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REPORT
on the promotion of the use of biofuels and other renewable fuels in transport
ESTONIA
2008

Article 4 of DIRECTIVE 2003/30/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the promotion of the use of biofuels or other renewable fuels for transport lays down that Member States are to report to the Commission by 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 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 renewable fuels.

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

Under the **Alcohol, Tobacco and Fuel Excise Duty Act**, biofuel is exempt from excise duty once the European Commission has authorised it and until that authorisation expires. Biofuel, for which the first four digits of the CN code are 4401 or 4402, is unconditionally exempt from excise duty. Authorisation to exempt biofuel from excise duty was received from the European Commission in a letter dated 27 July 2005. The authorisation number for the exemption of biofuel from excise duty is 314/2005 and it is valid for 6 years.

In accordance with the objectives set out in the **Development plan to promote the use of biomass and bio-energy 2007-2013** (drawn up pursuant to Government Order No 429 of 3 August 2006), the following studies referring to the terms of reference were carried out in 2007.

The *first term of reference* dealt with identifying land resources which can be used to generate energy biomass.

The *second* order package of studies focused on assessing biomass resources from existing, current or already planned production/consumption. Biomass resources were in turn dealt with in three resource groups: wood biomass, industrial and municipal -waste

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biomass, and agricultural biomass. With regard to agricultural biomass, the biomass potentially obtainable from rough and semi-rough grassland was also assessed.

The *third term of reference* targeted the identification of all energy crops under consideration for cultivation in Estonia, together with an appraisal of their realistic cultivation potential and suitability. Energy crops were also split into two large plant groupings: ligneous and herbaceous energy-biomass producing crops.

The *fourth term of reference* was to bring together technological studies. The objective of this was to find answers to the following issues:

- 1) nationwide planning for biomass production and energy use;
- 2) suitability of biomass energy conversion technology to various types of biomass-based fuels;
- 3) biogas production potential – suitable technological solutions, possibilities, locations, conditions for network creation;
- 4) transport biofuel production potential – suitable technological solutions, possibilities, locations;
- 5) evaluation of biomass product life-cycle;
- 6) participation of Estonian research groups in EU research and development framework programme bio-energy projects;
- 7) material production from biomass; use of bio-materials;
- 8) arrangements and measures for promoting biomass energy use in Estonia.

The *fifth term of reference* targeted market regulation of the field (law, taxation, public procurement, aid).

In addition to these studies, an overview of the **Estonian biofuel market** has been compiled; during this process, an analysis was made of the existence of the resources needed to produce biofuels, actual production of biofuels, foreign trade, price trends in Estonia and elsewhere, and biofuel consumption.

The implementation study entitled “**Measures needed to increase the share of biofuel use in transport – cost and fuel market impact**” analysed and assessed the possibilities of producing or importing biofuel, the present state of the vehicle fleet suitable for biofuel use, the existence of biofuel requirements, and the potential impact of enacting a requirement for mandatory biofuel use.

Future action is being planned on the basis of the findings of these studies.

One of the priorities of the **Strategy for the use of national structural instruments 2007-2013** is to develop the energy sector. One objective of the priority is to increase the use of alternative transport fuels. To achieve this objective, support is being provided for the widespread dissemination of information concerning the use of alternative fuels and for investments to convert vehicles.

In 2007, 122 applicants were granted EEK 5.95 million in energy crop aid for 11 568 ha of land.

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As part of the framework for information activities on biofuel production and use, several seminars, conference and fairs were organised in 2007.

Details of the actions, studies, research timetable and funding possibilities related to the implementation of the **Development plan to promote the use of biomass and bio-energy** can be found at <http://www.bioenergybaltic.ee>.

2. Renewable energy resources used for energy generation in Estonia

Estonia's renewable energy potential, which lies primarily in the co-generation of heat and electricity based on biofuel and in wind energy, is described in the 2005 report. The figures for the share of renewables in primary energy for 2007 are currently unavailable; they will be published in September.

Primary energy provision in 2006 was 208 PJ, of which approximately 60% was from oil shale and 11% from wood and peat combined. Gross electricity production in 2006 was 9 731 GWh, including 13.5 GWh from hydro-electric plants and 76.3 GWh from wind farms, i.e. 0.9%. Renewable energy source share of gross consumption in 2006 was 1.6%. Wood accounted for 16.2% of fuel used to produce heat energy in 2006.

3. Fuel consumption in transport in 2007

On the basis of preliminary data from the Statistics Estonia the following fuel was used for transport in 2007:

Diesel	590 000 tonnes
Petrol	323 000 tonnes
Liquefied gas (LPG for transport)	8 000 tonnes

Precise figures will be available in Statistics Estonia's September publication.

As at 1 January 2008, 623 136 vehicles were registered in the traffic register, of which 438 485 ran on petrol and 184 627 on diesel.

According to the report presented by biofuel producers, in 2007 there were three biofuel operators in Estonia (FAME, KN 3824 90 98), releasing a total of 638 964 litres of biofuel to be used in its pure state or mixed with diesel, and one biofuel operator releasing 26 345 litres of biofuel (denatured ethanol, KN 2207 20 00) mixed in various ratios with petrol.

Total petrol and diesel consumption in 2007 was 1 052 000 000 litres, of which biofuel accounted for just 0.06%.

These calculations are based on the following data:

Diesel – energy content 43 MJ/kg;

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Petrol – energy content 44 MJ/kg;
Ethanol – energy content 27 MJ/kg;
FAME – energy content 38.6 MJ/kg.

4. Other factors influencing the placing on the market of liquid biofuels

According to the report dealing with the measures needed to increase the share of biofuel use in transport, the possibilities for developing the biofuel market are as follows:

- exempting biofuel from excise duty;
- mandatory biofuel sale requirement;
- mandatory use of biofuels in public transport;
- support for the purchase of buses adapted to run on biofuel;
- support for installing biofuel refuelling stations for buses;
- direct aid to biofuel and/or biomass producers in proportion to their production volume;
- State aid to prepare biofuel infrastructure.

In summary, biofuel production and use in Estonia is hampered by the lack of stable demand, high cost of biofuel raw materials, competition from the food industry for the raw material (rape), the additional investment required of fuel retailers to sell biofuel, and a lack of information on the effectiveness and impact of biofuel use.