts of its primary components: soy oil and methanol *but only for use in the domestic market*. We believe that in coming years the BSF could be of enormous use to the domestic industry and has the potential to launch the creation of a new futures market for the Argentine biodiesel market.

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<sup>24</sup> see Article 7 of Biofuels Law No. 26.093.

<sup>25</sup> *The Financial Impact of Sovereign Wealth Fund Investments in Listed Companies*, Fotak, Bortolotti, Megginson, March 2008

## Conclusions

The global biodiesel industry is suffering the consequences of a worldwide economic contraction. This results in increased protectionism which is even more counterproductive in the long run. Argentina is in a position to take advantage of the European penalty tariffs on US biodiesel while at the same time advancing the start date of its own domestic mandate.

We believe our proposal encapsulates a number of strengths:

1. shows the world and citizenry Argentina's organizational ability in advancing the B5 domestic market mandate;
2. it highlights legislative and executive branches of government ready to support a nascent industry with concrete actionable solutions;
3. allows existing biodiesel producers to keep their factories open during an unusually hard crisis, which will strengthen the industry;
4. keeps jobs throughout the entire and extensive value chain of the industry;
5. gives a clear signal to investors that Argentine investments are protected and that rules support entrepreneurial spirits;
6. reduces the damage potentially occurring from increased protectionism around the world; and
7. establishes Argentina as an industry leader through the creation of the first Biodiesel Stabilization Fund.

The domestic biodiesel industry we see will then compete not on price but rather on product quality and customer service. Since quality is also established through international standards, the focus of this industry would be on quality of customer service, an area that needs to be further developed in Argentina.

To achieve all this, government and industry must work side by side and quickly for a greater good. Fortunately interests appear to be aligned: government wants to reduce the expenditure of hard currency and maintain jobs within the country; the private sector seeks ways to maintain their factories open.

And a third indirect party, our citizens, will benefit from seeing a country that takes a decisive step towards a more prosperous, fair and with a sustainable and clean industry for generations to come.



## **About the Argentine Renewable Energies Chamber**

The Argentine Renewable Energies Chamber (“*Cámara Argentina de Energías Renovables*”, or CADER) is a non-profit industry trade organization dedicated to promoting the sustainable development of alternative energies in our country. Our mission is to protect the interests of its members, pushing for the establishment and development of a vibrant and respected industry, respected globally and with the highest standards, practices and focus.

The first requirement to achieve this development is providing access to accurate information. Thus, CADER publishes on a regular basis studies in different sectors of the renewable energies industry in Argentina, describing fairly its state and opining on areas that need further improvement, with a goal of becoming an attractive investment center on a global basis.

This mindset has already paid dividends: our institution has been invited to become a board member of the recently established Global Renewable Fuels Alliance, a worldwide non-profit industry association based in Toronto, Canada that represents over 60% of global biofuels production in 30 countries. Our goal in this organization is to help in the development of a strong industry globally with fair trade practices and accurate information.

This last point is especially part of CADER’s philosophy since inception: to help Argentina establish a position as a global player in renewable energies and one of its leaders.

For more information, please visit our website at [www.ArgentinaRenovables.org](http://www.ArgentinaRenovables.org), write is at [info@cader.org.ar](mailto:info@cader.org.ar), o visit our offices at Viamonte 524, Suite 101, Buenos Aires, C1053ABL, Argentina.