

Supply and Demand of Biodiesel in the European Union (EU)

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INTRODUCTION

There was a significant development in the EU in 2001 when the European Council agreed on a strategy for sustainable development, including the use of biofuels. In May 2003, the EU outlined a comprehensive legislative framework (European Directive 2003/30/EC) on the promotion of biofuels and other renewable fuels for transport, simply known as the Biofuels Directive. In November 2003, there was unanimous adoption of the new Council Directive 2003/96/EC on taxation of energy products, including detaxation of biodiesel and biofuels to boost their production. This legislation is also known as the Energy Tax Directive. With these two important directives in place, the EU can now develop its biofuels industry for its energy security which is seen as politically correct action for protecting the environment, enhancing agriculture and creating job opportunities.

Technically, biofuels are liquid fuels produced from biomass feedstocks via a number of chemical processes. The two common biofuels that have advanced the most are biodiesel (produced from vegetable oils) and bioethanol from plant sugars and its derivative, ethyl tertiary butyl ether (ETBE). Currently, in the EU, biodiesel has greater emphasis than bioethanol. Further development in the biodiesel industry is expected in the EU, but much of the planned expansion is still dependent on several factors, including incentives, investments and feedstock availability. These factors are likely to influence biodiesel developments over the

next few years as legislative changes, research and development and promotion of biofuels in public transport strive to meet the requirements of the Kyoto Protocol in the agreed reductions in emission of greenhouse gases.

PROMOTION OF BIODIESEL IN THE EU

In EU, biodiesel continues to be the preferred and leading alternative to conventional fuels, although bioethanol is starting to make in-roads. The Biofuels Directive basically requires member states to increase the use of biofuels to a minimum of 2% of total liquid fuel consumption by 2005 and progressively increase it further to 5.75% by 2010. These targets are non-mandatory but require all EU member states to annually report their progress on implementation

with close monitoring by the EU authorities on the levels of achievement in the targets. These targets serve as a strong political signal and indicate the determination and commitment of the EU member states to the use of biofuels.

The Energy Tax Directive meanwhile provides the legal basis for national legislation and regulation on tax incentives for biofuels. This directive (specifically Article 16) allows member states to reduce taxation on several products listed in it (*i.e.* vegetable oils, non-synthetic alcohols, esters and products produced from biomass). This directive is vital to achieve the targets in the Biofuels Directive. It is acknowledged that without tax relief, biofuels are uncompetitive with conventional fuels. As the targets in the Biofuels Directive are not mandatory, oil companies will only blend biofuels in their gasoline and diesel if there is economic justification. It is important to note that the tax relief may have various effects, some intentional and others unintentional. Clearly, if this tax relief results in investment in new production facilities and also in the increased use of biofuels, then an important goal would have been achieved. However, on careful analysis, the Energy Tax Directive has also allowed a non-traditional ethanol producer entry into the fuel alcohol business in the EU, which is being resisted by

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some member states.

In November 2003, after several years of negotiations, the EU finally agreed on a Biodiesel Standard, EN14214 CEN for FAME (fatty acids methyl esters). EN14214 is now the only standard applicable to biofuel in the EU and a recognized reference both for biodiesel producers, and for the mineral oil and car industries. This is an important development in terms of standardising technical purity and strengthening product warranty. Meanwhile, another important technical development is the adoption of a revised standard for petroleum diesel (EN590) which specifies it to contain up to 5% FAME to be considered as conventional diesel in all respects, without the need for any particular treatment or labelling at the pump. This technical modification simplifies the marketing of blends containing up to 5% biodiesel and will have an extremely positive impact on the future development of biodiesel markets. In Germany, another important change has taken place. A new law on biomass was approved in November 2003, which opened the door to the detaxation not only of pure biodiesel, but also to blends containing biodiesel of up to 5%. This important progress has completely transformed the main EU market for biodiesel (*i.e.* Germany), and has opened up new possibilities for partnership with the local mineral oil industry. There is a good possibility that other EU member states may follow Germany's decision.

Another important development is the Mid-Term Review Reform of the Common Agricultural Policy (CAP) approved in June 2003, which had an important impact on agriculture. The reform maintained set aside arrangements under which non-food crops for biodiesel production can be grown. This has led to the creation of support for non-food crops under the form of a carbon credit of €45 ha⁻¹ that will be

granted to farmers growing energy crops. However, some critics have argued that the non-food set aside scheme has its own limitations, as it only benefits indirectly oilseeds and is not applicable in acceding countries under the *simplified scheme*.

Impact of the Directive

With all the main EU legislatives in place, the real work is to assure that all these directives are implemented satisfactorily in all the 25 EU member states. This is an important step which is crucial for ensuring that the EU targets for biofuels are realized. Despite making good progress, it was acknowledged that the EU would not succeed in its goal of having 2% of all its transport fuels derived from biofuels by the end of 2005. At best, it may reach 1.5%. According to European Commission (EC), despite the projected shortfall, the output of biofuels has risen sharply in recent years, largely because of tax breaks on fuel duties in leading producing countries like Germany. In 2002, only 0.2% of all transport fuels were derived from biofuels, and by 2003, the amount had grown to 0.6%. The EU's ultimate goal of 5.75% by 2010 would have a profound impact on agriculture, as it would need at least 9% of the EU agricultural area. According to the EC, assuming 14 billion litres of biodiesel and 13 billion litres of bioethanol are to be produced, some 9.7 million hectares of rapeseed, 5.1 million hectares of grain and 0.6 million hectares of sugar beet will be required. Rapeseed production will have the most profound implication on agriculture. Currently, a total of about 4.2 million hectares in EU 25 are planted with rapeseed.

Another key question concerns the impact of the EU Biofuels Directives on new EU member states. The 10 new member states that joined the EU on 18

May 2004 will need to implement the EU Directives as soon as possible. Apart from Czech Republic, the other countries have no biodiesel industries. In addition, the normal CAP rules supporting non-food production will not apply. Farmers in acceding countries (with the exception of Slovenia) will receive only 25% of the normal CAP payment, and will not receive any premium for energy crops, and there will be no compulsory set aside. This is the challenge that these countries will face as their biodiesel sector will have to be developed without any kind of support from the agricultural side.

The tax relief has also opened up a new market opportunity for bioethanol as fuel. Generous tax breaks combined with relatively open markets (like in Sweden, France and Spain) will soon attract ethanol from non-EU countries such as Brazil. Whether intentional or not, the bioethanol market, so far a predominantly national market, will become an European market. Finally, the trend of non-traditional ethanol producers entering the fuel alcohol business will continue, and so will the competition, not only with bioethanol but also with biodiesel.

Demand for Biodiesel

In view of the political determination, the consumption of biofuels is set to increase rapidly. Approximately 14 million tonnes of biofuels need to be produced in the EU by 2010 to meet the 5.75% target. Biodiesel demand would be for about 2.5 million tonnes in 2005 to achieve the overall 2% target with the balance from bioethanol, and this will progressively increase to 7.3 million tonnes to meet the overall 5.75% target by 2010 (*Table 1*). This will be an enormous challenge for the individual member states. Therefore, it was not surprising that these goals, originally meant to be obligatory were subjected to intensive

discussion among the states. As a result, it was agreed that these targets would merely be indicative goals. Indicative goal does not mean that the targets will have no real value. On the contrary, the EC will use them as a yardstick to require each member state to issue annual reports on the way in which they will meet the targets. The EC reserves the right to prescribe a goal for a member state if it fails to make any effort to meet its own goal.

CURRENT BIODIESEL PRODUCTION IN EU

As a result of several favourable directives, the EU biodiesel production is today a thriving industry. According to the European Biodiesel Board (EBB), the total biodiesel capacity in the EU in 2004 was 2.25 million tonnes. Almost half of this was in Germany, with a capacity of 1.09 million tonnes. France and Italy

are the next two biggest producers of biodiesel. However, this scenario will change dramatically in the next two to three years, as many new production facilities and capacity expansion are reported, especially in Germany, France and the United Kingdom (Table 2).

SUPPLY AND MARKET DEVELOPMENT OF BIODIESEL

Since early 2005, many EU states have released their strategies detailing their biofuels production programmes to meet the 2005 target. It appears that most states are leaning toward the use of biodiesel as the preferred alternative fuel.

Germany

Total biodiesel capacity in Germany was about 1.09 million tonnes in 2004. With several new plants coming on-stream, total

output is expected to reach 1.4 – 1.6 million tonnes in 2005. Rapeseed oil continues to be the dominant feedstock. Germany's biodiesel industry is currently working at full capacity. The country is on course to meet its biofuel goal. In early 2004, Germany permitted oil companies to blend biodiesel with conventional fuels up to a maximum 5% biodiesel content. It is expected that the growth in sales of blends could rise from 15% in 2004 to as much as 40% in 2005.

France

France is the second largest producer of biodiesel in the EU, with a total capacity of 502 000 t yr⁻¹. The government has announced a tripling of the country's biofuel capacity over the next three years. This means an additional 800 000 t available by end 2007. This includes a

TABLE I. EU TARGETS FOR BIOFUELS (1000 t)

Year	Target share (% of total demand)	Biodiesel demand	Total biofuels demand*
2005	2.00	2 532	4 873
2006	2.75	3 482	6 701
2007	3.50	4 431	8 527
2008	4.25	5 381	10 355
2009	5.00	6 331	12 183
2010	5.75	7 280	14 010

Note: *Based on 1998 fuel consumption.
Source: EU Commission COM (2001).

TABLE 2. PRODUCTION CAPACITY OF BIODIESEL IN THE EU (1000 t)

Country	2004	Additional future capacity*
Germany	1 088	410
France	502	260
Italy	419	-
Austria	100	120
Spain	70	90
Denmark	44	-
United Kingdom	15	300
Sweden	8	-
Czech Republic	63	-
Slovenia	10	-

Note: *Up to 2005 (various sources).
Source: European Biodiesel Board (EBB) except Czech Republic and Slovenia.

160 000 t plant by Diester Industrie that is due to start operation in September 2005. The government has also announced a new tax break on biofuels to the amount of €320 million a year. The new production capacity is split between 480 000 t of biodiesel and 320 000 t of ethanol. Diester Industrie also plans to double its production to 200 000 t at its plant in Venette. The company is also reported to be discussing with Cargill to set up a new biodiesel plant near the Port of Saint-Nazaire with a capacity of 120 000 t yr⁻¹. Currently, biodiesel constitutes about 1%-2% of the total diesel consumption in France.

Italy

Unlike other EU member states, Italian production of biodiesel is forecast to decrease dramatically in 2005 and in the near future. The Italian budget for 2005 unexpectedly reduced biodiesel tax relief from the previous 300 000 t yr⁻¹ to 200 000 t. According to governmental sources, the tax relief was cut because of budgetary limitations. This action contradicts the previous policy which increased the amount of biodiesel eligible for subsidy from 125 000 t in 2000/2001, to 300 000 t yr⁻¹ for the three-year period 2001/2002 to 2003/2004. Given the extremely high consumption tax on gasoline and petroleum products in Italy, the only way to make biodiesel competitive is with the re-introduction of the tax relief, supported by environmental considerations. Biodiesel consumption has increased from 70 000 t in 1999/2000 to 310 000 t in 2003/2004. Biodiesel has been increasingly used by the petroleum industry, in blends of 5%-30% with petroleum diesel, and, to a lesser extent, for heating. The effect of biodiesel production on Italian agriculture is, however, very

minimal because the rapeseed oil used for making biodiesel is imported from France and Germany. Only about one-fifth of the biodiesel produced is from soyabean oil.

Austria

Austria is also leaning towards biodiesel to meet its biofuels target. The country has nine large biodiesel plants, along with three pilot plants, with a total capacity exceeding 100 000 t yr⁻¹. However, in 2003, only 55 000 t of biodiesel was produced, of which 90% were exported to neighbouring countries at a higher price. The government has not addressed the issue of tax incentives to encourage domestic biodiesel producers to keep their product in the country. Austria has set tentative targets of using 2.5% biofuels by 1 April 2005 equivalent to 220 000 t yr⁻¹. This is targeted to increase to 4.3% by 1 April 2007 and 5.75% by 1 April 2008. However, the government has also acknowledged that blending of 5% biodiesel is not enough to achieve the biofuels target, and has thus recommended higher blends ratio, although no specific level was mentioned.

Denmark

Denmark is the only EU country which has reservations about the biofuels target. The country alleges that biofuels are far more expensive to produce than petrol or diesel, although the country produces about 44 000 t of biodiesel annually. In addition, considerable additional investment is required in existing systems to handle the biofuels during storage and distribution. Denmark is also against any tax relief for biofuels because if complete tax exemption were granted, the country will lose approximately USD 41 million when the 2% biofuel target is met, and this would grow to USD 131 million when the target reaches 5.75%

by 2010. The government intends to inform the EC that Denmark's indicative target for the use of biofuels in 2005 will be zero. However, it acknowledges that developments in biofuel technology in the future may change the economics of biofuels and thus may result in the country changing in its view on biofuels.

United Kingdom

The United Kingdom is unlikely to meet its biofuel production target in 2005, but investment continues to grow. The United Kingdom has set its own target at 0.3% by 2005 as current output is running at around 0.1% for all transport fuels. It was also announced that DI Oils PLC would start a joint venture to produce biofuel in Saudi Arabia for export to Europe, using *Jatropha* oil from the non-edible oil plant, for blending with diesel.

Several major biodiesel projects are already in the pipeline, including the 200 000 t Greenergy plant at Immingham in Humberside, scheduled for production by mid 2006; the 50 000 t Argent Energy plant at Motherwell, Scotland, capable of turning used cooking oil and animal fats into fuel, is due on-stream in May 2005; and the 250 000 t Biofuels Corporation plant at Billingham at Teeside, scheduled to become operational in the third-quarter of 2005. Biofuels Corporation said that rapeseed oil and palm oil will be used as feedstocks. The company has also agreed to sell about 350 000 t of its output in a five-year deal with Petroplus, a Dutch oil refinery. Petroplus says it has captured 60% of the United Kingdom biodiesel market with its *Bioplus* brand, a 95:5 blend of ultra-low sulphur-diesel and biodiesel.

Greece

In Greece, it was agreed that the most convenient biofuels are

biodiesel and ethanol. The country has no real consumption of biodiesel, either from domestic production or imports. The government initially planned to use a 5% biodiesel blend, but did not specify to what blend ratio the fuel could potentially be raised. Greece has two biodiesel plants under development, one in Kilkis by Elvy SA, with an annual capacity of 40 000 t which is due to be ready by December 2005, and another at Volvos by Elinos SA, of the same capacity, to operate in mid 2005. The plants will use mainly imported rapeseed oil and soyabean oil, while domestic oils, such as cottonseed oil, will play a smaller role. Both plants will have the potential to double their capacities within one year. At least three other companies have expressed interest in building biodiesel plants in the country, with capacities between 10 000 to 30 000 t. Greece will need 47 000 t of biodiesel to meet the initial 2% biofuel requirement in 2005 and 148 000 t to meet the 5.75% target in 2010.

Belgium

The government is preparing to introduce 2% biodiesel into conventional fuels in 2005. This will be increased to 6% within five years.

Ireland

According to Sustainable Energy Ireland (SEI), the country has the capacity to produce biofuels for substituting both petrol and diesel. Feedstocks such as rapeseed oil, used cooking oil and animal fats can be used. The company estimated that there is an immediate potential for 22 000 t of tallow and 5000 t of used cooking oils for biodiesel. SEI also reported that Ireland could meet about 23% of the EU Biofuels Directive by 2010 without imports, but through the use of set aside land. As a result, a group of Wexford County

farmers have set themselves up as potential biodiesel producers using rapeseed oil.

Finland

In Scandinavia, a Finnish energy company, Fortum, is building a biodiesel plant at its oil refinery in Porvoo. The plant, which is due to come on-stream in August 2007, will have an annual capacity of approximately 170 000 t. It is expected that this production can serve all the Nordic market needs. There is currently no significant commercial biodiesel production in Finland.

Poland

Progress towards meeting legislation in the new EU member states on biofuels has been slow. In Poland, a new legislation to replace the ex-Biofuels Act 2003 is unlikely to be gazetted until later in 2005. The Polish Ministry of Agriculture is working on two bills to replace the Biofuels Act, which was earlier deemed unconstitutional by the local Constitutional Tribunal. Although at present the production of *biocomponents* for addition into petrol is considered unprofitable for commercialization, ADM is planning to produce biodiesel in Szamotuly. PKN Orlen plans to build a biodiesel plant in Germany using Polish rapeseed oil. It will have a production capacity of 100 000 t yr⁻¹.

Other EU Member States

The Hungarian oil and gas producer, MOL, announced that it will start producing biodiesel from July 2005. At the end of last year, the Hungarian Government decided not to impose any excise duties on biodiesel to boost the industry. Cyprus, Estonia, Latvia, Lithuania and Slovakia have all published their intentions for achieving the targets in the EU Biofuels Directive using domestic production. Estonia is proposing

to make biodiesel tax-free. Slovenia's largest petrol trader, PETROL, is expected to produce about 80 000 t yr⁻¹ of biodiesel within two to three years, sharply up from some 10 000 t yr⁻¹ currently.

FEEDSTOCKS FOR BIODIESEL

Fatty acid methyl esters, which can be derived from vegetable oils, are the most common biodiesel. In the EU, the primary feedstock is rapeseed oil although, in Southern Europe, some sunflower oil is used. Rapeseed oil is the definite choice as it is domestically produced and cheaper.

Although the EU is a large producer of rapeseed, the current production is not enough to cater for the growing demand for biodiesel. According to *Oil World*, in 2004/2005, the total rapeseed oil disappearance will be 5.1 million tonnes, of which an estimated 2.3 million tonnes will go into biodiesel production (Table 3). This means that more than one-third of the EU rapeseed crop will be used by the non-food sector. According to EBB, the EU production of oilseeds does not follow the increase of biodiesel production, neither are the EU figures for the crushing of oilseeds. The report of the EC Agriculture Director-General (DG Agri) also indicates that oilseeds production will not increase even in the long-term (1995-2011). Some critics have also argued that the CAP reform and the enlargement of EU are not enough to boost rapeseed production. The energy crops scheme, although in the right direction, is insufficient as it is limited to 1.5 million hectares EU-wide with complex administrative procedures to activate the plantings.

There are few other alternative feedstocks for biodiesel production. Most of them have limitations either on political and/or technical grounds. Firstly, the EU can use non-EU soyabean

oil. The production of biodiesel from imported feedstock is not off-limits anymore. Politically, imported soyabean will have an image problem as genetically modified organisms (GMO's) are still resented in the EU. The sourcing and logistics of transportation can also be expensive. Technically, the use of soyabean oil is limited by the iodine value in the EN14214 standard. Sunflower oil, both of EU and non-EU origins, can be an alternative. However, the availability of sunflower oil is limited, and the price is generally higher than many other vegetable oils. Like soyabean oil, sunflower oil also has a high iodine value.

Secondly, used cooking oil and animal fats have been considered as cheap alternatives to rapeseed oil. The limitation is mainly technical, as used cooking oil must be purified and blended with a high percentage of biodiesel from rapeseed in order to meet the EN14214 standard. Some have argued that production from animal fats cannot easily meet the EN14214 standard. Overall, both these feedstocks have negative impact on the quality if not properly handled and processed.

The third option is to use palm oil. Palm oil has been successfully used as biodiesel. Malaysia has embarked on an extensive biodiesel programme since 1982. The programme includes development of production technology to convert palm oil to palm oil methyl esters (palm diesel), pilot plant study of palm diesel production, as well as extensive evaluation of palm diesel in running conventional diesel engines. Methyl esters from crude palm oil and crude palm stearin produced by MPOB/PETRONAS technology have very similar fuel properties to petroleum diesel. In recent years, MPOB has also developed palm diesel with low pour point (without additives) to meet seasonal pour point requirements in the colder months. With an improved pour point, palm diesel can be used in temperate countries. In comparison with rapeseed oil, soyabean oil and sunflower oil, palm oil is more cost-effective and abundantly available.

CONSTRAINTS OF BIODIESEL

There are several constraints in the production and consumption

of biodiesel in the EU. Firstly, on the issue of product liability, the European Standard for diesel fuel EN590 permits only the addition of a maximum 5% biodiesel. Though other blends containing more biodiesel are possible in tax terms, they no longer conform to the fuel standard and, therefore, have to be classified separately in accordance with the EU directive on the promotion of biofuels and national fuel quality. This aspect is particularly relevant in the case of the use of diesel/biodiesel blends with respect to the end customers (*i.e.* product liability), since it is impossible to determine prior to mixing the original quality of the fuels in question.

Secondly, the biodiesel standard as stipulated in EN14214 is essentially based on fatty acid methyl esters from rapeseed oil. Thus, production from used frying oils and animal fats must be critically evaluated in order to meet the quality specifications set down in EN14214.

Thirdly, about 80% of the feedstock for biodiesel is rapeseed oil, although sunflower oil is also used in Southern Europe. The crux for a feedstock is therefore, the minimal quality requirements of EN14214. With regard to

TABLE 3. SUPPLY AND DEMAND OF 17 OILS AND FATS IN EU25 (million tonnes)

Production	04/05F	03/04	02/03	01/02	00/01
Soya oil	2.55	2.55	3.03	3.23	3.04
Sun oil	1.75	2.03	1.76	1.66	2.24
Rape oil	5.39	4.40	4.24	4.31	4.20
Olive oil	1.99	2.32	2.02	2.40	2.05
Other 13 oils	5.54	5.51	5.52	5.45	5.33
Total	17.22	16.81	16.57	17.05	16.86
Consumption (a)					
Soya oil	1.88	2.09	2.40	2.41	2.15
Rape oil	5.13	4.34	4.14	4.00	4.10
Sun oil	2.37	2.42	2.28	2.11	2.31
Palm oil	4.25	3.67	3.49	3.31	2.80
Olive oil	2.00	1.99	1.98	1.96	1.95
Tallow	1.08	1.11	1.16	1.18	1.20
Others	5.90	5.86	5.87	5.84	5.73
Total	22.61	21.48	21.32	20.81	20.24

Note: (a) = for food and non-food.
Source: Oil World (April 2005).

marketing biodiesel as a neat fuel in the EU, the automotive industry has exerted significant pressure on the biodiesel industry to vigorously meet the requirements in the standard. Some car producers are reported not to be in favour of providing car warranties for biodiesel derived from other than rapeseed oil. Serious deviations in the biodiesel quality standards can result in a temporary closure of biodiesel pumps at service stations, as the operators are liable for the product.

Fourthly, the EU targets are very ambitious and dependent on agricultural supply as the main feedstock for the biodiesel industry. This means the EU agriculture must grow in tandem to meet the development in the biodiesel sector. The very high oilseed prices, including that of rapeseed, will not be a good incentive for biodiesel production. However, it should be noted that oilseed prices are seasonal and can vary rather greatly.

Finally, the different systems of detaxation and excise duties in force in the different EU member states can also be a source of confusion. There is not yet a real internal market for biodiesel with common rules based on mutual recognition of detaxation across the EU. Detaxation quotas and other national instruments, including the way in which detaxation is granted and the formula for blending, can also act as obstacles to intra-EU trade.

OUTLOOK OF BIODIESEL IN EU

The high energy prices in recent years will no doubt, be the main driving force for biodiesel production and consumption in the coming years. For the EU, the implementation of the biofuels targets, and the detaxation policy, should boost the production of biodiesel by its members. The availability of feedstock will be an issue that needs to be tackled quickly. The EU will have to at least double its rapeseed oil

production to meet the projected biodiesel demand, if rapeseed oil is to remain the main feedstock. The alternative is to import substantial quantities of rapeseed into the EU or consider other vegetable oils, such as soyabean oil, sunflower oil and palm oil. The key factor is that the feedstock must be economical. In Europe, it has been forecasted that at least 10%-15% of European biodiesel is likely to be produced from palm oil.

In the global perspective, the Kyoto Protocol on global warming came into force in February 2005 (without the endorsement of US and Australia). However, in most parts of the EU, it is still the domestic economic policy and feedstock availability that will primarily determine its future development and attraction for larger investors.

CONCLUSION

The EU has achieved a remarkable starting point with endorsement of the major EU Directives in 2003. Since then, developments have been phenomenal, in particular, the use of renewable energy for transport in many member states. The task ahead is to sustain the biofuels industry on a permanent basis. The EU needs to do this in a dynamic approach, by bringing together the different stakeholders involved in the biodiesel production, marketing chain and national administrations across the 25 member states. It is a political debate, no doubt, but, more importantly; it must be economically viable for the industry to prosper. Secondly, the government needs to convince consumers on the advantages of biodiesel, especially of their indispensable role in reducing the emission of greenhouse gases. The support from consumers is important. Lastly, there is a need for a strong partnership with the vegetable oil industry in order to provide the increasing quantities of raw materials. All sources of

supply, both within and outside the EU must be harnessed. In the future, EU biodiesel will, no doubt, continue to grow steadily, improving its cost competitiveness and maintaining a very high quality product profile. The full potential for biodiesel will be further realized if adequate agricultural supply is ensured, and when a real internal market is established throughout the EU.

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