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## 18. Biofuels – Necessity knows no law

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**I.** One of the toughest challenges we are faced with this century undoubtedly lies in the possibility of progressively substituting the consumption of fossil fuels, a non-renewable energy source, with alternative energy sources.

A global scenario points to biofuels as a real and tangible alternative.

Without wishing to go into technical definitions, we are referring to the liquid fuels obtained from agricultural products, from processing agroindustrial products or from organic waste, termed biomass.

Our aim is to highlight the relative, but never insignificant, importance of tax-related incentives or benefits that governments could offer producers of these fuels, so as to foster production, focusing the analysis on 'Argentina's case' in relation to Brazil's experience, a country already well in the lead.

**II.** While the latter has shown a solid and persistent increase in both production and consumption of biofuels in the last few decades, especially bioethanol, coming in second among the world's largest producers of these fuels, Argentina has gone along other roads as far as energy is concerned, putting off an increase in manufacturing activities through a lack of policies and laws encouraging such growth.

What is more, contrary to what is expected in the promotion of alternative fuels, Argentina has allowed and subsidized the use of natural gas as fuel for vehicles during the last few years, with market prices that are considerably lower than gasoline and diesel fuel, which is just the opposite of what should logically be paid for selling a scarce and non-renewable asset.

According to our opinion, this also unquestionably affected and drew out the creation of provisions that encourage the development of production investments in this area.

In addition to the effect created by providing natural gas for consumption in motor vehicles, the supply of this input for industrial activities has recently been affected causing a negative impact on productivity, leading to potential shortages in supplies and the need to import large volumes of gas from Bolivia. This phenomenon has essentially contributed to confirming a new paradigm represented by a feeble energy system, which, at the rate of economic growth in the last few years, looks likely to collapse and is no longer self sufficient.

In addition to this, we should point out that Argentina's current diesel fuel refining capabilities are being used to full capacity.

In reaction to this state of affairs, several regulations of a different nature, among them the tax-related ones we will comment on further ahead, have recently been issued, many still focusing essentially on environmental aspects, while some provincial governments have promoted the advantageous aspects of their territories as locations in which to undertake biofuel-related projects; this, however, has taken place somewhat erratically, without an integrated development plan at a national level providing the proper legal framework.

The question we must ask ourselves at this stage of the analysis, therefore, is why growth in this matter has differed so greatly between both countries.

Although we have already anticipated some of the arguments, one possible answer, that may seem far too simplistic but

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which holds true nonetheless, may lie in the fact that during the nineties Argentina, with its peso pegged to the US dollar at par, gave up on sustained industrial growth in favor of substitutional imports of the products it had stopped producing, using its non-renewable resources for the abovementioned purposes, perhaps even making a show of their availability, without foreseeing shortages or a currency devaluation that would once again position it in a context of productive growth, as the one being experienced at present and, therefore, making Argentina highly demanding of different types of fuels (mainly diesel fuel, fuel oil and gas).

In other words, this lack of foresight may possibly be attributed, among other equally valid reasons, to the economic context of those years and to the availability of sub-used fossil fuels.

In the coming paragraphs, we will look at what tax-related incentives authorities have come up with as a palliative for this scenario, although we will also attempt to show that, based on the relative experience of other countries, such as Brazil, these incentives cannot form the basis around which we could expect a significant increase in the production of biofuels to emerge.

III. Those of us working in the world of taxes, welcome the recent publication of a framework law that attempts to regulate and promote the production of biofuels in Argentina, without losing sight of how taxes affect the development of economic activities.

As mentioned repeatedly in the above paragraphs, the benefited activities are currently at a stage of incipient development, characterized by quasi-primitive undertakings, if we compare them to those in the US, Brazil, France, Germany and Spain, the largest biofuels producers in the world.

The purpose laid out by authorities consists in achieving a gradual substitution of the use of non-renewable fossil fuels, following along the lines of what the European Union, among others, has planned for 2010.

In Argentina, by that time and pursuant to the provisions set forth by these regulations, diesel fuel being sold in the territory will have to contain at least 5% of biodiesel, while gasoline will be required to contain at least 5% of bioethanol.

That is why certain appealing but improvable tax benefits have been included that will attempt to boost a potentially promising Argentine industry.

These benefits consist mainly in the following:

- an early reimbursement of VAT credits resulting from acquiring capital assets and conducting infrastructure construction works;
- accelerated depreciation of certain assets in relation to income tax;
- temporary minimum presumed income tax exemption of assets used in the project; and
- exemption from paying the water infrastructure works rate and taxes on liquid fuels and on the transfer or import of diesel fuel.

In spite of the relative effects we pointed out earlier, we should not play down the virtues of relying on an adequate tax incentive system when considering the extraordinary competitive advantages Argentina has for producing, for example, biodiesel, a 100% biodegradable fuel, that causes a considerably lower emission of gases and which is obtained from virgin oils or already-used oils from traditional crops grown in Argentina, such as soybean, sunflower, peanut, among others.

The actual promotion of production undertakings of this kind may, at least, make it easier for certain sectors related to agricultural activities to become more sophisticated and avoid suffering the effects of a possible alteration in the current exchange and/or decrease in the price of commodities.

The delicate balance to be achieved between the development of an industry with clear advantages in multiple aspects and the proper tax framework governing the activity, should not overlook the known benefit that for other economic activities (mining, forestation and wind and solar power) is an exclusive prerogative: tax stability. This has been, and still is, an incentive of proven importance in regard to the mining investment boom in Argentina.

The guarantee of invariability in tax charges inherent to tax stability would surely boost the interest of investors proportionately to the expectations of authorities and the importance they have given the matter, besides the abovementioned tax benefits.

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If Argentina is thinking in terms of sustained and sustainable development in this activity, the granting of this benefit should at least be analyzed.

Furthermore, Argentina's potential not only involves the local market, but also the external market. This being the case, clear and steadfast rules dealing with export duties should be put in place, as their negative impact on the internal rate of return may cause foreign investors to focus on a country other than Argentina.

Regardless of the valuable contribution of these incentives to the development of biofuels production in Argentina (in their current or improved state), we should mention that Brazil's tax benefits by sector, which appear to have a smaller scope than those granted in Argentina, are not the reason for its manufacturing increase, as shown categorically by the circumstances.

This makes one thing clear: the tax environment and system is important when it comes to making an investment decision, but it is not the defining factor.

In this regard, we will now focus on some of the characteristics of a paper<sup>1</sup> dealing with this matter that indirectly relativizes the effect of tax benefits, considering other aspects to be of crucial importance to the development of this activity. Neither should we overlook other types of restrictions imposed by environmental regulations existing in more developed countries and, basically, the oft-proven fact that indicates that growth of this industry is an ideal alternative for supply needs that cannot be satisfied with a country's own non-renewable resources (fossil fuels) and for the ever increasing prices; these measures are thus essential, in most of the duly planned cases, to deal with the increase in fuel consumption by industry, trade and people.

**IV.** Indeed, the paper prepared by our European colleagues, based on the creation of indicators enabling them to set up a ranking of the most propitious countries for biofuels production and the largest producers, focuses on the following factors, as summarized below:

#### *Biofuels Index*

The individual Ethanol and Biodiesel indices combine in equally weighted proportions to generate the All Biofuels Index, which is made up as follows:

- Biofuels Infrastructure Index - 35%
- Fuel-specific Indices - 65%

#### *Biofuels Infrastructure Index*

The Biofuels Infrastructure Index is an assessment by country of the general regulatory infrastructure for biofuels. On a weighted basis, the index considers:

- Market regulatory risk - 29%: The score in this category depends on how strongly the general regulatory, political, and economic environment in the respective market advocates the production, distribution, and use of biofuels.
- Supporting infrastructure - 42%: A market with sufficient arable land available to cultivate, an established and widespread distribution network, and R&D activity will score well.
- Access to finance - 29%: Markets with a sound financial industry, proven financial track record of financing biofuels projects, listed companies operating in the biofuels sector, and strong appetite by foreign and domestic investors score highly.

#### *Fuel-specific Indices*

This comprises two Indices providing fuel-specific assessments for each country, namely:

- Ethanol
- Biodiesel

Each of the Indices consider, on a weighted basis, the following:

- Offtake incentives - 25%: This includes the level of mandatory blending targets, tax breaks on fuel excise duty, and tax credits awarded to biofuels producers.
- Tax climate - 8%: Countries that create a favorable tax climate, such as enhanced capital allowances or corporation tax holidays, will score highly.
- Grants and soft loans - 8%: Comprises grants and soft loans for investment in biofuels production.
- Current installed base - 11%: Existing production capacity installed in a country.
- Domestic market growth potential - 15%: Conventional fuel consumption of a country, and the headroom given the

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<sup>1</sup> Biofuels Country Attractiveness Indices, Renewable Energy Group, Q2 2007, Ernst & Young - Germany

current regulatory regime and installed capacity, determine the ultimate growth potential for alternative fuels.

- Export potential - 15%: A market's score is determined by its geographical location, and any free trade and bilateral export agreement to which it is party.
- Feedstock - 10%: Takes into account the energy yield, sustainability, and price volatility of a country's main biofuels feedstocks.
- Other factors - 8%.

## All Biofuels Index at Q2 2007

Ranking*		Country	All Biofuels	Ethanol	Biodiesel	Infrastructure
1	(1)	US	75	81	69	90
2	(2)	Brazil	71	76	66	94
3	(3)	Germany	67	69	64	81
4	(4)	France	66	65	67	70
5	(5)	Spain	65	66	64	61
6	(7)	Sweden	59	62	56	76
7	(6)	UK	58	60	58	76
8	(8)	Canada	57	65	49	66
9	(9)	Italy	53	51	55	47
10	(10)	Thailand	52	52	52	44
11	(11)	China	51	53	49	50
12	(13)	The Netherlands	51	51	51	59
13	(-)	Indonesia	49	48	50	44
14	(14)	India	48	50	46	46
15	(12)	Australia	47	51	45	56

Source: Ernst & Young

\*Ranking in the Q1 2007 All Biofuels Index in brackets

The relative importance given in these measurements to the effect of tax benefits granted to producers as incentives is compatible with what we have discussed so far, but also noteworthy are Argentina's weaknesses in a considerable number of the items taken into account, the development of which has not been encouraged or contemplated by the recently published laws that attempt to regulate the activity.

Without a doubt, considering all the aspects involved in the measurement and even those that we could reasonably add on, it would be difficult to sustain, empirically-speaking and, therefore, also in theory, that growth of the biofuels production sector has been based on the tax incentives that countries have granted their producers.

It goes without saying that incentives of this kind should not be ruled out; that would be a mistake. However, these are not the policies on which a harmonious, sustained and legally predictable growth of the sector should be based.

Some of the aspects considered in the indices prepared by our Firm have been clearly left to one side in Argentina: granting financing facilities at preferential rates, a transparent tax environment that provides investments with legal security, clear and consistent tax rules that prevent unexpected increases in tax charges when the producer obtains more favorable prices in other markets, among others.

V. In conclusion, we would like to reflect on what has been discussed so far.

First of all, we should firmly point out that encouragement of the activity under analysis should be based on adequate strategic planning by the Argentine government, supported by clear regulations and long-term objectives.

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These objectives should be based on fostering rational production and use of energy resources. Whether these resources are renewable or not.

We believe it important to emphasize, in spite of sounding repetitive, the need and advantage of establishing tax incentives that encourage or boost the activity's growth, although we cannot consider this as being enough.

We should also highlight the need to analyze and even emulate foreign experiences which have been implemented with the utmost success and that could even be improved upon, given Argentina's excellent territorial conditions for the development of biofuels.

Finally, we should work towards banishing the phrase that tends to be repeated in resignation and that has given this paper its title, and take action with the future in mind to anticipate events and avoid missing the train of progress.