

National report on the promotion of the use of biofuels or other renewable fuels for transport in Romania – 2010

1. Introduction

In accordance with Article 4 of Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport, Member States report to the Commission every year prior to 1 July:

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

2. Measures to promote the use of biofuels in transport

2.1. Regulatory environment

The use of biofuels and other renewable fuels for transport is being promoted with the aim of partially replacing petrol and diesel, contributing to achieving certain objectives such as: meeting commitments for the reduction of greenhouse gases, ensuring fuel security in a manner compatible with the environment and increasing the level of energy independence, promoting the use of renewable energy sources.

In addition, promoting the use of biofuels could create new opportunities for sustainable rural development, with the potential to open up new markets for agricultural products.

Directive 2003/30/EC was transposed in full by Government Decision No 1844/2005 on the promotion of the use of biofuels and other renewable fuels for transport, published in Official Gazette No 44 of 18 January 2006.

Romania must ensure that a minimum percentage of biofuels or other renewable fuels for transport are introduced onto the market by 2010. The minimum percentage set is 5.75%, calculated on the basis of the energy content of all types of petrol and diesel used in transport.

In order to meet the target, Government Decision No 1844/2005 was amended by Government Decision No 456/2007, published in Official Gazette No 345 of 22 May 2007, making provision for the staggered introduction of a minimum percentage of biofuels in conventional fuels, as follows:

- a) from 1 July 2007, diesel with a minimum 2% biofuel content by volume;
- b) from 1 January 2008, diesel with a minimum 3% biofuel content by volume;

- c) from 1 July 2008, diesel with a minimum 4% biofuel content by volume;
- d) from 1 July 2009, petrol with a minimum 4% biofuel content by volume.

The European Council of March 2007 reaffirmed the Community's commitment to the Community-wide development of energy from renewable sources beyond 2010. Thus, with the aim of achieving the target of 10% of biofuels by 2020, calculated on the basis of the energy content of all types of petrol and diesel used in transport (Article 3(4) of Directive 2009/28/EC on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC), it was considered appropriate to increase the content of biofuels in conventional fuels by amending Government Decision No 456/2007 with Government Decision No 829/2010 published in Official Gazette No 602 of 25 August 2010.

In this context, fuel suppliers are introducing on the market only a blend of biofuels and conventional fuels - derived from mineral oils as follows:

- a) from 1 January 2011, diesel with a minimum 5% biofuel content by volume;
- b) from 1 January 2013, diesel with a minimum 7% biofuel content by volume;
- c) from 1 January 2011, petrol with a minimum 5% biofuel content by volume;
- d) from 1 January 2013, petrol with a minimum 7% biofuel content by volume;
- e) from 1 January 2017, petrol with a minimum 9% biofuel content by volume;
- f) from 1 January 2018, petrol with a minimum 10% biofuel content by volume.

2.2 Promotion using economic instruments

- Ø Emergency Government Ordinance No 125/2006 approving the direct payment and complementary national direct payment schemes granted for agriculture starting from 2007, and amending Article 2 of Law No 36/1991 on agricultural companies and other forms of agricultural associations, approved with amendments by Law No 139/2007;

Financial assistance is granted to agricultural producers for the cultivation of sunflower, oilseed rape, soya and corn under the single area payments scheme (SAPS) and the payment scheme for energy crops;

- Ø Order No 549/2007 establishing the method of implementation, the specific conditions and eligibility criteria for application of the direct area payments scheme for energy crops.
- Ø The National Programme for Rural Development (2007 -2013) provides for the stimulation of investment in renewable energy, in the efficient use of energy and in new technologies which will contribute to ensuring sustainable development and greater security of reserves, also leading to economic growth.

Thus, both the increased use of renewable energy resources, including the production of biofuels, and the increased supply of biomass within the framework of sustainable agriculture and forestry systems are encouraged by means of the following measures:

- Measure 121 **"The modernisation of agricultural holdings"** – in the framework of this measure, support is given to investments which are aimed at: the production and sustainable use of energy from renewable sources on the holding; the establishment of forest species with a short production cycle and regeneration by means of vegetative propagation with a view to the production of renewable energy.
- **Measure 123 "Adding value to agricultural and forestry products"** – in the framework of this measure, support is given for promoting investment aimed at generating biofuels and renewable energy from forest biomass, and at increasing the use of renewable energy resources.
- **Measure 312 "Support for the creation and development of microenterprises"**
 - in the framework of this measure, support will be given for investment in:
 - non-agricultural activities,
 - craft activities,
 - provision of services,
 - the purchase of equipment for the production of energy from renewable sources other than biofuels (in the framework of measure 312, the purchase of equipment is permitted for the production of energy which uses solar, wind, hydraulic or geothermal energy solely for the purpose of carrying out economic activities for which the beneficiary is or will be authorised).

3. Biomass potential in Romania

Romania has a total surface area of 91 843 square miles; 62% of this is occupied by agricultural land, 28% is forest or other land with forest vegetation, and 10% other types of land (waters, marshes, unproductive land, etc).

Romania's agricultural lands break down into the following classes of suitability:

- § **Class I (very high suitability):** 2.8% of agricultural land, of which approximately 3.8% is arable land;
- § **Class II (good suitability):** 24.7% of agricultural land, of which approximately 35.9 % is arable land;
- § **Class III (average suitability):** 20.8% of agricultural land, of which approximately 25.3% is arable land;

§ **Classes IV and V (poor and very poor suitability):** 51.7% of agricultural land, of which approximately 35% is arable land;

Romania has a total arable area of 9 379 331 hectares.

Given the soil and climate conditions in Romania, the most viable crops for the production of first generation biofuels are:

- ü for the production of biodiesel: oilseed rape, sunflower and soya;
- ü for the production of bioethanol: sugar beet, cereals (grain, corn, etc).

In the existing topogeographical environment, Romania is considered to have a high biomass energy potential, estimated at approximately 7 594 thousand TOE*/year (318×10^9 MJ/year), which represents around 19% of the total consumption of primary resources in 2000, broken down into the following categories of fuels:

- Ø residues from forestry activities and firewood – 1 175 thousand TOE (49.8×10^9 MJ/year);
- Ø wood waste – sawdust and other wood scrap – 487 thousand TOE (20.4×10^9 MJ/year);
- Ø agricultural waste resulting from cereals, corn stalks, plant debris from vines, etc. – 4 799 thousand TOE (200.9×10^9 MJ/year);
- Ø biogas – 588 thousand TOE (24.6×10^9 MJ/year);
- Ø urban household waste and residues – 545 thousand TOE (22.8×10^9 MJ/year).

4. Romania's potential as regards the production of biofuels

Romania's potential to supply the raw material necessary for biodiesel, namely vegetable oil (sunflower, soya, oilseed rape) is approximately 500 -550 thousand tonnes/year. Its potential to supply the raw material necessary for bioethanol, namely for corn seed is approximately 390 thousand tonnes/year and for wheat germ approximately 130 thousand tonnes/year.

* Romania's strategy for the exploitation of renewable energy sources, as approved by Government Decision No 1535/2003.

At present Romania has a production capacity of approx. 300 thousand tonnes/year for biodiesel and approx. 120 thousand tonnes/year for bioethanol.

5. National resources allocated to the production of biomass

Biomass is the main rural fuel, being used especially to heat dwellings and water and in cooking.

Biomass accounts for 7% of primary energy demand and 50% of Romania's potential renewable resources.

The National Wood Institute estimates the annual production of fire wood from forests to be 1 677 thousand m³, and the volume of bark to be 0.860 thousand m³ with an annual availability of residues resulting from the primary processing of wood (sawdust, ends etc) of 2 095 thousand m³.

The estimated quantity of national forest biomass resources for 2015 and 2020
(thousand m³)

Sector/origin	2015	2020
Primary resource	3.0	3.5
Secondary resource	3.5	4.0

6. Total sales of transport fuels - 2010

Type of fuel	Total sales (tonnes)
Unleaded petrol (minimum 95 =< RON < 98 & < 10 ppm sulphur)	940 997
Unleaded petrol (minimum RON >= 98 & < 10 ppm sulphur)	585 693
Total petrol	1 526 690
<i>Diesel < 10 ppm sulphur</i>	<i>4 194 655</i>
Total diesel	4 194 655
Total petrol and diesel	5 721 345

7. Total sales of transport fuels

In 2010 in Romania, approximately 253 331 tonnes of biodiesel and bioethanol (142 431 tonnes of biodiesel and 110 900 tonnes of bioethanol) were used, of which:

- **Production:**
 - biodiesel = 83 562 tonnes
 - bioethanol = 53 301 tonnes
- **Imports:**
 - biodiesel = 58 869 tonnes
 - bioethanol = 57 599 tonnes

8. Quality of biofuels

The Ministry of Economic Affairs, Trade and the Business Environment is responsible for implementing the 'Qualitative and quantitative monitoring system

for petrol and diesel' marketed in filling stations, as approved by Order No 742/2004 of the Minister for Economic Affairs and Trade, the annex to which was replaced by Order of No 58/2006 of the Minister for Economic Affairs and Trade.

In 2010, under the 'Qualitative and quantitative monitoring system for petrol and diesel', checks were carried out to determine the fatty acid methyl ester (FAME) content of approximately 210 diesel samples and to determine the content of biofuels in petrol in approximately 360 petrol samples. The checks were performed by bodies recognised by the Ministry of Economic Affairs, Trade and the Business Environment to carry out sampling of petrol and diesel, in accordance with Order No 907/2004 of the Minister for Economic Affairs and Trade approving the list of recognised bodies carrying out sampling activities, as amended.

Standard SR EN 14078:2004 is used to determine the fatty acid methyl ester (FAME) content in diesel and standard SR EN 1601:2000 is used to determine the content of biofuels in petrol.

In accordance with Government Decision No 456/2007, failure to place the mix of biofuels and conventional fuels on the market is punishable by a fine of RON 7 500 to RON 15 000.