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France

Bio-Fuels

French Biofuel Production Plans

2007

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Report Highlights:
In order to increase the biofuel-to-fuel blend to 10 percent by 2015, the GOF recently increased its biofuel production quotas that will benefit from tax rebates. Quota allocation is heavily weighted to biodiesel products since transportation demands for diesel fuel predominate and are growing. Acreage dedicated to biodiesel production, primarily rapeseed, is expected to double by 2010. Bioethanol production is projected to be sourced from 300,000 ha of wheat, 50,000 ha of corn and 50,000 ha of sugarbeets by 2008.

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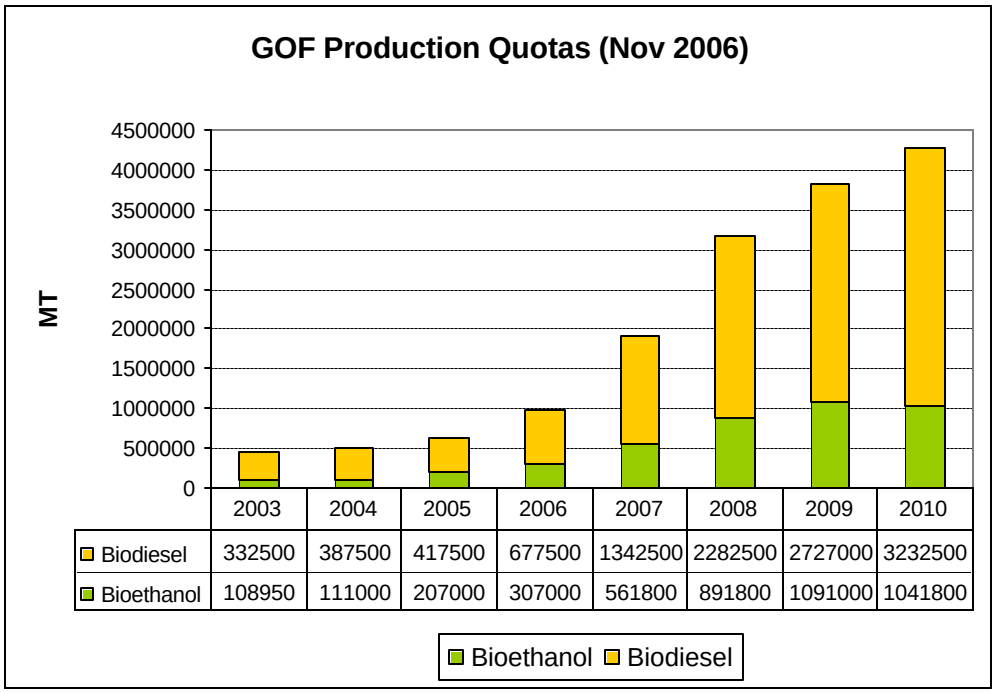
Executive Summary

The GOF recently announced an increase in the biofuel production quotas benefiting from tax rebates when sold on the French market. Quota allocation is dominated by biodiesel as compared to bioethanol. The acreage planted for biodiesel use is expected to more than double to 1.5 million hectares of oilseeds by 2010. Bioethanol production is projected to comprise 300,000 hectares of wheat, 50,000 hectares of corn and 50,000 hectares of sugarbeets by 2008. Biofuels are entering mainstream French transportation through gas stations and in the development of flex fuel cars, recently approved for trials in France.

Policy

The Government of France (GOF) provides tax relief for a limited quantity of biofuels produced and sold on the French market. The GOF recently announced that, to increase biofuel utilization in fossil fuels from roughly 1 % in 2005 to 10% by 2015 (in net calorific value), the government will increase the biofuel production limits eligible for tax incentives.



	2003	2004	2005	2006	2007	2008	2009	2010
Biodiesel	332500	387500	417500	677500	1342500	2282500	2727000	3232500
Bioethanol	108950	111000	207000	307000	561800	891800	1091000	1041800

As an additional incentive measure, the GOF imposes an environmental tax (taxe generale sur les activites polluantes, or TGAP) on fuel distributors who don't meet a biofuel incorporation rate, set by the government, of 1.75 percent in 2006, 3.5 percent in 2007, 3.5 percent in 2008, 6.25 percent in 2009, and 7 percent in 2010.

Biodiesel

Consumption

Growing transportation needs are driving the demand for biodiesel. In 2006, 55 percent of the EU transportation market needs were filled by diesel and this proportion is expected to rise; in France, diesel represented 73 percent of total gas consumption versus 27 percent for gasoline. Diesel consumption in France is expected to surpass 2006's 30 million MT (MMT) mark and to rise to 36 MMT by 2010. The French petroleum industry plans to produce half of

the 6 MMT increase with biodiesel, and the other half with conventional fuels. In 2005, French consumption of 370,000 MT of biodiesel represented 1 percent of domestic diesel use. To meet GOF 2006 utilization goals of 1.75% in calorific value (corresponding to 1.9% in volume), the French will have to increase their consumption to 630,000 MT of biodiesel.

Production Plans

Most biodiesel produced in France is comprised of rapeseed and sunflower seed methyl ester produced by the French company "Diester Industrie" (DI). In order to meet the GOF's 2010 biodiesel production quotas, DI plans to augment its production capacity through expansion and new construction as indicated below (in 1,000 MT):

Plant Location	2005	2006	2007	2008	2010
Grand Couronne	260	260	260	510	N/A
Saint Nazaire	0	0	250	250	N/A
Le Mériot	0	0	250	250	N/A
Coudekerke	0	0	0	250	N/A
Sète	0	200	200	200	N/A
Compiègne	100	200	200	200	N/A
Bordeaux	0	0	0	250	N/A
Boussens	40	40	40	40	N/A
Total DI production capacity	**400**	**700**	**1,200**	**1,950**	N/A
PRODUCTION QUOTA (France)	417.5	677.5	1,342.5	2,282.5	3,232.5

The maximum production capacity of each plant is indicated in the above table. However, in the case of new plants, the maximum production capacity cannot be reached in the first year. For example, the new plant in Sète will produce significantly less than 200,000 MT in 2006.

Impact on crops

Even though biodiesel can be produced using vegetable or animal oil, to date, all biodiesel produced in France is from Vegetable Oil Methyl Ester (VOME) mainly from rapeseed. In 2005, and probably in 2006, rapeseed methyl ester accounted for 80 percent of the biodiesel production, followed by sunflower seed methyl ester (10 percent), soybean oil (5 percent), and palm oil (2 percent).

Future trends in biodiesel production could include a strong growth trend for rapeseed oil methyl ester, increased sunflower oil methyl ester production from oleic varieties, further development of animal oil ethyl ester from animal fat and additional blends including imported soybean oil and palm oil.

The French oilseed industry (PROLEA) forecasts that to reach the GOF's 2010 production levels, France will need 1.5 million hectares planted to non-food oilseeds, including 1.25 million hectares of rapeseed and 330,000 hectares of sunflower seed. (1 hectare of rapeseed produces approximately 1.5 MT of methyl ester, thus, 1.5 million hectares would produce approximately 2.25 MMT of biodiesel.)

In 2006 industrial rapeseed covered 680,000 hectares and total rapeseed covered 1.36 million hectares. French oilseed growers claim that increasing the French industrial oilseed acreage to 1.5 million hectares would not unbalance the food/non-food output for rapeseed,

if French rapeseed exports were replaced by crush. French annual rapeseed exports and rapeseed crush are roughly 1.5 MMT and 2.4 MMT, respectively.

B5 and B10 Standards

Currently, biodiesel producers and oil companies sell biodiesel fuel mix unlabelled as such in gas stations. Most French consumers are unaware that they are consuming biodiesel. To date, French law authorizes selling unmarked biodiesel/diesel blends up to 5 percent (B5). However, the GOF plans to create a new standard for B10 (biodiesel/diesel blend at 10 percent) during the first quarter of 2007, to be sold unmarked in gas stations. In addition, the GOF will submit this standard to the EU Commission and ask for a European standard on B10.

Bioethanol

Consumption

In France, due to the refiners' preferences and lack of bioethanol-compatible gasoline, gasoline is predominantly blended with Ethyl Tertio-Butyl Ester (ETBE) more than with bioethanol. ETBE is made with 45 percent bioethanol and 53 percent isobutylene.

In 2005, 111,400 MT of bioethanol were consumed in France, representing 0.82 percent of French gasoline consumption. The government's 2006 objective of 1.75 percent in net calorific value corresponds to 2.7 percent in volume of bioethanol, and 4.5 percent, in volume, or ETBE, i.e., 232,000 MT bioethanol. 2006 data is not yet available but expectations are that the government's objective will be met.

Production

Bioethanol can be produced from sugarbeets, wheat and corn and one can produce and consume ethanol as such and also ETBE, to be mixed with gasoline. In France, the bioethanol industry is smaller scale with more diverse producers than the biodiesel industry. The companies currently producing bioethanol in France are Tate & Lyle (wheat), BCE (wheat), and BENP (wheat). The following companies have recently been approved by the French Government to produce bioethanol in the future: BENP in Lillebonne (wheat), Cristanol in Bazancourt (sugarbeet and wheat), AB Bioenergy in Lacq (corn), Roquette in Bernheim (wheat), Tereos (wheat) in Lillebonne and Soufflet in Le Meriot (wheat). The Lillebonne plant will open in April 2007 and, when fully operational, will use 545,000 MT of the 2007 wheat crop.

In 2006, the French Government authorized flex fuel cars (able to consume up to 85 percent bioethanol) in France for experimentation. The regional council of the Marne regional district (Champaign region, East of Paris) launched an experiment in June 2006. Seven flex fuel cars manufactured by Ford will be tested over 3 years. Several flex-fuel cars from French and foreign manufacturers (including Ford) were displayed for the first time at the international motor show in October 2006 in Paris, and although they are not available to the public yet, they received wide media coverage.

Impact on Crops

Until 2005 bioethanol in France was produced primarily from sugarbeets and secondarily from wheat: most bioethanol production is likely to be derived from wheat in 2008, at the expense of sugarbeets.

According to the French Ministry of Agriculture, 300,000 hectares of wheat, 50,000 hectares of corn and 50,000 hectares of sugarbeets are expected to produce bioethanol by 2008. For wheat and corn, this will represent less than 5 percent of the total grain acreage.

Related reports:

Report Number	Title	Date Released
FR6005	French Biofuel Production Booms	1/20/2006
FR6016	French Rapeseed Production Continues to Increase	3/09/2006
E36102	Biofuels Annual	7/11/2006