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**Measures to promote the use of biofuels,
total sales of fuel for use in transport and the share of biofuels**

REPORT FOR 2010

Analysis of data on the use of biofuels in the transport sector in the Republic of Slovenia in accordance with Article 16 of the Decree on the promotion of the use of biofuels and other renewable fuels for the propulsion of motor vehicles (Official Gazette of the Republic of Slovenia No 103/07 and 92/10) and Article 4(1) of Directive 2003/30/EC of the European Parliament and the Council of 8 May 2003 on the promotion of the use of biofuels or other renewable fuels for transport (OJ L 123, 17.5.2003, p. 42) for the 2010 reporting year.

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CONTENTS

1.	INTRODUCTION.....	3
2.	MEASURES TO PROMOTE BIOFUELS.....	4
3.	STATUS OF CULTIVATION AND PRODUCTION OF BIOFUELS IN SLOVENIA.....	6
4.	BIOMASS FOR ENERGY USES OTHER THAN TRANSPORT.....	7
5.	TOTAL SALES OF TRANSPORT FUEL IN 2010.....	7
6.	SALES OF BIOFUELS FOR TRANSPORT IN 2010.....	7
7.	SOURCES	10

1. INTRODUCTION

On 8 May 2003 the European Parliament and the Council adopted Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport (OJ L123, 17.5.2003, p.42, hereinafter Directive 2003/30/EC). The Directive introduces measures to promote the use of biofuels and other renewable fuels to replace the use of mineral fuels in transport. This is a significant contribution to meeting objectives on improving the security of energy supply, reducing greenhouse gas emissions and creating new outlets for sustainable rural development.

The Directive requires European Union Member States (hereinafter: the Member States) to ensure that a minimum proportion of biofuels and other renewable fuels is used in transport and, to this end, requires each country to establish national targets on the proportion of biofuels for transport when placing fuels on the market. The Directive also establishes reference values for the Member States for these national targets: 2% by the end of 2005 and 5.75% by the end of 2010. The percentage of biofuels is calculated on the basis of energy values compared to the energy value for all the petrol and diesel used in transport.

Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC (hereinafter: Renewables Directive) was adopted on 23 April 2009. Pursuant to this Directive, each Member State was to harmonise its legislation in this area within 18 months. For the reporting year 2010, however, Directive 2003/30/ES, and consequently the Decree on the promotion of the use of biofuels and other renewable fuels for the propulsion of motor vehicles (Official Gazette of the Republic of Slovenia No 103/07), is still applicable.

In accordance with Article 16 of the Decree, which transposes Article 4(1) of the Directive into Slovenian law, Member States must report to the Commission by 1 July of each year on:

- the measures taken to promote the use of biofuels or other renewable fuels to replace diesel or petrol for transport purposes,
- the national resources allocated to the production of biomass for energy uses other than transport and
- the total sales of transport fuel and the share of biofuels, pure or blended, and other renewable fuels placed on the market in the preceding year. Where appropriate, Member States are to report on any exceptional conditions in the supply of crude oil or oil products that have affected the marketing of biofuels and other renewables.

This annual report is a continuation of Slovenian Government reporting to the European Commission in the field of biofuels and other renewable fuels for motor vehicles in the Republic of Slovenia, which commenced in 2005 (1-5).

2. MEASURES TO PROMOTE BIOFUELS

Legal framework

To promote the use of biofuels and other renewable fuels for transport to replace diesel and petrol of fossil/mineral origin, the Republic of Slovenia has adopted the following legislative acts:

- a. The Decree on the promotion of the use of biofuels *inter alia* specifies, as per the Directive:
 - the types of biofuels used as transport biofuels and
 - the minimum level of biofuels in motor vehicle transport which each fuel distributor must ensure for motor vehicles in each calendar year up to 2015.

Article 5 of the Decree specifies 5% as the minimum proportion of biofuels in the total quantity of motor vehicle propulsion fuels placed on the market in Slovenia in 2010. The content of biofuels is expressed as a percentage of the fuel energy value in the transport sector for motor vehicles.

In accordance with the provision of Article 5(3) of the Decree, the proportion of the annual quantity of biofuel may be reduced if the price of one or more of the highest daily biofuel prices on the stock exchange exceeds the amount of the daily stock exchange price of the mineral fuel with which biofuel is mixed and the excise duties for this mineral fuel. In 2010, conditions for reducing the proportion of biofuels arose only in the second half of December (a period of 13 days) and concerned only diesel fuel. Consequently, the proportion of biodiesel may be reduced by 5 % E/E to 4.743 % E/E.

Article 7 of the Decree on the promotion of biofuels requires that each distributor must ensure that the total annual volume of biofuels placed by him on the market in the Republic of Slovenia is at least equal to 70% of the total annual volume of biofuels in the period 2008-2012, calculated for this period on the basis of the proportions mentioned in Article 5 of the Decree. In the period 2008-2012, each distributor must ensure it is at least 80% of the total annual volume calculated for this period on the basis of the proportions mentioned in Article 5 of the Decree.

Pursuant to the provisions of Article 11 of the Decree, if an individual distributor fails to meet the annual obligations to place biofuels on the market, that distributor may be required, when planning to place biofuels on the market for the coming year, to increase the amount of biofuel placed on the market in such a way that the quantity of biofuel in the coming year equals the sum of the proportion that is set out in Article 5 of the Decree for the coming year and the unfulfilled obligation for the previous year.

- b. The Excise Act (Slovenian Official Gazette No 97/10) establishes that biofuels as transport fuel are dutiable goods and hence covered by the monitoring system but are zero-rated for excise duty purposes. If they are used as transport fuel in their pure form, they are exempt from excise duty. Blends of biofuels with fossil fuels may qualify for a refund of excise duty paid or for an exemption from excise duty commensurate with the proportion of biofuel added, up to a maximum of 5%. In the case of new energy products, the

Government of the Republic of Slovenia may fix the proportion of reimbursement or exemption from excise duties in accordance with the standards governing the quality of fuels.

c. Incentives to grow crops for biofuel production

Upon accession to the EU, Slovenia adopted the market regulations and the system for direct payments for crops, introducing direct payments for the production of energy crops. Direct payment has been introduced for the production of energy crops. In accordance with the rules governing **direct payments for producers of certain arable crops**, producers of energy crops (rape seed oil) may – in addition to direct payments, which in 2005 amounted to SIT 71 291/ha (€298/ha) – also receive aid for the energy crops amounting to SIT 6 474/ha (€27/ha). In accordance with Article 88 of Council Regulation (EC) No 1782/2003 of 29 September 2003 establishing common rules for direct support schemes under the common agricultural policy and establishing certain support schemes for farmers and amending Regulations (EEC) No 2019/93, (EC) No 1452/2001, (EC) No 1453/2001, (EC) No 1454/2001, (EC) 1868/94, (EC) No 1251/1999, (EC) No 1254/1999, (EC) No 1673/2000, (EEC) No 2358/71 and (EC) No 2529/2001 (OJ L 270, 21.10.2003, p. 1; hereinafter referred to as Regulation 1782/2003), and Article 30 of the Decree on direct payments in agriculture (Official Gazette of the Republic of Slovenia No 107/08), direct aid to producers of energy crops amounts to €45/hectare.

Government programming documents

The Slovenian Government's basic programming document as regards the introduction of measures to promote the use of biofuels for transport is the Operational Programme for reducing greenhouse gas emissions by 2012. The objective of the Operational Programme is to fulfil Slovenia's obligations to reduce greenhouse gas emissions within the first commitment period of Kyoto Protocol. The Government adopted the last amending act to the program on 30 July 2009. The operational programme makes provision, in the first five-year target period (2008 to 2012) of the Kyoto Protocol, for an average reduction in greenhouse gas emissions of 139 000 tonnes CO₂ equivalent per year, which entails replacing diesel and petrol by around 45 000 tonnes of fuel per year. The Operational Programme thus anticipates that, over the period 2008–2012, the average annual use of biofuels will amount to approximately 3% of all fuels for transport purposes.

Local initiatives

On the initiative of Ljubljana city council, the Ljubljana Public Passenger Transport Office (LPP) joined the European Commission's CIVITAS II - MOBILIS programme, which is designed to encourage local authorities to develop sustainable transport and to introduce transport solutions that are human- and environmentally-friendly and as efficient as possible. The objectives of the project are to test the use of biodiesel to power urban bus vehicles, to reduce the quantity of environmentally harmful exhaust gases and to lower fuel costs. From July 2005 a blend of fossil diesel fuel (80 %) and biodiesel (20 %) was tested in two LPP urban buses but, due to the difficulties of storing fuel, in 2006 there was a changeover to 100 % biodiesel, with the result that, depending on weather conditions (especially in winter), it has been used by up to 20 buses. In March 2009, for financial reasons, LPP completely ceased the use of pure biodiesel in its buses (6).

3. STATUS OF CULTIVATION AND PRODUCTION OF BIOFUELS IN SLOVENIA

Biodiesel

In the Republic of Slovenia, the greatest scope is for producing biodiesel or pure vegetable oil. The basic raw material to produce both these types of biofuels is oil obtained from pressing the seeds of oil seed rape. Further processes are necessary for the esterification of the vegetable oil in order to produce the final extraction of biodiesel.

According to the data of the Statistical Office of the Republic of Slovenia (SURS), approximately 2 809 hectares of land were sown with oilseed rape in 2006, enabling the production of approximately 15 000 tonnes of oil seed to make about 5 000 tonnes of biodiesel; in 2008 and 2009, a practically identical surface area was sown (4 442, 4 424 hectares), while a rather larger area was sown in 2010 (6 464 hectares), enabling the production of approximately 15 518 tonnes of oil seed to comfortably make 5 000 tonnes of biodiesel. More detailed data from this source (9) for the period 2005-2010 are shown in Table 1.

Table 1: Data for biodiesel produced from domestic oil seed 2005-2009

Year	Surface area sown with oil seed rape (ha)	Seed yield (t)	Biodiesel produced from Slovenian-grown seed * (t)
2005	2 260	5 352	1 784
2006	2 809	4 991	1 664
2007	5 358	14 740	4 913
2008	4 442	10 949	3 650
2009	4 424	9 845	3 282
2010	6 464	15 518	5 173

*Estimate

According to Ministry of Agriculture estimates, the Republic of Slovenia has, at most, between 6 000 and 7 000 hectares of suitable land available for the production of oil seed rape.

In Slovenia, in 2010 biodiesel was produced by a single registered producer, who produced 20 561 tonnes of biodiesel (10). The biodiesel was produced using rapeseed produced on Slovenian farms and imported raw materials.

At the end of 2009, trial production of biodiesel started in a new plant with an annual production capacity of around 50 000 tonnes. This will incentivise the cultivation of crops in the Republic of Slovenia suitable for biodiesel production. Despite this, the demand for raw materials will be greater than production in the Republic of Slovenia, hence it will be necessary to purchase raw materials on the markets of South-Eastern Europe and elsewhere. The aforementioned facility plans in the short term to produce 25 000 tonnes of biodiesel annually. Imported oil, waste edible oils and fats of animal origin, and also, to a lesser extent, home-produced oil seed (especially rape) will continue to be used as raw material.

Bioethanol

Slovenia does not currently have any plants that produce bio-ethanol or other types of biofuels suitable for blending with petrol nor does it have any refineries or plants that blend imported biofuels with petrol. Even arable land suitable for the cultivation of raw materials for bioethanol production is limited.

4. BIOMASS FOR ENERGY USES OTHER THAN TRANSPORT

Through its energy programme for the use of different sources of biomass, primarily aimed at generating electricity and heat, the Republic of Slovenia contributes to achieving EU objectives on improving security of energy supply, reducing greenhouse gas emissions and creating new outlets for sustainable rural development. According to data from the Statistical Office of the Republic of Slovenia (SURS), wood and other solid biomass accounted for 19.8 TJ of primary energy production, i.e. 6.5% of total available primary energy (307 PJ), in 2006. In 2007 its share was 19.5 TJ (6.4%; total: 307 PJ), in 2008 – 21.7 TJ (6.7%; total: 324 PJ) and in 2009 – 20.9 TJ (7%; total: 292 PJ). Provisional data for 2010 indicates a total primary energy production (PE) of 300 PJ, with wood and biomass accounting for 22.9 PJ or 7.6%. (8).

5. TOTAL SALES OF TRANSPORT FUEL IN 2010

Table 2 shows the total volume of mineral fuels placed on the market in Slovenia as vehicle fuel in 2009 and 2010, according to the data of the Statistical Office of the Republic of Slovenia (SURS) (7).

Table 2: Comparison of the sales of liquid fuel in 2009 and 2010

Fuel	Sales in 2009 (kg)	Sales in 2010 (kg)
Diesel	1 187 869 740	1 184 500 460
Unleaded petrol (95<=RON<98)	531 538 660	510 562 960
Unleaded petrol (RON>=98)	65 351 320	60 233 660
TOTAL	1 784 759 720	1 755 297 080

According to the Statistical Office data, sales of liquid fuels for motor vehicles in the Republic of Slovenia in 2010 compared to the previous year were lower for all three products.

6. SALES OF BIOFUELS FOR TRANSPORT IN 2010

For a very limited period in 2010 (13 days in December) daily stock exchange prices of mineral fuels and biofuels (source: European Marketscan Pletts) were such as to permit a reduction in the proportion of biofuels (only for biodiesel). This entailed a slight reduction in

the distributors' obligation to place biofuels on the market (for biodiesel, reduced to 4.743% E/E) compared to that fixed in Article 5(1) of the Decree on the promotion of biofuels (5% E/E).

In 2010, transport fuel of mineral origin in Slovenia was mainly replaced by biodiesel and, to a far lesser extent, by other biofuels such as bio-ethanol and ETBE (ethyl tertiary butyl ether). Biodiesel as a transport fuel is used predominantly in blends with conventional fossil-fuel diesel and, to a lesser extent, pure. Most biofuels were thus sold as blends of biodiesel and diesel, with the biodiesel content not exceeding 5 %.

In Slovenia biodiesel was used in trial blends with diesel for road transport vehicles in 2004. In 2005, 2006, 2007, 2008, 2009 and 2010, its proportion in fossil-fuel diesel, like the proportion of other biofuels (e.g. bio-ethanol and ETBE), gradually increased, and we expect to see this trend continue in the coming years. Biodiesel/diesel blends were partly imported from third countries or other EU Member States and partly produced in Slovenian production plants. The proportion of biofuels placed on the market in Slovenia is increasing on average but the target amounts laid down are not being achieved. It should be pointed out that most distributors are meeting obligations to place biofuels on the market in accordance with the provisions of the Decree on the promotion of biofuels.

On the basis of data from distributors (11, 12) and Customs Administration data on exemptions from excise duties (13), the quantity of biofuels (pure biodiesel, biodiesel blended with fossil-fuel diesel, bioethanol and ETBE blended with petrol) was 50 860 480 kg or 45 727 345 kg in 2010. The discrepancy between the data of the distributors or the authorised monitors of liquid fuel quantity on the one hand and the Customs Administration on the other arises because the distributors in a specific year also place on the market stocks from the preceding year, while the Customs Administration indicates only the sales data (excise duties) for the current year.

According to the data of authorised monitors of the placing of biofuels on the market, 10 distributors placed 16 003 967 kg of biofuels for transport on the Slovenian market in 2007, while in 2008 and 2009 biofuels in pure form or blended with mineral fuels were placed on the market by 25 out of the total number of 28 distributors met this obligation in 2008; in 2010, biofuels were placed on the market by all 29 registered or identified distributors, i.e. the ones notified to the Ministry in line with the Decree. The details of the placing of fossil fuels and biofuels on the market in the Republic of Slovenia are shown in Table 4.

The annual proportion of biofuels in all liquid fuels that were placed on the market in the Republic of Slovenia in 2008, 2008 and 2010 can also be seen in Table 3, which was compiled using the monitors' data.

Table 3: Average proportion of biofuel in transport fuel in the years 2008-2010

Fuel	Proportion of biofuels, 2008	Proportion of biofuels, 2009	Proportion of biofuels, 2010
Average proportion of biofuels in transport fuels by mass (m/m%)	1.44	1.99	2.94
Average proportion of biofuels in transport fuels by energy (E/E%)	1.20	1.70	2.53

From year to year the proportion of biofuel has grown slowly but it still lags behind the proportion stipulated in Article 5 of the Decree.

Table 4: More detailed examination of the annual volume of biofuels and their percentage share in the total volume of motor fuels placed on the market in 2010.

NMB98 (kg)	57 603 486
NMB95 (kg)	495 911 397
Diesel fuel (kg)	1 159 480 793
Total mineral fuels minus biofuels (kg)	1 712 995 676
NMB98 (MJ)	2 525 912 857
NMB95 (MJ)	21 745 714 765
Diesel fuel (MJ)	49 393 881 786
Total mineral fuels minus biofuels (MJ)	73 665 509 407
Bio-ethanol in NMB98 (kg)	2 202 344
Bio-ethanol in NMB95 (kg)	2 303 596
Bio-ethanol in diesel (kg)	44 840 934
Pure biodiesel (kg)	2 627 283
Total biofuels (kg)	51 974 157
Biofuel in NMB98 (MJ)	79 923 067
Biofuel in NMB95 (MJ)	83 597 493
Biodiesel in diesel (MJ)	1 654 630 461
Pure biodiesel (MJ)	96 946 743
Total biofuels (MJ)	1 915 097 765
Proportion of biofuel in NMB98 petrol (m/m %)	3.68
Proportion of biofuel in NMB95 petrol (m/m %)	0.46
Proportion of biofuel in blended diesel fuel (m/m %)	3.72
Proportion of biofuel in all fuels (m/m %)	2.94
Proportion of biofuel in NMB98 petrol (E/E%)	3.07
Proportion of biofuel in NMB95 petrol (E/E%)	0.38
Proportion of biofuel in blended diesel fuel (E/E%)	3.42
Proportion of biofuel in all fuels (E/E%)	2.53

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