

**Report on 2006  
in accordance with Article 4(1) of Directive 2003/30/EC  
of 8 May 2003**

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 (hereinafter Directive 2003/30/EC), Member States are required to 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.

In accordance with the Cabinet decision of 1 March 2005 (No 11 27.§1), the Ministry of Economic Affairs has been designated as the coordinating body for the implementation of the Biofuel Law.

**1. Measures taken to promote the use of biofuels or other renewable fuels**

Biofuel production and biofuel quality in Latvia are governed by the following legislation adopted in 2005: Biofuel Law, Cabinet Regulation No 498 of 5 July 2005 on procedures for the circulation of fuel containing bioproducts and administration of the relevant excise duty, and Cabinet Regulation No 772 of 18 October 2005 on regulations regarding requirements for biofuel quality, conformity assessment, market supervision and procedures for consumer information.

According to data from the Central Statistical Board, in 2005 biofuels represented 0,33 % of the total combined energy content of the petrol and diesel placed on the market as transport fuel. Therefore it is still necessary to continue to expand the production of biofuels, to improve their quality and competitiveness with other fuels, and to inform and educate the public on issues of biofuel use, so as to create a favourable climate for the production of biofuels and investment in their development and to induce local authorities to consider ways of encouraging the use of biofuels in public transport.

In that connection, 4 October 2006 saw the issue of Cabinet Instruction No 766 amending Cabinet Instruction No 402 of 22 June 2005 on measures to implement the Biofuel Law; the Instruction specifies the measures to be taken in 2006 and 2007 and lists a number of provisions regarding biofuels that are to be amended in 2007.

On 11 October 2006 the Cabinet published Instruction No 783 on the Biofuels Development Advisory Board. The role of this body is to coordinate the work of the agencies involved in

implementing the Biofuel Law. Its remit is to contribute to the development and implementation of agreed national biofuels policy, help in framing and implementing European Union and national biofuels policy, to take part in defining the national interest in connection with draft EU legislation on biofuels, and to promote the development of the biofuels sector and the competitiveness of Latvian companies on the international biofuels market.

The Advisory Board analyses the situation of the national biofuels sector, drafts recommendations on the development of the biofuels sector, prepares proposals for essential legislation on biofuels, advises, as required, on draft biofuels legislation and examines policy documents on the development of the biofuels sector and gives its views on them.

Latvian standard LVS EN 14214 + AC: 2005 "Automotive fuels – Fatty methyl esters (FAME) for diesel engines. Requirements and test methods" was developed to determine the quality of biofuel and the composition of the blend with fossil fuel.

2006 saw the development of technical specifications standard LVS 379:2006 "Liquid petroleum products – Determination of 30 % fatty acid methyl esters (FAME) content in middle distillates – Infrared spectroscopy method", which was registered in September of that year.

In order to promote the production and use of biofuels, Latvia's Ministry of Economic Affairs commissioned the following studies:

- An economic assessment of the German experience with rape oil fuel and of the suitability of using biodiesel fuel in the Latvian setting (Dr Arnis Kalniņš, Senior Researcher, Department of Economics, Latvian University of Agriculture). This study examined Germany's experience of the production and use of rape oil fuel and biodiesel and whether that experience could be transferred to the Latvian setting. The production costs and selling price of rape oil fuel and biodiesel in Germany were evaluated and their competitiveness with fossil fuels in terms of price was investigated. Latvia's original project on the use of rape oil fuel (2004 to 2006) was assessed. A model calculation was made and the economic arguments for the processing of 10 to 12 000 tonnes of rapeseed into vegetable oil (cold method) and biodiesel and the marketing of the latter were put to farmers (Cooperative Association of Agricultural Services).
- Scope for increasing the use of bioethanol in the transport sector (Dr Arnis Kalniņš, Senior Researcher, Department of Economics, Latvian University of Agriculture). The scope for increasing the use of bioethanol in transport was investigated, the properties of bioethanol evaluated economically and a report submitted on the conversion of car engines to bioethanol and the possibility of using E85 fuels.
- A study of the quality of biodiesel aimed at making the overall properties of biodiesel compatible with those of fossil diesel (Professor Vilnis Gulbis and Professor Gints Birzietis, Agricultural University of Latvia). This study looked at how the use of biodiesel affected

vehicles' performance and the possibilities of improving performance and made recommendations for practical measures.

All the above research projects are to be found on the Ministry of Economic Affairs' website: [www.em.gov.lv](http://www.em.gov.lv).

Two booklets: "What biodiesel users should know" and "What E85 biofuels users should know" were commissioned and published by the Ministry of Economic Affairs.

Following an open call for tenders by the Ministry of the Environment for the award of funds from the administration of Latvia's Environmental Protection Fund, Latvia's Biofuels Association carried out a project "Promoting the use of biofuels and integrating environmental requirements via regional organic farming centres (biocentres)", aimed mainly at informing farmers and potential biofuels producers of production opportunities and at setting up regional biocentres.

In 2006 a technology transfer contact point for biodiesel was launched at Riga's Technical University, dealing with the production and quality assurance of biodiesel fuels. This project will study the business sector's needs in terms of research results and explore prospects for collaboration, create a database on the expertise available in Riga Technical University's Fuel Chemistry Scientific Centre, prepare proposals for marketing of research, establish a biodiesel production demonstration site with small capacity biodiesel reactors for demonstrating the various technologies and will consult businesses.

2006 saw the adoption of a number of amendments to existing legislation on the production of and trade in biofuels which were designed to promote biofuel production and to enable producers to offer their product for sale on the Latvian market.

Under the amendments to the Law on excise duties adopted on 19 December 2006, the basic rate of duty for unleaded petrol is LVL 209/1000 litres and for diesel LVL 178/1000 litres. As an incentive, provision was made for the following duty reliefs on biofuels and mineral oil/biofuel blends.

1. application of a reduced rate of excise duty depending on the biofuel content of the fuel/blend:
  - for unleaded petrol containing:
    - 5 % by volume of dehydrated ethanol obtained from agricultural raw materials: LVL 199/1000 litres;
    - as from 1 July 2007: 85 % by volume dehydrated ethanol obtained from agricultural raw materials: LVL 31,5/1000 litres;
  - for diesel fuel, blended with rapeseed oil or rapeseed biodiesel, provided that the rapeseed oil or rapeseed biodiesel represents:
    - from 5 up to (but not including) 30 % by volume of the total product volume: LVL 170/1000 litres;

- at least 30 % by volume of the total product volume: LVL 125/1000 litres;
2. application of a zero rate of duty (LVL 0/1000 litres) to rapeseed oil sold or used for heating or fuel and to biodiesel completely derived from rapeseed oil.

Under the amendments adopted by the Cabinet on 28 December 2006 to Cabinet Regulation No 662 on Procedures for the Circulation of Excisable Goods (hereinafter Cabinet Regulation No 662), the keepers of excisable goods warehouses are dispensed from informing the State Revenue Service in writing before commencing the manufacturing, treatment, processing, pre-packaging or blending operations of biofuels or the addition of additives to fuels using the flow method in accordance with paragraph 101 of Cabinet Regulation No 662 (paragraph 100 of Cabinet Regulation No 662).

As an incentive to the production and use of biofuels, the state fee for obtaining a special permit (licence) to carry out the activity of excisable goods warehouse keeper or approved trader is reduced if that person's business is with biofuels to the exclusion of petroleum products:

- activity of excisable goods warehousekeeper for biofuel: LVL 200 (Cabinet Regulation No 662, subparagraph 63.4.1.6). This is to be compared with the unamended rate of LVL 1500 for petroleum products (subparagraph 63.4.1.1);
- activity of approved trader for biofuel: LVL 100 (Cabinet Regulation No 662, paragraph 6.4.2.6). Again this is to be compared with the unamended rate of LVL 500 for the licence to trade in petroleum products (subparagraph 63.4.2.1).

Under Cabinet Regulation No 662 the reduced rate (LVL 200) for issuing special permits (licences) for the activity of excisable goods warehousekeeper originally applied only if the biodiesel produced in the warehouse was 100 % derived from rapeseed oil.

## **2. National resources allocated to the production of biomass for energy uses**

To promote the use of biomass (mainly wood) for the heating of individual buildings and the supply of centralised district heating, support from financial instruments is provided for fuel conversion projects. Project holders may apply for co-financing from the EU structural funds in both the current and the next programming period.

Residues from logging and wood processing are a potential source of biomass not yet fully exploited in Latvia.

Use of wood biomass would contribute significantly to increasing the consumption of biofuels. 15 to 25 % of total surface wood is left in wood-felling sites in Latvia, which represents about 2 to 5 000 000 million tonnes of fuel per year. About 25 % of wood-processing by-products (bark, sawdust, chips and remnants) are used by industry (mainly in the wood sector) to fuel technical processes and for essential heating.

Wood as fuel represents a significant and stable share of the national energy mix; in Latvia it is used for district heating, both centralised and local, and for heating individual buildings. The share of wood in energy production rose in 2006, standing at 30 % of the primary energy balance. This is mainly the result of household consumption, of which wood accounts for over 50 %.

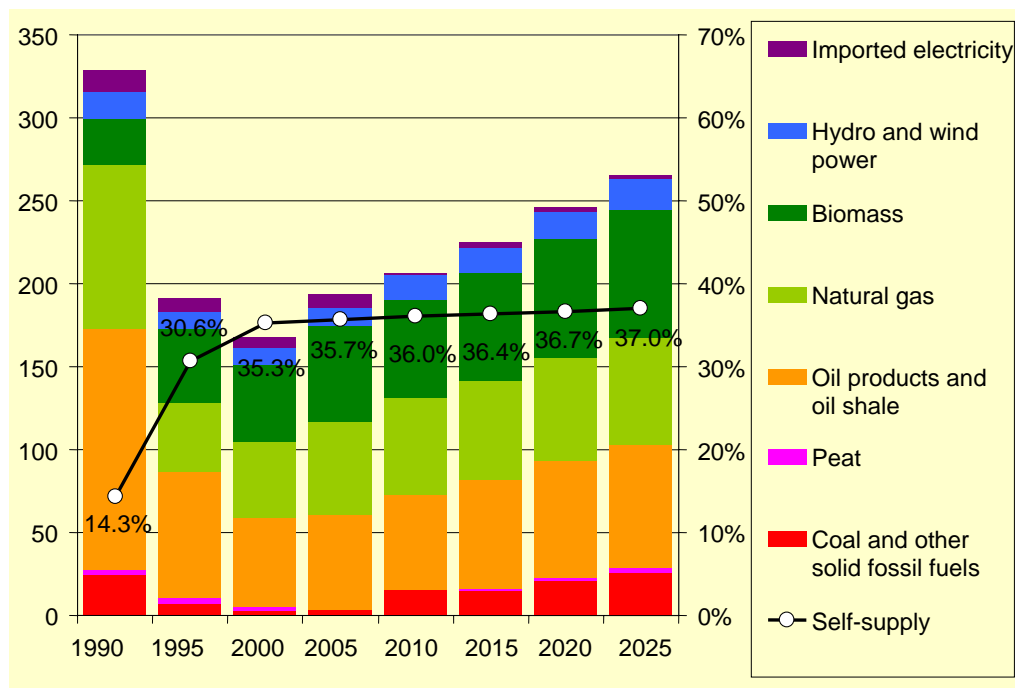
Wood is also used in the generation of electricity. While Latvia currently has three wood-fuelled cogeneration plants with an installed electrical capacity of 2 MW, there is still significant development potential nationally.

Overall, renewables accounted for one third of Latvia's primary energy mix in 2006.

The use of renewables is expected to increase in the future and to maintain 36 to 37 % self-supply in the pattern of consumption of primary energy resources (see Figure 1).

Figure 1

Desirable pattern of consumption of primary energy resources



\* For the consumption pattern of primary energy resources, the energy development scenario of the Climate Change Programme 2005-2010 has been used and adjusted according to the 2004 statistics

Wood and water are the most widely used renewable energy resources in Latvia. Use of wind and biogas is much less common. Solar energy is currently used on a very small scale in pilot projects. Table 1 gives an overview of the use of renewables.

Table 1

## Electricity generation from renewable resources in 2005

	Large hydro-power plants	Small hydro-power plants	Biomass CHP plants (wood)	Wind generators	Biogas CHP plants
Number <sup>1</sup>	3	149	3	41	3
Installed capacity MW <sup>2</sup>	1534	25	2	26,4	7,3

<sup>1</sup> Data from Ministry of Economic Affairs

<sup>2</sup> Data from Central Statistics Board

In the 2005 renewable energies mix, hydro resources accounted for 16,71 %, wood 82,58 %, wind energy 0,24 %, and biogas 0,47 %.

Renewable energy resources provide a significant contribution to the production of electricity. In 2005, the share of renewable energy resources in total consumption (production + imports - exports) was 47,0 %. This is 2,3 % less than the indicative target for the share of electricity produced from renewables in total electricity consumption set for 2010 by the Electricity Market Law.

95,7 % of the electricity produced from renewables was generated by large hydro-power plants. Small hydro-power plants produced around 2 %, wind generators 1,5 % and biogas plants 0,8 % of total electricity output.

### 3. Transport fuels placed on the Latvian market

In the period 1 January to 31 December 2006 the following quantities of mineral oils (fuel), fuel containing bioproducts and biofuel were produced and imported in Latvia (data provided by the State Revenue Service):

- 1) mineral oils (fuel), fuel containing bioproducts and biofuel released for free circulation and consumed:

Table 2

Mineral oils (fuel)	2006	Difference in consumption compared with 2005 ("-" = down)
unleaded petrol (m <sup>3</sup> )	428 391	11 786
diesel ( <i>not including marked diesel</i> ) (m <sup>3</sup> )	765 176	68 268

lpg (m <sup>3</sup> )	57 631	1 716
<b>total:</b>	<b>1 251 198</b>	<b>81 770</b>
unleaded petrol mixed with ethanol (4.5-5 % by volume)* (m <sup>3</sup> )	41 333	21 472
diesel (5 % biodiesel)** (m <sup>3</sup> )	398	398
diesel (30 % biodiesel) (m <sup>3</sup> )	-	-
<b>total:</b>	<b>41 732</b>	<b>21 870</b>
100 % biodiesel (incl. imports)(m <sup>3</sup> )	1 815	- 843
<b>total:</b>	<b>1 815</b>	<b>- 843</b>
<b>grand total (m<sup>3</sup>):</b>	<b>1 294 745</b>	
bioethanol (1000 litres absolute alcohol) ***	1 651	627

\* unleaded petrol to which is added at the excise warehouse agricultural ethanol (at least 99,5 % alcohol by volume) which has been dehydrated and denatured; the absolute alcohol content of the end product must be 4,5 to 5,0 % by volume

\*\* diesel to which rapeseed biodiesel is added at the excise warehouse in a proportion of from 5 up to (but not including) 30 % by volume of the end product

\*\*\* distributed for use as an unleaded petrol additive

2) biofuels produced:

Table 3

Biofuel	2006	Difference in consumption compared with 2005
100 % biodiesel (m <sup>3</sup> )	7 822	5 685
bioethanol (1000 litres absolute alcohol)*	9 936	6 920

\* dehydrated ethanol (at least 99.5 % alcohol by volume) extracted from agricultural raw materials and denatured with petrol.

3) biofuels imported from other countries, put into free circulation and consumed in Latvia:

Table 4

Biodiesel	2006	Difference in consumption compared with 2005 ("-" = down)
100 % biodiesel (m <sup>3</sup> )	336	- 139
bioethanol*	-	-

\* The State Revenue Service has no information regarding any use of pure bioethanol in internal combustion engines in 2006.

According to the State Revenue Service's data, biofuels accounted for **0,22 %** of the total fuel used for transport in Latvia in 2006.

Consumption of fossil fuels in transport in 2006 was 7,2 % higher than in the previous reporting period.

In 2006 71 % of the biodiesel and 93 % of the (100 %) bioethanol produced in Latvia was sent to EU Member States.

### 3.1. Fuel sales points

According to the information available to the Ministry of Economic Affairs, 100 % biodiesel can currently be purchased at 14 filling stations.

Unleaded petrol mixed with ethanol (4,5 to 5 % by volume) and diesel mixed with biodiesel (4,5 to 5 % by volume) can be purchased at any filling station in Latvia. There is no particular procedure for consumer information on such fuels, which do not damage engines (engines do not need to be modified).

### 3.2. Current situation of biofuel production in Latvia

In 2006 there were 83,2 thousand hectares under rape, an increase of 17 %, while total yield was down by 17 %. The average yield per hectare fell by 0,60 t as a result of the long period of drought suffered by Latvia in 2006.

In 2006 120,5 thousand tonnes of biodiesel raw materials were produced in Latvia, only 22,5 thousand tonnes of which were required by biodiesel plants – i.e. there was a 98,1 thousand tonne surplus of raw materials.

#### Raw materials used in biofuel production in 2006

Table 5

Materials	Unit of measurement	Volume*
Rapeseed purchased	t	8 861,47
of which: rapeseed purchased in the EU, incl. Latvia	t	8 861,47
Cereals purchased	t	35 479,82
of which: cereals purchased in the EU, incl. Latvia	t	35 479,82
Rapeseed oil purchased	t	4 704,98
of which: oil purchased in the EU, incl. Latvia	t	3 880,85
oil purchased outside the EU	t	824,13

\* Ministry of Agriculture data



In 2006 there was no provision for state aid to farmers for the production of biomass for energy.

Table 6 shows the direct state aid granted for biofuel production in accordance with Cabinet Regulation No 303 of 18 April 2006 on the procedure for monitoring and managing direct state aid for the production of the necessary annual minimum quantity of biofuel, on the basis of state aid scheme No 540N2005 (Support for production of biofuel), approved by the European Commission.

Table 6

**Direct state aid to biofuel producers in 2006**

	Unit of measurement	Indicators*
Quota eligible for financial support	1000 litres	22 392.000
Biofuel produced	1000 litres	17 164.968
Aid granted for biofuel produced in 2006	LVL	2 882 739.00
Biofuel marketed	1000 litres	17 660.794

\*Ministry of Agriculture data

The total annual capacity of biodiesel plants in Latvia in 2006 was around 11 000 t, while bioethanol production units had a capacity of 10 000 t.

In 2006 Latvia produced almost half of the planned volume. Latvia has sufficient resources to meet the targets set by it and the European Union for biofuel consumption, and biofuel production capacity is being developed. Establishment of a reliable system for promoting the use of biofuels could stimulate greater use of existing capacity.

**3.3. Measures to achieve the minimum target for biofuels and other renewable fuels placed on the market**

Biofuel use projections and the related production and marketing issues are dealt with under the programme for production and use of biofuels in Latvia (2003-2010). For biofuel to take a 5,75 % share of total consumption, 75 000 tonnes of biofuel will have to be consumed, i.e. 32 000 tonnes of bioethanol and 43 000 tonnes of biodiesel.

To help ensure that biofuel produced in Latvia is used in Latvia, the following measures are being taken:

- Cabinet Regulation No 772, on Regulations regarding requirements for biofuel quality, conformity assessment, market supervision and procedures for consumer information, is being amended to include quality requirements for rapeseed oil, refined or unrefined, suitable for use as fuel in certain types of combustion engines; for unleaded petrol to which dehydrated

bioethanol (at least 99,5 % alcohol by volume) has been added (85 % by volume of the total end product); and for biogas.

- In 2007 a link to a section on biofuels is to be added to the homepage of the Ministry of Economic Affairs, giving easy access to information and news about biofuels.
- The possibility of creating biofuel clusters is being considered.

In 2006 a programme for the promotion of biogas production and development in Latvia (2007 to 2011) was drawn up. The aim is to develop the production and use of biogas in Latvia, including use for transport, and at the same time comprehensively deal with issues concerning the management of biodegradable by-products/residues of production, processing and finishing processes and reduce the risk of soil, water and air pollution, as well as possible threats to human health.

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