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Biofuels in Belgium

Short summary : The European directive 2003/30 has been implemented into the Belgian legislation in 2005. A call for tenders has been launched for biodiesel and bioethanol that will be produced and marketed starting in November 2006 and October 2007 respectively. A tax advantage has been given for blends, while keeping it neutral for the state budget (increased tax on fossil part). Pure plant oil has been completely exempted from excise duty.

Policies and regulations including tax

Transposition of EU Directives

Further to the Directives 2003/30 and 2003/96 of the Union the following procedure was implemented in Belgium :

- Arrêté Royal (published Moniteur Belge – MB : official journal - 8 March 2005) : this law set objectives of 2% by 2005, additional 0,75% per year, to reach 5,75% in 2010 (energy content).
- Programme Law (MB 12 July 05 et 30 Dec 05) : These laws were proposing tax advantages to the various liquid biofuels. These taxes changed several times due to the evolving taxes in Belgium.
- Approval of the tax reduction by the European Commission (26 December 2005)
- Arrêté Royal (MB 20 March 2006) : pure plant oil (PPO) is added to the list of products that are free of taxes, like the fuels used in agriculture for example. The starting date is 3 April 2006.
- Arrêté Royal (MB 16 June 2006) : this law set adapted tax rates and announced the call for tenders procedure for Belgium, together with volume for biodiesel and ethanol, dates for making these biofuels available on the market. An evaluation committee is established and criteria for choice are identified.
- Official Journal of EC (4 July 2006) : a European call for tenders for biodiesel and ethanol is launched with a deadline for applicants of 21 August.

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- Press release 22 October 2006 : the winners/producers are known for ethanol and the first period for biodiesel. The producers for the second call will be known by 22 December.
- Arrêté Royal (MB 7 Dec 06) : this law gives the modalities for biofuels that are not covered by CEN standard (PPO, E85, blends > 5%) and state particularly the modalities for PPO.

Implementation on the Belgian market

The volumes and eligible blends for tax advantages are the following :

Ethanol :

- 48 000 m³/y between 1/10/2007 et 31/12/2007
- **250 000 m³/y** from 2008 to 2012
- 187 500 m³ from 1/01/2013 and 30/09/2013
- tax advantage for min. 7% ethanol through ETBE)

Biodiesel :

- 286 000 m³ between 1/11/2006 and 30/09/2007
- 475 000 m³ between 1/10/2007 and 31/12/2008
- **380 000 m³/y** between 2009 and 2012
- tax reduction if min. 3,37% bio in 2006, 4,29% in 2007 and 5% afterwards
- possibility of tax reduction for higher blends only for regional public transport companies

Pure Plant Oil :

- PPO is fully exempted from taxes provided the following conditions are fulfilled :
- PPO produced by farmers and cooperatives
- used of their own rape
- direct commercialisation to final users

Using this system of call for tenders (similar to the system applied in France) Belgium has ensured that investment and production will be operated in the country. It prevents imports of biodiesel because the tax advantage is only allocated to a few known production companies at precise location. However the choice among producers was difficult and highly politically influenced. In addition the system is not flexible regarding the quantities that can be marketed and the producers might fail for any reason. The price of biodiesel might also be influence as the number of producers is limited to 4 only.

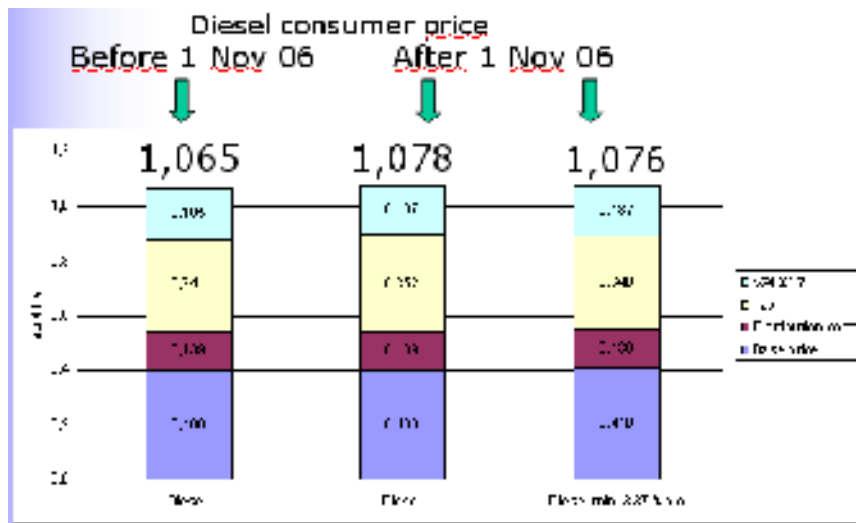
The tax regime

Regarding tax exemption the Belgian government has approved a tax advantage for biodiesel **without any burden for the budget**. Starting on 1 November 2006, the tax of fuels will remain about the same for diesel that will contain 3,37% biodiesel while the pure fossil diesel tax will be increased by 1,2 c€/l. The advantage in favour of biodiesel amounts to 35,2 c€/l (1,2 / 0,0337).

Price of diesel for final consumers before and after 1 November in Belgium

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Such tax system is attractive mainly because it does not reduce the state income. Increasing the tax on transportation fuels is also favouring the rational use of energy and CO₂ savings because the fuels becomes more expensive and consumers are supposed to consume less. However it is a pity that the Belgium tax regime does not allow a tax reduction for high blends. Only public transportation companies are eligible for proportional tax reduction when the biofuels content increases.

Raw material supply

Players

In Belgium the arable land amounts to 800 k ha. Main crops are cereals, sugar-beet, maize and potatoes. Farmers are generally not organised in cooperative (except SCAM in Wallonia). Rapeseed is collected and stored by private companies (Walagri, SCAM, AVEVE and several (small) independent collectors, all federated by SYNAGRA). These companies are buying and selling cereals and rape on the world market sometimes through specialized traders.

Regarding oil production and refining Cargill is the main (and almost only) players in Belgium with large capacities in harbours of Antwerp and Gent and several other locations. A new investment in a crushing plant of 300 k t is planned specifically for the supply to biodiesel plants.

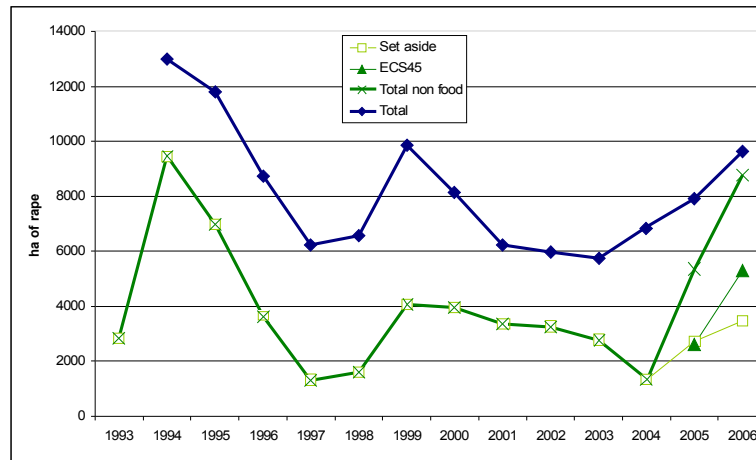
Rape potential

Rape is cultivated on set aside in Belgium almost since the beginning of the set aside regime. It has always been sent abroad physically or through certificates. The surface evolved according to the set aside percentage and the price and ranged between 1 and 9 000 ha. The total rape area is now close to 10 000 ha in Belgium. The energy crop scheme does not increase the rape area but it substitutes food crops.

Evolution of rape area total area and non food area on set aside and energy crop scheme

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According to several sources the rape area could double mainly depending on the price and the competitiveness with other crops (wheat is now proposed on set aside). In any case the potential of rape in Belgium is by far insufficient to cover the demand and import is necessary.

Biodiesel producers

Due to the call for tenders in Belgium the biodiesel producers are known (name of company, location, received quota, capacity of the plant) :

First call (quantities to be marketed from 1 Sept 06 to 30 Sept 07)

- Oleon : Gent, quota : 72 M l, capacity 95 000 t
- Neochim : Feluy, quota : 125 M l, capacity 200 000 t
- Proviron : Ostende, quota : 48.32 M l
- Flanders Biofuels : Gistel, quota : 40.68 M l

Second call (after 1 Oct 07)

- Bioro : Gent, capacity 250 000 t
- Proviron
- Neochim
- Oleon

Neochim plant in Feluy (200 000 t/year)

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End users : transport and heat sectors

Biodiesel in Belgium will be used exclusively in the transport sector. Light fuel oil for heating has one of the lowest tax in Belgium compared to other European countries. Biodiesel is therefore not competitive at the current oil price.

Objective

The objectives for Belgium are outlined in the table below. If we estimate the consumption of gasoline and diesel for the year 2010 (evolution of - 4,4%/y for gasoline and + 4,7%/y for diesel between 1995 to 2005, convert this consumption into toe and multiply by the objective for Belgium, we can estimate that about 542 k toe are necessary to meet the objective.

Evolution of diesel and gasoline consumption, and calculated target for Belgium

	Gasoline (Ml)	Diesel (Ml)	Total (toe)	Objective BE (%)	Objective BE (tep)
1994	3 787	4 681	6 816 592		
1995	3 776	4 706	6 829 565		
1996	3 647	4 963	6 950 974		
1997	3 372	5 287	7 019 707		
1998	3 339	5 544	7 213 160		
1999	3 179	5 794	7 305 362		
2000	2 978	6 108	7 421 137		
2001	2 898	6 384	7 595 451		
2002	2896	6 899	8 031 732		
2003	2869	7 404	8 439 662		
2004	2683	7 548	8 422 148		
2005	2406	7468	8 146 219	2	162 924
projection 2006	2300	7821	8 366 294	2,75	230 073
projection 2007	2198	8190	8 604 037	3,5	301 141
projection 2008	2101	8577	8 859 965	4,25	376 549
projection 2009	2009	8983	9 134 629	5	456 731
projection 2010	1920	9407	9 428 623	5,75	542 146

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This projection of fuels consumption shows that the biodiesel volume of the call for tenders (380 k m³) is equivalent to 4% of the market in 2010. Together with the ethanol volume (250 k m³) the call for tenders reaches 4,4% (energy) of the fuel market. It means that this is not sufficient to reach the 5,75% target for Belgium.

Other issues

In addition it is important to note that the Belgium system does not foresee any obligation. Biodiesel producers have to market their production without any obligation on the side of the oil companies. For biodiesel however the problem is less crucial than for ethanol for which the volume represents 12% of the 2010 market, almost impossible to reach.

The communication around biodiesel development is another key aspect to look at. In a first experience a B3 blend was distributed in a public pump and announced as Biodiesel for the consumers. After a few days the oil company noticed that fewer clients were visiting this pump because they were afraid about this new kind of fuel. It is likely that the communication strategy of fuel distributors will be adapted in the future or the biodiesel blends will be completely anonymous.

First biodiesel pump in Belgium in December 2006 (in reality a B3 blend)



As mentioned before the tax exemption for high blends is valid only for public transportation companies. In Belgium three companies are focused : TEC, De Lijn, STIB. It not known yet if they will step in and use biodiesel but it would be extremely welcome for the biodiesel sector as the communication around these experiences would certainly be worth.

Finally Belgium would have to evaluate already the strategy beyond 2010. An objective of 10% by 2020 might be feasible but the kind of biofuels is questionable.

International trade

Import of raw material

The comparison with the internal supply of rape and the biodiesel industry demand for vegetable oil is extremely clear. As mentioned above 10 000 ha of rape are cultivated in Belgium. This corresponds to roughly 35 k t of rape and 14 kt rape oil.

To reach the quantity of the call for biodiesel, roughly 380 k t oil are needed, meaning that Belgium will be able to provide less than 5% of the demand. It is foreseen that large quantities of rapeseed,

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rape oil, soybean oil and palm oil will be imported in Belgium. Certification of these imports will certainly be an issue on the coming years.

Export of biodiesel

The capacity of the biodiesel industries in Belgium will exceed the need for the Belgian market. It is estimated that a capacity exceeding 500 k t biodiesel will be operational by the beginning of 2008. Therefore there is a clear potential for exporting biodiesel abroad.

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