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Report assessing actions taken to promote biofuels in France in 2009

The French authorities hereby submit to the European Commission the report by France provided for in Article 4(1) of Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport.

1. The French biofuel plan: an ambitious policy

Directive 2003/30/EC¹ on the promotion of the use of biofuels or other renewable fuels for transport set the Member States an objective of incorporating 5.75 % NCV² of biofuels into fuels by 2010.

In the framework of the French biofuel plan, the objective of incorporating 5.75 % NCV has been brought forward to 2008 and increased to 7 % NCV in 2010 in Programme Law No 2005/781 of 13 July 2005³ laying out the French energy policy guidelines. In order to meet these ambitious targets, the government took various proactive measures promoting the production and marketing of biofuels.

French incorporation objectives (NCV)

2005	2006	2007	2008	2009	2010
1.20 %	1.75 %	3.50 %	5.75 %	6.25 %	7.00 %

2. Biofuels in France

2.1. The biofuels sectors

The two sectors, the agricultural ethanol sector for petrol and the methyl esters sector for diesel, have developed processed products with characteristics similar to those of the fuels or domestic heating oil with which they can be blended:

- pure ethanol or ETBE (ethyl-tertio-butyl-ether) made from agricultural ethanol (wheat or beetroot);
- FAME (fatty acid methyl esters) made from (rapeseed or sunflower) vegetable oils, animal oils or recycled waste oils.

2.2. The incorporation of biofuels

¹ Replaced by Directive 2009/28/EC.

² Energy percentage.

³ Amended by Agricultural Guidance Law No 2006-11 of 5 January 2006.

These biofuels are incorporated:

- Either systematically into the various fuels dispensed:
- SP95 or SP98 (E5) can contain up to 15 % by volume of ETBE or up to 5 % by volume of ethanol;
- SP95-E10 (E10) can contain up to 22 % by volume of ETBE or up to 10 % by volume of ethanol.

The latter fuel is not compatible with all vehicles on French roads. The Energy Director's decision of 3 March 2009 determines the list of petrol engine vehicles compatible with this fuel.

- Or in fuels having a high biofuels content:
- super ethanol E85: The main component of this fuel is bioethanol. This fuel is intended for flex fuel vehicles. It comprises at least 65 % ethanol and at least 15 % premium grade petrol.

All the conditions were put in place to authorise the sale of super ethanol throughout the whole territory for professionals and private individuals from 1 January 2007. Therefore super ethanol is eligible for a beneficial rate of tax of €3.24/hl (instead of €8.33/hl in 2008) which currently enables this fuel to be sold at an average price of €0.86/l (October 2009).

Lastly, to facilitate and accelerate the development of this sector favourable tax measures have been adopted, account being taken of the importance of super ethanol in terms of the environment and energy independence:

- the granting of an option for exceptional amortisation of vehicles over 12 months;
- a tax reduction on company cars over eight quarters;
- a 50 % exemption on the additional tax for registration certificates.

At the car show on 9 October 2008 the French President stated that he was willing to exempt flex fuel vehicles from the 'malus' (which did not take account of the full environmental benefits of such vehicles) and also confirmed government support of this sector: Law No 2008-1425 of 27 December 2008 (the 2009 Finance Law) supplemented Article 1011a(3) of the General Tax Code in order to enable vehicles specially equipped to run on super ethanol E85 to benefit from a 40 % allowance on carbon dioxide emission levels within the meaning of Council Directive 70/156/EEC of 6 February 1970. This allowance does not apply to vehicles whose carbon dioxide emissions are greater than 250 grams per kilometre.

On 31 October 2009, 316 service stations sold this fuel and about 9 500 vehicles running on this fuel had been registered. This sector is currently still in its start-up phase and is growing in significance.

- B30 diesel: Since 1 January 2007 this diesel containing 30 % by volume of VOME (vegetable oil methyl ester) has been authorised for captive fleet vehicles having dedicated fuel logistics. This fuel is not on sale to the general public because it is not compatible with the engines of many diesel vehicles which are already on the road in Europe and it requires appropriate maintenance conditions.

- Pure vegetable oils: Agricultural Guidance Law No 2006-11 of 5 January 2006 states that pure vegetable oils may be used as an agricultural fuel by those farmers who produced the plants from which the fuel is derived and that, within this context, this fuel is exempt from domestic consumption tax. This scheme has been extended to all agricultural holdings and the fisheries sector since 1 January 2007.

From 1 January 2007 all local authorities will be able to try out upon request (blended or 100 %) pure vegetable oils (PVOs) in those of their vehicles that are not used in public transport. However, in return, they will have to sign with the State a protocol specifying in particular the vehicle tracking and regular checking requirements that users will be expected to meet: the use of PVOs is met with much resistance from motor vehicle and agricultural machinery manufacturers, most of whom refuse to offer their guarantee if such oils are used.

2.3. Consumption of biofuels

2009 has seen a rise in the consumption of alternative fuels. The following table shows the amounts of biofuels consumed in France over several years:

In k tonnes	FAME	ETBE ⁴	Ethanol
2006	567	146	94
2007	1 146	189	232
2008	2 085	215	375
2009	2 102	202	417

The following table shows the actual percentages of biofuels incorporated into petrol and diesel over several years:

% NCV	Petrol sector	Diesel sector	Total percentage incorporated
2006	1.75 %	1.77 %	1.77 %
2007	3.35 %	3.63 %	3.57 %
2008	5.55 %	5.75 %	5.71 %
2009	5.24 %	6.27 %	6.04 %

3. The taxation of biofuels

3.1. The main incentive: the general tax on polluting activities (GTPA)

⁴ The quantity stated is that of the ethanol used to produce ETBE.

The 2005 Finance Law establishes a fuel taxation system that seeks to promote the incorporation of biofuels at the level set by amended Programme Law No 2005-781 of 13 July 2005 laying out the energy policy guidelines.

Article 32 introduces a tax on the release for consumption of petrol, on the one hand, and diesel, on the other, that is based on the ex-VAT sale price. Release levels have risen from 1.2 % NCV in 2005 to 7 % NCV in 2010. The NCV percentage of biofuels placed on the market has fallen, for both premium grade petrol and diesel.

GTPA revenue

2006	2007	2008	2009
€2M	€5M	€2M	€104M

3.2. Tax exemption

The partial exemption from domestic consumption tax (DCT) helps to offset the additional cost of producing biofuels compared to fossil fuels.

Each year its amount is fixed in the Finance Law for the following year. The scheme also ensures that most of the biofuels incorporated in France are traceable.

Only biofuels obtained from approved units benefit from this tax exemption, within the limit of the fixed quantities. These units were approved within the context of European calls for applications that led to the approval of 29 biodiesel production units, four ETBE production units and 23 bioethanol production units in France.

The volumes approved

k tonnes	2007	2008	2009
FAME	1 347	2 487	2 647
ETBE	222	225	224
Ethanol	333	717	867

The amounts exempt from tax

€/hl	2007	2008	2009	2010	2011
FAME*	25	22	15	11	8
ETBE**	33	27	21	18	14
Ethanol					
VOEE***	30	27	21	18	14
SB****	25	22	15	11	8

* fatty acid methyl esters

** only the ethanol portion can benefit from this

***vegetable oil ethyl esters

****synthesis biodiesel

The costs of the tax exemption

2006	2007	2008	2009
€1 260M	€500M	€720M	€521M

Despite the steady decrease in biofuel tax exemption rates, the increase in incorporation rates led by 2008 to a steady increase in the overall costs generated by this measure. In 2009 the tax exemption will thus have cost the State €520M in lost revenue.

4. The impact of the energy and environmental performance of the biofuels consumed in France

4.1. Compliance with sustainability criteria, efficiency targets

The principle of sustainability was introduced into the legislation by Programming Law No 2009-967 of 3 August 2009 on the implementation of the Grenelle Environment Forum. Article 21 of this law states that 'the production of biofuels in France is subject to energy and environmental performance criteria including in particular the biofuels' effects on soil and water resources'.

The French Environment and Energy Management Agency (ADEME) was commissioned to carry out a study in order to draw up a list of the biofuels used in France with regard to energy consumption and greenhouse gas emissions. The working group set up in this context consisted of representatives of the agricultural and industrial sectors concerned, the technical institutes (INRA, IFP, ADEME) and the competent State departments.

The final ADEME report entitled 'Life cycle analyses applied to first generation biofuels used in France' has been available on-line since 8 April 2010 on the websites of ADEME, the Ministry of Food, Agriculture and Fisheries and the Ministry of Ecology, Energy, Sustainable Development and Marine Affairs.

4.2. Second-generation biofuels

The physical and economic limits of the production of first-generation biofuels, in particular in terms of yield per hectare and the protection of food outlets, make the development of second-generation biofuels a priority. For this reason, the government entrusted ADEME with the task of managing a fund in order to support the research conducted in the various fields of the new energy technologies. Within this context, ADEME issued a call for expressions of interest (CEI) on second-generation biofuels. The application files were examined and three projects were selected:

- Futurol based on a biological process in which biomass is transformed to produce ethanol;

- BioTfuel based on a thermochemical process involving biomass transformation followed by Fischer-Tropsch synthesis to produce a synthesis biodiesel;
- Gaya based on a gasification/methanation process to produce a gaseous biofuel.

5. National resources allocated to the production of biomass for energy uses other than transport

Biomass energy recovery must help contribute to the ambitious targets set by the Programme Law laying out the energy policy guidelines with regard to the development of renewable energies by 2020, namely, in addition to transport fuels:

- an increase in the production of renewable electricity to 27 % of domestic electricity consumption;
- an increase of almost 50% in renewable heat production.

In 2008 biomass (including waste incineration and biogas) produced 4.3 TWh of electricity and 9.284 Mtep of heat.

Details of this portion are given in the national renewable energy action plan drawn up within the framework of Directive 2009/28/EC.