

Report of the Republic of Hungary to the Commission on the promotion of the use of biofuels for transport

This paper is intended to fulfil the obligation of the Member States to report to the European Commission for 2004, as required by Article 4 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.

The report covers:

1. The measures taken to promote the use of biofuels or other renewable fuels to replace diesel or petrol for transport purposes
2. The national resources allocated to the production of biomass for energy uses other than transport
3. Total sales of transport fuels and the share of biofuels, pure or blended, and other renewable fuels placed on the market for 2003; and the level of the national indicative target for 2005

1. Measures taken to promote the use of biofuels

Biodiesel programme

In the framework of the 1999 biodiesel programme two experimental biodiesel plants were built in Hungary; their production was planned to be utilized in a so-called closed-circuit, integrated producer-manufacturer system, while keeping biodiesel totally tax-free. In the pilot phase, the aim of the programme was to facilitate biodiesel use among agricultural producers manufacturing plant materials. However, due to the special, low-rate excise duty on diesel granted for agricultural producers, the use of biodiesel was not an economical option for them, thus, the programme failed.

Government Decision on fostering the biofuel market

On September 22th, 2004 the Hungarian Government approved the Report of the Ministry of Economy on the national plan for the promotion of the use of biofuel for transport. The aim of the plan is to establish regulatory environment for biofuels on a fully commercial basis. Pursuant to the proposal, the Government approved to continue to refund of the excise duty until 2010 in order to increase the proportion of biofuel use, and thus promote the blending of biofuels into standard engine fuels.

As in several EU member states, the use of bioethanol (ethanol) and ETBE (ethyl-tertio-butyl-ether) produced from bioethanol, as well as the use of biodiesel produced from vegetable oils is feasible in Hungary until 2010. Due to professional and financial considerations, direct blending of bioethanol in engine fuel is currently not advisable, however, technically, there is no restriction on the blending in of ethyl-tertio-butyl-ether (ETBE) produced by the

addition of isobutylene, a by-product of oil-refinement. Currently, production capacity for bioethanol required for the production of 40 thousand tons of ETBE is available. The first stage of refinery developments required for the production of ETBE can be completed in 6-12 months; production capacity can be doubled in 3-4 years, increasing the output of ETBE to 100 kton/year, which may result in the utilization of 50 ktons of bioethanol as fuel.

A wide array of options may open in the field of biodiesel production as a result of appropriate modifications in financial regulations and creation of a secure environment for investors on the long run. The current pure distribution will end as of 2005. The Government expects progress from the facilitation of blending of maximum 5% standard biodiesel into standard quality diesel oil for transportation purposes; this blending is allowed by European standards.

Tax strategy for biofuels

The Hungarian Government proposed the amendment of the Act on excise duty as of 2005 to the Parliament, which includes the planned tax allowances to facilitate the use of biofuels. According to these regulations, the distributor of ETBE (ethyl-tertio-butyl-ether) produced on the basis of bioethanol blended in engine fuel as well as standard quality biodiesel blended in diesel oil will be subject to an excise duty refund from 1st January 2005 to 31st December 2010. In accordance with the provisions of the Contract regarding state funds, we have informed the Commission of the plans to introduce these tax allowances.

Options to use of other renewable fuels

In accordance with the proposal, the ministries concerned will examine the use of edible oil waste for the production of biodiesel, as well as the general comparative economical, technical and environmental implications of direct blending of bioethanol in engine fuel and the use of other renewable fuels in Hungary.

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

Investment grants necessary in the case of various electricity-generating technologies using renewable energy

	Unit investment cost M HUF/MW	Composition of funds	
		Own resource (incl. loan) %	Support %
Water (1-10 MW)	341	95	5
Wind (special projects)	316	78,5	21,5
Sun (photo-electric) for own use	2 000	20	80
geothermal (automotive LPG)	750	53	37
beyond 50 MW	435	90	10
Fire wood, waste, energy crop (biomass)	355	82	18
Waste	-	-	-
Biogas	355	66	34

3. Total sales of transport fuels

According to the data of the Ministry of Finance, fuel use in Hungary amounted 146 PJ in 2003. There was no biofuel use.

4. The national target for 2005

By the above-mentioned decision, the Hungarian Government approved the national indicative target of biofuel in Hungary for 2005; trusting that as a result of the new measures, 0.4-0.6% of the energy content of the fuels for transport marketed in Hungary will be covered by biofuels by 2005.

This national indicative target will be less than the reference value defined by the directive. According to the directive, member states may be provided derogation from the EU reference values for the following reasons:

- a) a limited national potential to produce biofuel from biomass;
- b) resources for the production of biomass to be used for a purpose other than transport, and the special technical and climatic characteristics of the fuel market;

- c) national programmes that use their resources to produce other biofuels for transport, and that are equivalent to the objectives of the EU biofuel directive.

Hungary meets the condition of limited biofuel production potential. The prime factor hindering progress is that production capacities may only be enhanced on the long run. In the case of biodiesel, compared to other parts of Europe, we need to consider the poor national average crop of rape (cca. 1.8 ton/ha), which would be cheaper but the crop of which depends on climatic factors.

Even though the collection and utilization of used frying oil could play an important role in Hungary, studies into the possibilities thereof have only just started; and it is very time-consuming to design and create a system. It is not advisable to utilize pure used frying oil; while blending requires an appropriate pre-treatment.

Hungary undertook to increase the proportion of renewable resources used in electricity production from 0.9% to 3.6% by 2010. Financial means available for renewable energy resources are mainly used up by such innovations. In fulfilling the obligation regarding the increase up to 3.6% of the proportion of renewable use by 2010, biomass will have a paramount role, as outlined in the programme of the Ministry of Economy and Transport. For electric energy production agricultural or timber industry by-products and waste (e.g. straw, corn-cobs, fruit-tree trash, vine branches, forestry or timber industry waste) or herbs or woody energy crops grown especially for this purpose are available in Hungary. By planting energy crop plantations and forests accompanied by appropriate incentive schemes, the national amount of solid biomass can be increased significantly. There has not been a significant investment in energy crop plantation in Hungary, so far there has only been experimental planting. Nevertheless, there have already been several concrete initiatives for the utilization of biomass for purposes other than transport.

Significant energetic projects implemented:

Project	Average annual timber demand
Production of district heat Szigetvár (2 MW)	2 200 ton/year
Production of district heat Mátészalka (5 MW)	6 000 ton/year
Production of district heat Papkeszi (5 MW)	1 000 ton/year
Production of district heat Körmend (5 MW)	6 000 ton/year
Production of district heat Szombathely (7 MW)	8 000 ton/year
Production of heat and electricity Balassagyarmat (2 MW)	12 000 ton/year
Production of heat and electricity Szentendre	20 000 ton/year

Significant projects have been launched to transform formerly coal-fuelled power plants to use biomass. These are the following:

Power Plant in Pécs (49 MW)	330 000 ton/year
Power Plant in Kazincbarcika (30 MW)	200 000 ton/year
Power Plant in Ajka (20 MW)	192 000 ton/year

