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Fourth report to the European Commission
under Article 4(1) of Directive 2003/30/EC of the European Parliament and of the
Council of 8 May 2003 on the promotion of the use of biofuels or other renewable fuels
for transport

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Introduction

This report is presented pursuant to Article 4(1) of Directive 2003/30/EC of the European Parliament and of the Council of 8 May 2003 on the promotion of the use of biofuels or other renewable fuels for transport, which is worded as follows:

“Member States shall report to the Commission, before 1 July 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 for the preceding year. Where appropriate, Member States shall report on any exceptional conditions in the supply of crude oil or oil products that have affected the marketing of biofuels and other renewable fuels.

In their first report following the entry into force of this Directive, Member States shall indicate the level of their national indicative targets for the first phase. In the report covering the year 2006, Member States shall indicate their national indicative targets for the second phase.

In these reports, differentiation of the national targets, as compared to the reference values referred to in Article 3(1)(b), shall be motivated and could be based on the following elements:

- a) objective factors such as the limited national potential for production of biofuels from biomass;
- b) the amount of resources allocated to the production of biomass for energy uses other than transport and the specific technical or climatic characteristics of the national market for transport fuels;
- c) national policies allocating comparable resources to the production of other transport fuels based on renewable energy sources and consistent with the objectives of this Directive”.

1. Measures taken to promote the use of biofuels or other renewable fuels to replace diesel or petrol for transport purposes

Legislative framework of the internal market for the promotion of the use of biofuels in 2006

Directive 2003/30/EC has been fully transposed into Slovak legislation, and the corresponding legislative measures are contained in:

- Ø **Act No 98/2004 Coll.** on excise duty on mineral oil (entry into force: 1 May 2005), **as amended by Act No 667/2004 Coll.** (entry into force: 1 December 2004), **Act No 223/2006 Coll.** (entry into force on 1 May 2006) **and Act No 672/2006 Coll.** (entry into force: 1 January 2007);
- Ø **Act No 105/2004 Coll.** on excise duty on alcohol (entry into force: 1 May 2004) and amending Act No 467/2002 Coll. on the production and placing on the market of alcohol, as amended by Act No 211/2003 Coll.;
- Ø **Decree No 488/2006 Coll. of the Ministry of the Environment of the Slovak Republic** amending **Decree No 53/2004 Coll.** laying down requirements to be met by fuel quality and the keeping of fuel records, as amended by **Decree No 102/2005 Coll.** (entry into force: 1 September 2006);
- Ø **Government Regulation No 246/2006 Coll.** on the minimum amount of motor fuels produced from renewable sources in the petrol and diesel fuels placed on the market in the Slovak Republic (entry into force: 1 May 2006);
- Ø **Government Regulation No 608/2006 Coll.** laying down detailed provisions on the scope of, and the procedure for providing, information on the minimum amount of motor fuels produced from renewable sources in the petrol and diesel fuels placed on the market in the Slovak Republic (entry into force: 1 December 2006);

Practical implementation of the biofuels programme in 2006

The practical implementation of the biofuels programme is currently governed by:

- Ø Act No 98/2004 Coll. on excise duty on mineral oil, as amended (entry into force: 1 May 2004); The version of this Act currently in force contains the following provisions:
 - under Section 19(6), the operator of a tax warehouse which is an undertaking for the production of mineral oil specified in Section 6(1)(a) and (d) may, on the basis of a licence to produce blends, produce in the presence of an authorised representative of a customs office mineral oil which is a blend of,
 - a) mineral oil of CN codes 2710 11 41, 2710 11 45 or 2710 11 49 with up to 15% of a biogenous substance specified in Section 4(7)(c), if the biogenous substance was produced by the tax warehouse operator concerned,
 - b) mineral oil of CN codes 2710 19 41, 2710 19 45 or 2710 19 49 and a biogenous substance specified in Section 4(7)(a).

- Under Section 6(5), a mineral oil
 - a) specified in Section 19(6)(a) is subject to duty in accordance with paragraph 1(a), reduced by 48% of the percentage of a biogenous substance specified in Section 4(7)(c) that is contained in the blend, subject to a limit of 7.2%,
 - b) specified in Section 19(6)(b) is subject to duty in accordance with paragraph 1(d), reduced by the percentage of a biogenous substance specified in Section 4(7)(c) that is contained in the blend, subject to a limit of 5%,
- Under Section 6(1), the rates of tax are set as follows:
 - a) petrol of CN codes 2710 11 41, 2710 11 45 and 2710 11 49
SKK 15 500 per 1 000 litres,
 - b) gas oil of CN codes 2710 19 41, 2710 19 45 and 2710 19 49, except as provided for in Section 7(1) SKK 14 500 per 1 000 litres,
- Under Section 4(7), biogenous substances are:
 - a) vegetable fats and oils, including those which have been chemically modified, listed in Chapter 15 of the Customs Nomenclature, and esters produced therefrom, provided that the proportion of hydrocarbons they contain does not exceed 5% vol.
 - b) ethyl tertiary butyl ether produced from ethanol of CN code 2207 20 00 which is not of synthetic origin.

Ø **Government Regulation No 246/2006 Coll.** on the minimum amount of fuels produced from renewable sources in the petrol and diesel fuels placed on the market in the Slovak Republic (entry into force: 1 May 2006), under which persons engaged in the production of fuels (“producers”) and persons engaged in the sale of fuels (“vendors”) are obliged to place on the market biofuels (or other renewable fuels) in the amounts laid down in the Government Regulation, namely:

- in pure form or at high concentration in mineral oils
(e.g. in accordance with the quality requirements of technical standard STN EN 14 214),
- as blends of petrol or diesel fuel with biofuels
(e.g. in accordance with the quality requirements of technical standards STN EN 228 and STN EN 590),
- as liquids (ethers) such as bio-ETBE (ethyl tertiary butyl ether) or bio-MTBE (methyl tertiary butyl ether) produced from biofuels (on the basis of bioethanol or biomethanol), used in blends with petrol in accordance with the quality requirements of STN EN 228.

Producers and vendors are obliged to offer, in petrol and diesel fuels for transport purposes, minimum amounts of biofuels (or other renewable fuels), expressed:

- until 31 December 2006 by a reference value of 2%, calculated on the basis of the energy content of the total amount of petrol and diesel fuel placed on the market,
- from 1 January 2007 to 31 December 2009 by a reference value of 2%, calculated on the basis of the energy content of the total amount of petrol and diesel fuel placed on the market,
- from 1 January 2010 to 31 December 2010 by a reference value of 5.75%, calculated on the basis of the energy content of the total amount of petrol and diesel fuel placed on the market.

Current legislation has made it possible to “start up” the biofuels programme, mainly by blending esters (max. 5% vol.) with diesel fuels and by blending ETBE (max. 15% vol.) with petrol. When this Government Regulation was adopted, it became compulsory for all entities putting petrol and diesel fuel into free circulation in the Slovak Republic to include a minimum amount of biofuels in the range of fuels they offer for sale, on the basis of mandatory placing, in order that biofuels can compete on the market, in accordance with Directive 98/70/EC relating to the quality of petrol and diesel fuels and the amendments thereto (Directive 2003/17/EC).

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

The total energy potential of biomass for uses other than transport is more than 100 PJ, and the highest growth in biomass use has been recorded in heat production in the heating sector. Biomass offers excellent prospects as regards heat production for heating purposes, especially in central heating systems, though less so in households, in the form of pellets, briquettes, wood chips and straw. In the years to come, biomass will also offer good prospects as an energy source for electricity production.

Given the size of this potential, renewable energy sources (RES) offer the best prospects. The demand for energy biomass is currently covered in particular by the production of forest biomass.

Slovakia's total annual potential for the production of forest biomass suitable for use as an energy source will reach about 1 810 000 tonnes by 2010, which equates to some 17 PJ. After 2010, the forest biomass balance may increase in real terms as a result of increased wood production and 45 400 ha of trees being grown for energy use.

Stands of quick-growing woody plants for energy use and annual and multi-annual energy crops offer good prospects as a source of fuel biomass. Energy stands may be planted on land unsuitable for conventional agricultural and forestry production, soils temporarily excluded from agricultural production, contaminated soils suitable only for non-food production and industrial wasteland.

The wood-processing industry, which produces 1 410 000 tonnes of waste a year, is another source of wood suitable for energy production. The total energy value of the usable waste produced by the wood-processing industry is 18.1 PJ, two thirds of which is from the mechanical processing of wood and one third from black lye. The biggest waste producers are large timber-processing firms which do, however, most often use this waste for energy production purposes.

Other promising sources of agricultural biomass include cereal straw, maize stubble, sunflower stalks, winter rape and wood waste from orchards and vineyards.

Support programmes

In April 2007, the Slovak Government approved a framework of support for increased household use of biomass, financed from the State budget. This framework will be developed in more detail in the *Programme for increased household use of biomass and solar energy*, which the Slovak Ministry of Economic Affairs approved in September. Grants will be awarded subject to certain criteria being met. The overall amount of funding earmarked per year **will be SKK 100 million** (about EUR 3 million). The first stage of this measure, up to 2011, will focus on plans for promoting the use of biomass. During this period, it is necessary to assess the effectiveness of the measure and, if need be, modify it.

In addition to this national support measure, there are other projects using biomass to produce electricity and heat which have received financial support through the EU structural funds. Almost EUR 10 million has been allocated to biomass projects that fall within the remit of the Ministry of Economic Affairs. The Slovak Republic wishes to continue to avail itself of such support in the future.

3. Total sales of transport fuel and the share of biofuels, pure or blended, and other renewable fuels placed on the market for the preceding year

The domestic market for motor fuels in the Slovak Republic in 2006

In 2006, the Slovak domestic market for motor fuels (equating, in terms of energy, to about 80.668 PJ) was clearly marked by the predominance of conventional fossil fuels (petrol and diesel), which accounted for over 97% of the total.

The reference value for alternative motor fuels (biofuels, LPG, CNG) is about 2.3% (the respective shares, having regard to the energy content of the fuels, being about 0.69% for biofuels, about 1.33% for LPG and about 0.28% for CNG).

Motor fuel consumption on the Slovak domestic market in 2001-2005 is shown in the following table:

Commodity	2001	2002	2003	2004	2005 ¹⁾	2006 ²⁾
Petrol	612 kt 655 ktoe	726 kt 777 ktoe	668 kt 715 ktoe	614 kt 657 ktoe	662 kt 708.34 ktoe	642 kt 686.94 ktoe
Diesel	825 kt 854 ktoe	1 007 kt 1 042 ktoe	893 kt 942 ktoe	954 kt 987 ktoe	1 143 kt 1 183.01 ktoe	1 168 kt 1,208.88 ktoe
Petrol + diesel combined	1 509 ktoe	1 819 ktoe	1 639 ktoe	1 644 ktoe	1 891.35 ktoe	1 895.82 ktoe
Esters	38 kt 30.86 ktoe	3 kt 2.44 ktoe	2 kt 1.62 ktoe	1 kt 0.81 ktoe	*	15.79 kt 12.82 ktoe
Bioethanol	-	-	-	-	-	-
ETBE	-	-	-	-	-	1.19 kt 0.34 ktoe
LPG	21.79 kt 24.62 ktoe	28.50 kt 32.21 ktoe	30.48 kt 34.45 ktoe	30.74 kt 34.73 ktoe	29.97 kt 33.86 ktoe	22.62 kt 25.56 ktoe
CNG	-	1 323 mil. m ³ 1.07 ktoe	2 566 mil. m ³ 2.08 ktoe	4 387 mil. m ³ 3.55 ktoe	5 531 mil. m ³ 4.47 ktoe	6 612 mil. m ³ 5.35 ktoe

Source: Statistical Office of the Slovak Republic (ŠÚ SR) – data for petrol, diesel, esters and bioethanol for the period 2001-2005

Výskumný ústav dopravný, a. s. Žilina – data for LPG and CNG for 2001-2006,

Administration of State Material Reserves of the Slovak Republic (SŠHR SR) – data for petrol and diesel for 2006,

Slovak Association of Petroleum Industry and Trade (SAPPO) – data for ETBE and esters for 2006

Notes:

¹⁾ data for 2005 represent data for the traded commodity, from ŠÚ SR,

* **in 2005**, for **esters**, only production, imports, exports and consumption at the oil company Slovnaft Bratislava are shown,

Consumption at Slovnaft is shown as blending with diesel fuel – entire production for export.

bioethanol – not recorded, not used for blending with petrol.

²⁾ quantitative data for 2006 relate to the entire year, whereas the quantities of biocomponents (esters, ETBE) are evaluated for statistical purposes for an eight-month period (i.e. from the entry into force of the Biofuels Regulation);

ETBE (ethyl tertiary butyl ether) – has been produced from bioethanol at Slovnaft Bratislava since the end of last year; but the blending of ETBE with petrol began officially only in December 2006.

In the text of this report, and in the table, consistent units and dimensional relationships (for certain physical quantities in the SI system) are used to express quantity and energy content:

1 kt = 1 000 tonnes; 1 ktoe = 1 000 toe (1 tonne of oil = 1 toe oil, which is 1 tonne of oil equivalent); 1 toe = 41.868 GJ; G (giga) = 10^9 ; P (peta) = 10^{15} ;

J (joule) is a unit of energy (dimensionally expressed as the product of one newton and one metre);

1 tonne of petrol = 1.070 toe; 1 tonne of diesel fuel = 1.035 toe; 1 tonne of ester = 0.812 toe;

1 tonne of bioethanol = 0.600 toe; 1 tonne of ETBE (ethyl tertiary butyl ether) = 0.282 toe (the product of 0.47 and 0.6);

1 tonne of LPG (liquefied petroleum gas – as motor fuel in the form of propane/butane) = 1.130 toe;

1 000 m³ CNG (compressed natural gas – as a motor fuel) = 0.809 toe.

State aid for implementation of the biofuels programme in 2006

The following conditions for the application of tax breaks are laid down in the Excise Duty Act:

- a reduced rate of excise duty for biofuels (ETBE and esters) in an amount equal to the sum of tax paid in respect of the volume of the fuels present in a product benefiting from the tax allowance,
- exemption from excise duty for esters of higher fatty acids which are offered for use or are used as fuel, if the proportion of hydrocarbons they contain does not exceed 5% vol.

The application of other tax advantages (e.g. for the blending of bioethanol with petrol in conformity with quality standard STN EN 228, or for the blending of esters with diesel in a concentration higher than provided for in quality standard STN EN 590) is subject to notification to the European Commission under Directive 2003/96/EC restructuring the Community framework for the taxation of energy products and electricity. The notification (i.e. notification with a request for authorisation of the State aid) has to be approved before an amendment to the Act on excise duty on mineral oils can be adopted. A precise quantification of the basis for the tax advantage is a mandatory part of the notification. The tax advantage concerned may therefore be incorporated into a draft act only after it has been quantified for notification purposes and after the date from which it is planned to apply the tax advantage has been specified (maximum duration of six years from the date of entry into force), having regard both to production and to the prospects for using the blend concerned as a fuel in vehicles.

Overview of implementation of Government Regulation No 246/2007 in 2006

In 2006 (i.e. from the date of entry into force of the Biofuels Regulation), implementation of the biofuels programme by a chain of commercial entities (grower – processor – biocomponent and motor fuel producer – distributor – consumer/customer) took the form of:

- the blending of esters with diesel in conformity with quality standard STN EN 590:2004, and the placing on the Slovak market of imported diesel with the addition of esters in conformity with quality standard EN 590:2004;
- the blending of ETBE (ethyl tertiary butyl ether) with petrol in conformity with quality standard STN EN 228:2004 and the subsequent placing of the product on the national market.

Implementation of the biofuels programme is measured in terms of the achievement of a proportionate reference value of 1.333%, on the basis of the date on which the Biofuels Regulation entered into force (i.e. eight twelfths of 2%). The actual value achieved during the eight-month period is about 1.041% of the energy content of the total amount of petrol and diesel placed on the domestic market. The level attained in 2006 reflects the introduction of mandatory placing in the context of placing biofuels on the domestic market, in accordance with Directive 98/70/EC relating to the quality of petrol and diesel fuels and the amendments adopted thereto (Directive 2003/17/EC).

The table on p. 8 of this report presents information on this in terms of quantities and energy content. The data on the quantities of petrol and diesel fuel relate to the whole of 2006, whereas the statistics for biocomponents (esters, ETBE) relate to a period of eight calendar months, i.e. from the date of entry into force of the Biofuels Regulation. The practical implementation of the biofuels programme began only in the second half of 2006, to ensure compliance with the “mandatory placing” requirement laid down in the Biofuels Regulation. The blending of esters with diesel fuels, and/or the importation of such blended fuels, began in August 2006, whereas the production of ETBE (ethyl tertiary butyl ether) from bioethanol came on stream at Slovnaft Bratislava at the end of last year, and the blending of ETBE with petrol officially began only in December 2006. The reference value (percentage share of biocomponents in the energy content of motor fuels) achieved in December 2006 is 2.18 %. Such values (in excess of 2%) were also achieved during the January-March 2007 period, as demonstrated by actual compliance with the reference values for biofuel content laid down in the Biofuels Regulation for 2007.

Conclusion

The divergence from the indicative target for 2006 as regards the placing of biofuels on the Slovak domestic market for motor fuels is mainly the result of:

- a) objective factors, such as the limited national potential for producing biofuels from biomass; the inadequate development of sources for the domestic market meant that the required biogenous substances were not available;
- b) the fact that implementation of the biofuels programme only started in practice in the second half of 2006, with the aim of ensuring compliance with the mandatory placing requirement imposed by the Biofuels Regulation; the blending of esters with diesel fuels, and/or the importation of such blended fuels, began in August 2006, whereas the production of ETBE (ethyl tertiary butyl ether) from bioethanol came on stream at Slovnaft Bratislava at the end of last year, and the blending of ETBE with petrol did not officially begin until December 2006;
- c) the volume of resources allocated to the production of biomass for energy uses other than transport and the specific technical or climatic characteristics of the domestic market for transport fuel;
SKK 886 million of funding was approved for projects using renewable energy sources, including co-financing from the State budget of the Slovak Republic;
of this amount, SKK 400 million was approved for projects involving the use of biomass.
Of the 27 projects involving the use of RES that were submitted, 24 received support, and 13 of these were for the use of biomass.

With regard to the reference value (percentage share of biocomponents in the energy content of motor fuels), the level attained in December 2006 was 2.18%. Such levels (in excess of 2%) were also achieved during the January-March 2007 period, as illustrated by the attainment of the biofuel content reference values laid down in the Biofuels Regulation for 2007.

On 4 July 2007, the Slovak Government debated and took note of the Report on the use of biocomponents in motor fuels in 2006 under Government Regulation No 246/2006 Coll. That report sets out the next steps to be taken in the implementation of the biofuels programme in the 2007-2010 period. These comprise the following set of measures, which will be managed, each within their relative remits and on the basis of cooperation, by the Agriculture and Economic Affairs Ministries, as well as other ministries and undertakings concerned:

- submission of an assessment, containing proposals for required action, by 30 June every year;
- in the next period, it will be necessary, in the context of research and development, to:
 - o seek the participation of Slovak research establishments in implementing an EU-wide biofuel technologies programme,
 - o create support mechanisms for research into second-generation biofuels,
 - o develop the oil industry so as to produce outputs for energy sector use;
- following the development of standards for diesel fuels with a higher ester content, an assessment of the prospects for increasing the biofuel content in motor fuels for transport undertakings such as the railways, coach and urban transport service operators, etc. (the

Slovak Ministry of the Environment will prepare technical standards relating to the quality of motor fuels that have a higher biocomponent content);

- The Ministry of the Environment is planning to introduce quality standards by the end of 2007 for the following blended fuels:
 - B30 (blend of 30% esters of higher fatty acids and 70% diesel fuel) and
 - E85 (85% denatured bioethanol and 15% petrol);and, once these have been approved, to explore the opportunities for using such fuels not only in the aforementioned transport undertakings but also to allow their gradual placing on the market for motor fuels, for use by other entities;
- a review, on the basis of the results of an assessment of the implementation of the biofuel programme in 2007, of the reference values for the placing of biofuels on the market in the forthcoming period, with corresponding amendments to Government Regulation No 246/2006 Coll.;
- last but not least, updating of the national biofuels development programme approved by the Slovak Government in late 2005;
- monitoring of price trends with regard to the marketing, and hence the marketability, of biofuels.