The use of biofuels in fuel in the transport sector in the Republic of Slovenia

REPORT

overview of data relating to the Republic of Slovenia pursuant to Article 4(1) of Directive 2003/30/EC for the 2005 reporting year

Ministry of the Environment and Spatial Planning

Ljubljana, September 2005
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 L 123, 17.5.2003, p. 42). Directive 2003/30/EC aims at introducing measures to promote the use of biofuels and other renewable fuels as a replacement for petrol and diesel fuels in transport thereby contributing significantly to meeting the objectives of improving the reliability of the energy supply, reducing emissions of greenhouse gases and creating new opportunities for sustainable rural development.

Directive 2003/30/EC requires EU Member States to ensure that a minimum proportion of biofuels and other renewable fuels is used for transport purposes and to set national target percentages of biofuels to that effect for the placing of fuels on the market in their territory. Directive 2003/30/EC sets the EU Member States reference values for their national target percentages of biofuels used for transport purposes, i.e.: 2% by the end of 2005 and 5.75% by the end of 2010. The percentages of biofuels are calculated on the basis of their energy value as compared to the energy value of all petrol and diesel used for transport purposes.

In accordance with Directive 2003/30/EC, Slovenia may announce a derogation from the reference values with regard to the target percentages of biofuels in transport, provided that it notifies the European Commission of its intention.

In this report Slovenia announces a derogation from the reference values for the first stage of the introduction of measures to promote the use of biofuels, namely with regard to the deadline for compliance with the requirements of the Directive by 31 December 2003. Slovenia claims a derogation from the reference values set for the first phase of measures to promote the use of biofuels on the grounds of factors which relate to limitations in its biofuel production capability.

Notwithstanding the derogation from the reference values set for the first phase of measures to promote the use of biofuels for transport purposes, Slovenia considers that, through its energy programme for the use of the various sources of biomass, mainly for the purpose of power and heat generation, it makes an appropriate contribution to meeting the EU’s objectives of improving the reliability of the energy supply, reducing emissions of greenhouse gases and creating new opportunities for sustainable rural development.

2. **LEGAL BASIS**

1. With a view to implementing measures to promote the use of biofuels and other renewable fuels as a replacement for diesel and petrol in transport, Slovenia has adopted the following legislative acts:

   a) The Action Plan for the reduction of greenhouse gases, adopted by the Government of the Republic of Slovenia on 31 July 2003, is the core Slovenian programme document for the introduction of measures to promote the use of biofuels for transport. The Action Plan states that the objective of introducing biofuels in transport in the first five-year Kyoto target period 2008-2012 is to reduce emissions of greenhouse gases by 120 000 tonnes CO₂ equivalent per year, which will mean substituting diesel and petrol fuels to the tune of 35 000 tonnes of fuel per year.
b) The Excise Duty Act (Official Gazette 84/98, as last amended in 42/04), which exempts biofuels used as motor fuels from the excise inspection and payment system when used in their pure form. When biofuels are blended with fossil fuels, a maximum 25% exemption from the payment of excise duty can be claimed.

c) The “Rules on the content of biofuels in motor vehicle fuels”, which determine, in accordance with Directive 2003/30/EC:

- the type of biofuels that can be used as biofuels for transport, and

- the minimum content of biofuels in motor vehicle fuels to be ensured by distributors of motor fuels for each calendar year up to 2010.

2. The following definitions are used in relation to the use of biofuels in transport in the Slovenian legislation:

- “biofuel” is a liquid or gaseous fuel for motor vehicle propulsion produced from biomass;

- “biomass” is the biodegradable fraction of products, waste and residues from agriculture, including substances of vegetal and animal origin, forestry and related productive activities, as well as the biodegradable fraction of industrial and municipal waste;

- “other biofuels”* means renewable fuels, other than biofuels, which originate from renewable energy sources, as defined in the regulations governing qualified electricity production, and are used as motor fuels.

3. In accordance with the Slovenian legislation, the biofuels used as motor fuels in transport are as follows:

- ethanol produced from biomass and/or the biodegradable fraction of waste, to be used as biofuel (hereinafter ‘bioethanol’);

- fatty acid methyl esters produced from vegetable or animal oil, of diesel quality, to be used as biofuel (hereinafter ‘biodiesel’);

- fuel gas produced from biomass and/or from the biodegradable fraction of waste, that can be purified to natural gas quality and used as biofuel (hereinafter ‘biogas’);

- methanol produced from biomass, to be used as biofuel (hereinafter: ‘biomethanol’);

- dimethylether produced from biomass, to be used as biofuel (hereinafter ‘biodimethylether’);

- ethyl-tertio-butyl-ether (hereinafter ‘ETBE’) produced on the basis of bioethanol where the percentage calculated as biofuel is at least 47% by volume of ETBE (hereinafter ‘bio-ETBE’);

* Translator’s note: “druga biogoriva” (other biofuels) must be an error. The corresponding definition in the accompanying legislation reads “druga obnovljiva goriva so obnovljiva goriva razen biogoriv…”, i.e. “other renewable fuels means renewable fuels other than biofuels….”
– methyl-tertio-butyl-ether (hereinafter ‘MTBE), produced on the basis of biomethanol where the percentage calculated as biofuel is at least 36% by volume of ETBE (hereinafter ‘bio-ETBE’);*

– synthetic hydrocarbons or mixtures of synthetic hydrocarbons which have been produced from biomass (hereinafter ‘synthetic biofuels’);

– hydrogen produced from biomass, and/or from biodegradable fractions of waste, to be used as biofuel (hereinafter ‘biohydrogen’);

– oil produced from plants through pressing, extraction or comparable procedures, crude or refined but chemically unmodified, when compatible with the type of engines involved and the corresponding emission requirements (hereinafter ‘pure vegetable oil’).

3.  PROMOTION OF THE USE OF BIOFUELS IN TRANSPORT

3.1.  Financial incentives

In accordance with Articles 53 and 54 of the Excise Duty Act (Official Gazette 84/98, as last amended in 42/04), distributors of motor fuel for road transport are entitled to an exemption from payment of excise duty if the following biofuels are blended in the fuel:

– bioethanol,
– biodiesel,
– biogas,
– bio-ETBE and
– biodimethylether.

The amount of the exemption is proportionate to the percentage of biofuel added but may not exceed 25% of the excise duty paid.

3.2  Obligations of fuel distributors

In accordance with Articles 5 and 6 of the Rules on the content of biofuels in motor vehicle fuels, distributors of motor fuel for road transport must ensure that the average annual quantity of biofuels in all fuels placed per calendar year on the motor fuel market in the territory of Slovenia amounts to:

– at least 1.2% in 2006,
– at least 2% in 2007,
– at least 3% in 2008,
– at least 4% in 2009, and
– at least 5% in 2010.

As there are no petrol refineries in Slovenia and no biofuels produced there suitable for blending with petrol, distributors are expected to start introducing biofuels in petrol

* Translator’s note: there must be another error in the text here, but I have translated it as written in the Slovenian original. The accompanying legislation again corresponds to the Community Directive, i.e. has “MTBE” for the second and third “ETBE” in this definition.
probably in 2007. By 2008, however, the average biofuel content of diesel fuels should attain the reference values set for that period by Directive 2003/30/EC.

It is estimated that the average content of biofuels placed on the market in Slovenia in the period 2006-2008 will be 1.25% less than the reference values in Directive 2003/30/EC, and 0.75% less for 2009-2010 because so much more of the biofuels available in Slovenia will be used to generate electricity in combined heat and power plants.

3.3 Own biodiesel production potential

Slovenia has the greatest technological possibilities for producing biodiesel or pure (raw) vegetable oil as an alternative propellant fuel. The basic raw material for making biodiesel and raw vegetable oil is the oil obtained from cold pressing oilseed rape or sunflower.

Further technological and chemical processing is required for the ultimate production of biodiesel fuel and it is intended to adapt existing plant for the production of edible oils in Slovenia for this purpose. Raw materials produced on Slovenian farms as well as imported raw materials will be used for the production of biodiesel.

Oil-producing conditions in Slovenia are relatively good. In the period 1980-1990 Slovenia cultivated between 2 000 and 2 500 hectares of oilseed rape. In 2004, 2 500 hectares were planted with oilseed rape. The Ministry of Agriculture estimates that 6 000 to 7 000 hectares are available which would be suitable for growing oilseed rape.

The projected trend in own production of raw materials for biodiesel in Slovenia until 2010 is shown in the table below:

<table>
<thead>
<tr>
<th>Year</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area (ha)</td>
<td>2 500</td>
<td>2 500</td>
<td>3 000</td>
<td>3 000</td>
<td>3 500</td>
</tr>
<tr>
<td>Fat (t)*</td>
<td>1 485</td>
<td>1 485</td>
<td>1 782</td>
<td>1 782</td>
<td>2 080</td>
</tr>
</tbody>
</table>

* The calculation of own production of raw materials was based on organic cultivation of oilseed rape with an average yield of 1800 kg of seed per hectare with a fatty content of 33%.

3.4 Bioethanol

Slovenia has no factories producing bioethanol or refineries or factories where imported bioethanol can be blended with petrol.

Following reform of the sugar sector in the EU, a project is being prepared for the conversion of the sugar factory in Ormož to the production of bioethanol from wheat and maize, as well as from sugar beet, if economically viable.

4. Production of biomass for energy use other than in the transport sector

Amongst the measures proposed for the reduction of emissions of greenhouse gases, the Action Plan prioritises programmes to promote the production of electricity from
renewable sources which is very important from the perspective of the emission of greenhouse gases and of lower operating costs compared to the cost of generating electricity from fossil fuels.

The proportion of electricity produced from renewable sources in Slovenia in 2000 was approximately 33%, most of which was generated in hydroelectric plants, followed by electricity from biomass. Measures for the use of biomass to produce electricity include the development of:

– plants for combined heat and power generation from woody biomass in factories and for district heating;

– systems for the production of electricity from landfill gas;

– systems for combined heat and power generation from biogas produced by biological treatment plants for municipal waste and industrial waste water; and

– systems for combined heat and power generation from biogas produced by biodegradable wastes obtained from crops and livestock.

It is estimated that in the period up to 2008 more than 7 000 tonnes of biodiesel and biogas will be used in Slovenia per year to produce electricity, i.e. more than 0.5% of the total quantity of fuel used as motor fuel. This breaks down as follows:

– biodiesel from waste edible oils: at least 700 tonnes/year;

– biogas from landfill: at least 1 500 tonnes/year;

– biogas obtained from the biological treatment of municipal waste: at least 2 500 tonnes/year; and

– biogas from plant and animal wastes in farming: at least 2 500 tonnes/year.

The role of biogas in the reduction of emissions of greenhouse gases in the production of electricity by the end of the first Kyoto Protocol period is shown in the following table:

### Expected electricity production from renewables (GWh)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomass CHP ind.</td>
<td>12</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Biomass CHP d.h.</td>
<td>0</td>
<td>0</td>
<td>11</td>
<td>18</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>Landfill gas CHP</td>
<td>0</td>
<td>8</td>
<td>87</td>
<td>110</td>
<td>125</td>
<td>124</td>
</tr>
<tr>
<td>Treatment plants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHP</td>
<td>3</td>
<td>3</td>
<td>8</td>
<td>16</td>
<td>21</td>
<td>24</td>
</tr>
<tr>
<td>Biogas CHP</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>14</td>
<td>19</td>
<td>22</td>
</tr>
<tr>
<td>Wind electr. distrib.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>net.</td>
<td>0</td>
<td>28</td>
<td>56</td>
<td>74</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Wind electr. transfer</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>50</td>
<td>100</td>
<td>120</td>
</tr>
<tr>
<td>Photovolt. elect.</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
<td>0.4</td>
<td>0.5</td>
<td>0.6</td>
</tr>
<tr>
<td>Small HE*</td>
<td>207</td>
<td>258</td>
<td>313</td>
<td>346</td>
<td>368</td>
<td>383</td>
</tr>
<tr>
<td>Large HE</td>
<td>2 839</td>
<td>3 513</td>
<td>3 536</td>
<td>3 734</td>
<td>3 897</td>
<td>4 034</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3 061</td>
<td>3 831</td>
<td>4 038</td>
<td>4 393</td>
<td>4 677</td>
<td>4 861</td>
</tr>
</tbody>
</table>
5. **TOTAL SALES OF FUELS FOR TRANSPORT**

On the basis of the statistical data relating to fuels placed on the market in Slovenia for use as motor fuel for road vehicles in the period 2001-2003, the following table shows an estimate of the consumption of fuels in transport for all subsequent years in the period governed by Directive 2003/30/EC as regards the use of biofuels:

<table>
<thead>
<tr>
<th>Fuel</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2005-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel</td>
<td>479 000 t</td>
<td>535 000 t</td>
<td>575 000 t</td>
<td>630 000 t</td>
</tr>
<tr>
<td>95 octane petrol</td>
<td>719 000 t</td>
<td>720 000 t</td>
<td>708 000 t</td>
<td>660 000 t</td>
</tr>
<tr>
<td>98 octane petrol</td>
<td>55 000 t</td>
<td>47 000 t</td>
<td>40 000 t</td>
<td>40 000 t</td>
</tr>
</tbody>
</table>

6. **PERCENTAGE OF BIOFUELS IN DIESEL FUELS IN 2004 AND TARGET AND PROJECTED PERCENTAGES FOR 2005**

Biofuels were already blended with diesel used as motor fuel in road transport on a pilot basis in Slovenia in 2004. The biodiesel blended with diesel fuels was imported from third countries, obtained from other EU Member States or produced in Slovenian factories manufacturing vegetable oils.

The target figure for the proportion of biofuels in fuels in Slovenia for the 2005 pilot year is 10 000 tonnes, i.e. 0.65% of the energy value of the projected annual quantity of 1 330 000 tonnes of fuel sold in that period.

On the basis of the data for 2004 and 2005 on excise duty exemptions for the quantity of biofuel sold in fuels used as motor fuel in road transport, the following table indicates the projected quantities of biofuel used in Slovenia for 2005.

Projected quantities of biofuels used in diesel fuels:

<table>
<thead>
<tr>
<th>Month</th>
<th>Year</th>
<th>Quantity in litres</th>
<th>Quantity in kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>July</td>
<td>2004</td>
<td>7 353</td>
<td></td>
</tr>
<tr>
<td>August</td>
<td>2004</td>
<td>64 950</td>
<td></td>
</tr>
<tr>
<td>September</td>
<td>2004</td>
<td>502 245</td>
<td></td>
</tr>
<tr>
<td>October</td>
<td>2004</td>
<td>288 869</td>
<td></td>
</tr>
<tr>
<td>November</td>
<td>2004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>December</td>
<td>2004</td>
<td>21 027</td>
<td></td>
</tr>
<tr>
<td>January</td>
<td>2005</td>
<td>239 057</td>
<td>211 067</td>
</tr>
<tr>
<td>February</td>
<td>2005</td>
<td>601 975</td>
<td>531 543</td>
</tr>
<tr>
<td>March</td>
<td>2005</td>
<td>945 096</td>
<td>834 519</td>
</tr>
<tr>
<td>April</td>
<td>2005</td>
<td>1 039 920</td>
<td>916 249</td>
</tr>
<tr>
<td>May</td>
<td>2005</td>
<td>1 484 757</td>
<td>1 311 040</td>
</tr>
<tr>
<td>June</td>
<td>2005</td>
<td>1 100 000</td>
<td>971 300</td>
</tr>
<tr>
<td>July</td>
<td>2005</td>
<td>1 100 000</td>
<td>971 300</td>
</tr>
<tr>
<td>August</td>
<td>2005</td>
<td>1 100 000</td>
<td>971 300</td>
</tr>
<tr>
<td>September</td>
<td>2005</td>
<td>1 100 000</td>
<td>971 300</td>
</tr>
<tr>
<td>October</td>
<td>2005</td>
<td>1 100 000</td>
<td>971 300</td>
</tr>
<tr>
<td>November</td>
<td>2005</td>
<td>1 100 000</td>
<td>971 300</td>
</tr>
<tr>
<td>December</td>
<td>2005</td>
<td>1 100 000</td>
<td>971 300</td>
</tr>
<tr>
<td><strong>TOTAL 2005</strong></td>
<td></td>
<td><strong>10 105 538</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Actual estimated percentage 2005</strong></td>
<td></td>
<td><strong>0.66%</strong></td>
<td></td>
</tr>
</tbody>
</table>
7. **Projections of the proportion of biofuels in Slovenia 2006-2010**

Slovenia has applied the reference values for biofuels in Directive 2003/30/EC in order to estimate the proportion of biofuel in diesel fuels to 31 December 2010.

Projected amounts of biofuel used in diesel fuels:

<table>
<thead>
<tr>
<th>Biodiesel</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion (%)</td>
<td>1.2</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Quantity (t)</td>
<td>18 340</td>
<td>14 480</td>
<td>21 720</td>
<td>28 960</td>
<td>36 200</td>
</tr>
</tbody>
</table>

The calculation of the annual quantities of biodiesel in diesel takes account of the projected annual consumption of 630 000 t of diesel in the transport sector in Slovenia and the 13% lower energy value of biofuel compared to diesel fuels.

To determine the projected percentage values of biofuels in petrol Slovenia has based its calculation on the arrangement of the market for these fuels in the EU as it has no ethanol production of its own nor refineries where biofuels could be blended with petrol. Appropriate biofuels would be procured outside Slovenia.

In view of the establishment of a market for petrol with added biofuels in the EU over the next two years and the introduction of a transparent system for issuing certificates for petrol with added biofuel in the EU for the entry into force of the excise duty exemption, Slovenia estimates that 2007 will be the first year when biofuel in petrol will go on sale. The percentages and projected quantities of biofuel are shown in the following table:

Projected quantity of biofuels used in petrol:

<table>
<thead>
<tr>
<th>Bioethanol</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion (%)</td>
<td>-</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Quantity (t)</td>
<td>-</td>
<td>16 860</td>
<td>25 300</td>
<td>33 730</td>
<td>42 170</td>
</tr>
</tbody>
</table>

The calculation of the annual quantities of biofuel in petrol takes account of the projected annual consumption of 700 000 t of petrol in the transport sector in Slovenia and the 17% lower energy value of bioethanol compared to petrol.

8. **Sources**

2. The Excise Duty Act (Official Gazette 84/98, as last amended in 42/04)
3. Rules on the content of biofuels in motor vehicle fuels
Pursuant to the second paragraph of Article 19 of the Environment Protection Act (Official Gazette of the Republic of Slovenia No 41/04), the Minister for the Environment and Spatial Planning, with the assent of the Minister for Finance and the Minister for the Economy, hereby issues the

RULES on the content of biofuels in motor vehicle fuels

Article 1
Content of the Rules

In accordance with 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 (Official Journal of the European Union L 123, 17 May 2003, p.42), these Rules lay down the types of biofuel to which the provisions of these Rules apply, the minimum biofuel content in motor vehicle fuels, the obligations of the distributors in connections with the biofuel content of fuels, applications to place biofuels on the market and the registration of biofuel distributors, monitoring of biofuel content in motor vehicle fuel and monitoring of the implementation of these Rules.

Article 2
Exceptions

The provisions of these Rules do not apply to fuels, which are imported, sourced in other EU Member States or produced in the Republic of Slovenia’s compulsory national oil reserves of oil and petroleum derivatives, and to fuel placed on the market when these reserves are released.

Article 3
Definitions

The terms used in the Rules have the following meanings:

1. *fuel* is liquid fuel for motor vehicle propulsion as referred to in the regulations governing the physicochemical properties of liquid fuels;

2. *biofuel* is a liquid or gaseous fuel for motor vehicle propulsion, produced from biomass;

3. *biomass* is the biodegradable fraction of products, wastes and residues from agriculture, including substances of vegetal and animal origin, forestry and related productive activities, as well as the biodegradable fraction of industrial and municipal waste;

4. *other renewable fuels* are renewable fuels, other than biofuels, which originate from renewable energy sources, as defined in the regulations governing qualified electricity production, and are used as motor fuels;
5. **placing on the market** means supply of fuels, against remuneration or free of cost, to the end user for the purpose of using the fuel;

6. **energy value** is the lower calorific value of the fuel;

7. **fuel distributor** (hereinafter: distributor) is a legal or natural person who places fuel on the market whether they produce the fuel, import it from third countries or source it in Member States of the European Union (hereinafter: EU). The category of distributor placing fuel on the market also includes importers, extractors and producers of fuel, if the imported extracted or produced fuel is supplied to another person for placing on the market (hereinafter: fuel retailer) or if they themselves are the end users of the imported, extracted or produced fuel;

8. **physicochemical properties of fuel** are the properties of fuels in accordance with the regulations governing the physicochemical properties of liquid fuels;

9. **monitoring of physicochemical properties of liquid fuel** (hereinafter: monitoring of quality of liquid fuels) is monitoring of physicochemical properties of liquid fuel in accordance with the regulations governing the physicochemical properties of liquid fuel;

10. **monitoring the biofuel content of fuel** means the procedures for determining the biofuel content of fuels, which include direct checking of the technical processes used to add biofuels to fuels, inspection of the certificates by means of which fuel producers vouch for the biofuel content of fuels, and measurement of the content of biofuels in fuel in individual consignments of fuel or inspection of the documentation accompanying a consignment of fuel, in accordance with the procedure specified in the programme for monitoring the content of biofuels in fuel.

**Article 4**

**Types of biofuel**

The provisions of these Rules apply to the following biofuels, as a minimum:

1. ethanol, produced from biomass and/or the biodegradable fraction of waste, if used as biofuel (hereinafter: bioethanol);

2. fatty acid methyl esters, produced from vegetal or animal oils, if it has the quality of diesel fuel and is used as biofuel (hereinafter: biodiesel);

3. gas fuel, produced as gas derived from wood or from biomass or from the biodegradable fraction of waste, if it may be purified to the quality of natural gas and is used as biofuel (hereinafter: biogas);

4. methanol, produced from biomass, if it is used as biofuel (hereinafter: biomethanol);

5. dimethylether, produced from biomass, if it is used as biofuel (hereinafter: biodimethylether);

6. ethyl tertiary butyl ether (hereinafter: ETBE), produced on the basis of bioethanol, if it contains at least 47% by volume ETBE and is considered biofuel (hereinafter: bio ETBE);

7. methyl tertiary-butyl ether(hereinafter: MTBE), produced on the basis of biomethanol, if it contains at least 36% by volume MTBE and is considered biofuel (hereinafter: bio MTBE);

8. synthetic hydrocarbons or blends of synthetic hydrocarbons, produced from biomass (hereinafter: synthetic biofuel);

9. hydrogen, produced from biomass and/or from the biodegradable fraction of waste, if it is used as biofuel (hereinafter: biohydrogen);
10. oil produced from plants by pressing, extraction or comparable processes, crude or refined, but chemically unchanged, if it fulfils the requirements of the type of motor for which it is used and complies with requirements on emissions (hereinafter: pure vegetable oil).

**Article 5**

**Average annual biofuel content**

(1) The average annual biofuel content in all fuels which are placed into circulation on Slovenian territory as motor vehicle fuels is as follows:
– 2006 at least 1.2%,
– 2007 at least 2%,
– 2008 at least 3%,
– 2009 at least 4% and
– 2010 at least 5%.

(2) The biofuel content given in the previous paragraph is expressed as a percentage of the energy value of the fuel placed into circulation as motor vehicle fuel, taking account for energy values of biofuels and fossil fuels of the values given in Annex 1, which forms an integral part of these Rules.

**Article 6**

**Distributors’ obligations**

(1) Distributors must ensure that biofuels are available to motor fuel users in one of the following forms:
– as biodiesel in the form of pure biofuel or in high concentrations in petroleum derivatives, if compliant with the requirements of standard SIST EN 590 on motor vehicle fuel quality and of standard SIST EN 14214 on the quality of fatty acid methyl esters for diesel engines,
– as pure vegetable oil, if compliant with the requirements of Annex 2, which forms an integral part of these Rules,
– as biogas, if compliant with the requirements of Annex 3, which forms an integral part of these Rules,
– as biofuel, if blended with petroleum derivatives, if compliant with the requirements of standard or technical specifications for motor vehicle fuel SIST EN 228 and SIST EN 590, and
– as fuel, which is produced from biofuels, such as ETBE, if the biofuel content complies with Article 4(6) and (7) of these Rules.

(2) If the biofuel content, which is blended with petroleum derivatives, exceeds 5% by volume fatty acid methyl esters or 5% by volume bioethanol, the distributor must ensure that the end user of the fuel is informed of the fact at the time of purchase or delivery of the fuel.

**Article 7**

**Average biofuel content for the individual distributor**

The distributor must ensure that the annual average biofuel content in all fuel which he places on the market on Slovenian territory in an individual calendar year is at least equivalent to the contents specified for that calendar year in Article 5 of these Rules.
Article 8
Declaration of intention to place on the market

(1) The distributor must by 31 October of the current year at the latest apply to the ministry competent for the environment (hereinafter: the ministry) to place biofuels on the market for the following year.

(2) With the application to place biofuels on the market in the next year, the distributor must enclose:

- the proposed annual plan for placing biofuel on the market for the following year,
- the proposed programme for monitoring the biofuel content in fuel for the following year,
- a copy of the Decision mentioned in Article 13 of these Rules on fulfilment of the annual plan for placing biofuel on the market in the previous year, and
- the evaluation of the annual quantity of biofuel which he will place on the market in the current year.

Article 9
Clearance to place biofuels on the market in conformity with the terms of the Rules

(1) In a Decision, the ministry confirms that the annual plan for placing biofuel on the market and the programme for monitoring the biofuel content in fuel, as enclosed with the application to place biofuels on the market, comply with the requirements of these Rules.

(2) The ministry issues the Decision referred to in the previous paragraph within 30 days of receiving a complete application to place biofuels on the market in the next year, including the annexes mentioned in the second paragraph of the previous Article provided that:

- it determines, on the basis of the data in the annual plan, that, in respect of the annual average biofuel content the fuel which the distributor plans to place on the market in the year for which the plan has been drawn up, the requirements under Article 7 of these Rules have been fulfilled and the provisions on the transfer of obligations for the previous year to the next year under Article 16 of these Rules have been respected, and
- the programme for monitoring biofuel content in fuel has been drawn up in accordance with the requirements of these Rules.

(3) On the basis of the data from the annual plan for placing biofuels on the market, annexed to the application to place biofuels on the market, in the Decision mentioned in the first paragraph of this Article the ministry determines for the individual distributor for the year in respect of which he applied to place biofuels on the market:

- types of fuel and estimated annual quantities of fuel which he intends to place on the market,
- minimum annual biofuel content in individual types of fuel which he intends to place on the market,
- minimum quantity of biofuels which he must place on the market, calculated on the basis of the estimated annual quantities of fuel which he intends to place on the market,
– the planned method and site to be used for supplying the fuel to end users or fuel retailers and other details of the distribution of biofuels of importance for performing monitoring of the content of biofuel in fuel, and
– the method of notifying information and the content of the data which the distributor must forward to the ministry for the purposes of checking implementation of the annual plan for placing biofuel on the market.

Article 10
Objection to placing biofuels on the market in conformity with the terms of the Rules
If the ministry in its Decision refuses to issue the distributor a certificate to the effect that his annual plan for placing biofuels on the market and programme for monitoring the content of biofuel in fuel are compliant with the requirements of these Rules, the ministry must set out the reasons why it considers that the proposed release of biofuels onto the market is not compliant with the requirements of these Rules or request that the application to place biofuels on the market be complemented by a new or amended proposal for the annual plan for placing biofuels on the market or proposal for the programme for monitoring the content of biofuels in fuel.

Article 11
Report on the fulfilment of obligations
omitted

Article 12
Conditions for placing fuels on the market
(1) The distributor may in an individual year place biofuels on the market until 31 March at the latest. After this date, however, he may do so only if the ministry has for that year issued him a Decision specifying the conformity of the annual plan for placing biofuels on the market and the programme for monitoring the biofuel content of fuel mentioned in Article 9 of these Rules and if for that year he has confirmed that the programme for monitoring the content of biofuels in fuel has been fulfilled.

(2) If the distributor has commenced the activity of placing fuel on the market and, for the year in which he began placing fuel on the market, has not submitted an application to place biofuels on the market, he may place fuel on the market until 31 March of the next year at the latest. After this date, however, he may do so only if the ministry has for that year issued him a Decision on the compliance of the annual plan for placing biofuels on the market and the programme for monitoring the biofuel content of fuels pursuant to Article 9 of these Rules and, for this year, he confirms that the programme for monitoring the biofuel content of fuels has been fulfilled.

Article 13
Fulfilment of distributors’ obligations
(1) The ministry issues a Decision for each individual distributor confirming fulfilment of the annual plan for placing biofuels on the market in the previous year on the basis of inspection of:
– data from the annual report on the fulfilment of obligations under the annual plan for placing biofuels on the market as referred to in Article 11 of these Rules,
– data on repayments of, or dispensations from, excise duties paid and
(2) The Decision on fulfilment of the annual plan for placing biofuels on the market for the previous year is issued by the ministry by 30 June of the current year at the latest.

(3) In the Decision mentioned in the previous paragraph, the ministry specifies the annual quantity of biofuel which the distributor transfers from the previous year to the current year as an obligation under Article 16 of these Rules.

Article 14
Identification on the basis of data from the recovery of paid excise duties
omitted

Article 15
Identification on the basis of monitoring of the content of biofuels in fuel
omitted

Article 16
Transfer of obligations to the following year

(1) If the ministry finds for an individual distributor that the actual average annual content of biofuel in fuel placed on the market in the previous year is less that the annual average content mentioned in the previous year’s plan for placing biofuel on the market, the distributor must when applying to place biofuels on the market for the next year take into account the fact that the biofuel content in the fuel which the distributor must place on the market in the next year is increased as follows: the difference between the planned quantity and the actual quantity of biofuel placed on the market in the previous year is added to the planned minimum quantity of biofuel in fuel for the next year, calculated on the basis of the requirements mentioned in Article 7 of these Rules.

(2) Irrespective of the provisions of the previous paragraph, the ministry will not issue to an individual distributor a Decision on the conformity of the proposed annual plan for placing biofuel on the market and the programme for monitoring the content of biofuel in fuel in accordance with the requirements of these Rules if the difference between the planned average biofuel content and the actual biofuel content in fuel placed on the market in the previous year is more than 50% of the planned average content of biofuel in fuel for the previous year.

Article 17
Monitoring of the content of biofuels in fuel
omitted

Article 18
Notification of the European Commission
omitted

Article 19
Inspection

The implementation of these Rules is monitored by inspectors of the inspectorate responsible for the environment.
Article 20
Transitional provisions

(1) irrespective of the provisions of the second paragraph of Article 8 of these Rules, the distributor must enclose the following with the application to place biofuels on the market for the year 2006:
   – proposed annual plan for placing biofuels on the market for the year 2006,
   – proposed programme for monitoring the content of biofuels in fuel for the year 2006 and for 2007:
   – proposed annual plan for placing biofuels on the market for the year 2007,
   – proposed programme for monitoring the content of biofuels in fuel for the year 2007, and
   – assessment of the annual quantity of biofuel he will place on the market in 2006.

(2) Distributors must send the ministry the first report on the fulfilment of obligations under the annual plan for placing biofuels on the market for the year 2006.

Article 21
Final provisions

These Rules enter into force on the day following their publication in the Official Gazette of the Republic of Slovenia.

No 007-01-120/2005
Ljubljana, 7 September 2005
EVA 2005-2511-0206

Janez Podobnik (signed)
Minister for the Environment and Spatial Planning

Approved by:

Andrej Bajuk (signed)
Minister for Finance

Andrej Vizjak (signed)
Minister for the Economy
### ANNEX 1

**Average energy value and average density of fuels and biofuels**

Average energy value and average density of fuels and biofuels, to be taken into consideration when calculating the content of biofuels in fuel

<table>
<thead>
<tr>
<th>Type of fuel</th>
<th>Energy value</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Value</td>
<td>Unit</td>
</tr>
<tr>
<td>Diesel</td>
<td>42.60</td>
<td>MJ/kg</td>
</tr>
<tr>
<td>Biodiesel</td>
<td>36.90</td>
<td>MJ/kg</td>
</tr>
<tr>
<td>Pure vegetable oil</td>
<td>35.17</td>
<td>MJ/kg</td>
</tr>
<tr>
<td>Benzene</td>
<td>43.85</td>
<td>MJ/kg</td>
</tr>
<tr>
<td>ETBE</td>
<td>36.29</td>
<td>MJ/kg</td>
</tr>
<tr>
<td>MTBE</td>
<td>34.92</td>
<td>MJ/kg</td>
</tr>
<tr>
<td>Ethanol</td>
<td>26.67</td>
<td>MJ/kg</td>
</tr>
<tr>
<td>Methanol</td>
<td>18.86</td>
<td>MJ/kg</td>
</tr>
<tr>
<td>Natural gas *</td>
<td>34.08</td>
<td>MJ/Sm3</td>
</tr>
<tr>
<td>Biogas *</td>
<td>32.64</td>
<td>MJ/Sm3</td>
</tr>
</tbody>
</table>

* at temperature 288.15 K and air pressure 101.325 kPa.

### ANNEX 2

**Physicochemical properties for pure vegetable oils**

<table>
<thead>
<tr>
<th>Physicochemical property</th>
<th>Measurement method</th>
<th>Unit</th>
<th>Minimum value</th>
<th>Maximum value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density (15 °C)</td>
<td>SIST EN ISO 3675,</td>
<td>kg/m3</td>
<td>900</td>
<td>930</td>
</tr>
<tr>
<td></td>
<td>SIST EN ISO 12185</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>SIST EN ISO 2719</td>
<td>°K</td>
<td>493</td>
<td></td>
</tr>
<tr>
<td>Calorific value</td>
<td>DIN 51 900-3</td>
<td>kJ/kg</td>
<td>35.000</td>
<td></td>
</tr>
<tr>
<td>Kinetic viscosity (40 °C)</td>
<td>SIST EN ISO 3104</td>
<td>mm²/s</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>Coke residue</td>
<td>SIST EN ISO 10370</td>
<td>% m/m</td>
<td>0.40</td>
<td></td>
</tr>
<tr>
<td>Iodine value</td>
<td>SIST EN 14111</td>
<td>g/100 g</td>
<td>100</td>
<td>120</td>
</tr>
<tr>
<td>Sulphur content</td>
<td>SIST EN ISO 20884,</td>
<td>mg/kg</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SIST EN ISO 20846</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impurities</td>
<td>SIST EN 12662</td>
<td>mg/kg</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Acid number</td>
<td>SIST EN 14104</td>
<td>mg KOH/g</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Oxidative stability (110°C)</td>
<td>SIST EN 14112</td>
<td>h</td>
<td>5.0</td>
<td></td>
</tr>
<tr>
<td>Phosphor content</td>
<td>SIST EN 14107</td>
<td>mg/kg</td>
<td>15.0</td>
<td></td>
</tr>
<tr>
<td>Ash content</td>
<td>SIST EN ISO 6245</td>
<td>% m/m</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>Water content</td>
<td>SIST EN ISO 12937</td>
<td>% m/m</td>
<td>0.075</td>
<td></td>
</tr>
</tbody>
</table>
### ANNEX 3

**Physicochemical properties for biofuels**

<table>
<thead>
<tr>
<th>Physicochemical property</th>
<th>Measurement method</th>
<th>Unit</th>
<th>Minimum value</th>
<th>Maximum value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative density</td>
<td>SIST EN ISO 6976</td>
<td>-</td>
<td>0.55</td>
<td>0.7</td>
</tr>
<tr>
<td>Calorific value *</td>
<td>SIST EN ISO 6976</td>
<td>MJ/m3</td>
<td>30.2</td>
<td>47.2</td>
</tr>
<tr>
<td>Wobbe index *</td>
<td>SIST EN ISO 6976</td>
<td>MJ/m3</td>
<td>46.1</td>
<td>56.6</td>
</tr>
<tr>
<td>Dust</td>
<td></td>
<td></td>
<td></td>
<td>Technically clean</td>
</tr>
</tbody>
</table>

* at temperature 273.15 K and air pressure 101.325 kPa.