

Important notice: this report has been submitted in the language of the Member State, which is the sole authentic version. Translation into the English language is being provided for information purposes only. The European Commission does not guarantee the accuracy of the data or information provided in the translation, nor does it accept responsibility for any use made thereof.

Translation of memorandum

From: Swedish Government Offices, Ministry of Enterprise, Energy and Communications, Energy

Date: 12 August 2009

Ref: N2009/6398/E

Subject:

Report under 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

This memorandum constitutes Sweden's sixth report under 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.

1) Measures taken to promote the use of biofuels or other renewable fuels to replace diesel or petrol for transport purposes

National targets

As indicated in previous reports, the national targets for the use of biofuels and other renewable fuels in Sweden were fixed at 3% for 2005 and 5.75% for 2010, calculated on the basis of energy content.

Promoting clean vehicles

The proportion of new car sales comprising clean vehicles grew from 5% in 2003 to 33% in 2008 (clean vehicles in this context are fuel-efficient cars with CO₂ emissions not exceeding 120g/km, and cars that can run on alternative fuels). This trend has continued in 2009, with the proportion of new car sales comprising clean vehicles standing at 38% for the January–June period.

Some of the contributing factors to this development are described below.

Taxation strategy for alternative fuels

The taxation strategy described in previous reports was also applied in 2007.

Carbon dioxide-based vehicle tax

A carbon dioxide-based vehicle tax was introduced in 2006 to promote the purchase of fuel-efficient vehicles, and thereby reduce emissions in the transport sector.

Obligation to provide renewable fuels

A new Act on the obligation to provide renewable fuels entered into force on 1 April 2006. Under this Act, Sweden's larger filling stations must offer a renewable fuel for sale alongside petrol and diesel. The Act initially applies to filling stations with a sales volume in excess of 3 000 m³ of petrol or diesel. These stations make up around 15% of the country's just under 4 000 filling stations. The aim is that around 60% of all filling stations will sell a renewable vehicle fuel by 2010.

Environmental policy for central government cars

Vehicles purchased by the public sector must, as a rule, be clean vehicles. From 2007, at least 85% of passenger cars purchased or leased by central government authorities must be clean vehicles. From 1 February 2009, all passenger cars purchased or leased by central government authorities must be clean vehicles. Exceptions are made for certain categories, such as emergency vehicles.

Clean vehicle premium

In the spring of 2007, the Government introduced a premium to encourage individuals to switch to clean vehicles, providing an incentive for fuel-efficient cars and cars running on environmentally friendly fuels. The premium covers conventional fuel-efficient cars, cars running on alternative fuels, electric hybrids and electric cars with a certain level of efficiency. An individual purchasing a new clean vehicle between 1 April 2007 and 30 June 2009 receives a premium of SEK 10 000. In 2009, the clean vehicle premium will be replaced by a five-year vehicle tax exemption for clean vehicles.

Production of biofuels

The two new biofuel production plants in Sweden became operational in 2008, and decisions have been taken to build new ones. The main types of plant being built or planned are those with established technology for the production of ethanol, RME (rapeseed methyl ester) and biogas (and upgrading plants for biogas).

Because access to raw materials, conversion efficiency and intensity of cultivation of modern raw materials will probably severely restrict expansion potential in a few years, the Swedish Energy Agency is investing in research and development of cellulose-based fuels. Efforts are being concentrated in three areas: ethanol produced from cellulose, gasification of biofuels and gasification of black liquor.

2) National resources earmarked for the production of biomass for energy uses other than transport

The biofuels market in Sweden

Sweden has a fully commercial biofuels market. In 2008, Sweden's total supply of biofuels, peat, etc. amounted to approximately 124 TWh, an increase of 4 TWh compared to 2007. Most of these fuels are produced in Sweden and include wood fuels (branches and tops, logging residues, wood, bark, chips and wood from short-rotation forestry) spent liquor (by-products of chemical pulp production), peat, waste (industrial waste and household refuse, etc.) and a smaller quantity of agricultural raw materials. These fuels are mainly used in the forest industry, for heating (district heating and single-family homes) and for electricity production.

Efforts to promote the use of biomass for energy purposes

Renewable energy certificates

In June 2006, the Government decided to develop a system of "electricity certificates", under which a certain proportion of consumer electricity consumption must come from renewable energy sources (Govt. Bill 2005/06:154, Renewable energy with green certificates). The system has been extended to 2030. Sweden has a target for renewable energy production of 17 TWh by 2016, compared with 2002 levels.

Subsidy for conversion from electric heating and oil-fired heating systems

A special investment subsidy for conversion from direct-acting electro heat in residential buildings came into force in January 2006. The overall total of the subsidy amounts to some SEK 1.3 billion for the 2006–2010 period. Applications for subsidies amounting to a total of SEK 611 million had been granted by 30 June 2009. Of the granted subsidy, SEK 331 million has been paid to the recipients.

A similar investment subsidy for conversion from oil-fired heating in residential buildings came into force in January 2006. Subsidies are granted for conversion to district heating, biofuelled heating systems, geothermal energy or solar energy. One objective of the subsidy is to reduce fossil fuel use and boost the proportion of renewable energy used for heating. By the end of 2008, 37 055 applications for subsidies amounting to a total of SEK 450 million had been granted. Of this subsidy, 43% has gone to geothermal systems, 37% to biofuel and 20% to district heating. An additional 179 applications were granted subsidies for the installation of solar heating.

Subsidy for energy efficiency and renewable energy in public places

A special investment subsidy for energy efficiency and conversion to renewable energy sources in premises used for public sector activities was introduced in 2005. Up to 31 December

2008, 7 167 applications were granted for subsidies amounting to a total of SEK 1 958 million, of which SEK 154 million was for the installation of solar cells. By the end of 2008, SEK 1 205 million of the subsidy had been paid to the recipients, of which SEK 89 million was subsidy for the installation of solar cell systems.

Climate investment programmes

Approximately SEK 500 million have been allocated for biogas measures since 2003 within the framework of aid to climate investment programmes (*Klimp*). In 2007, SEK 56 million in aid was granted, distributed over 57 biogas filling stations.

New energy technology

A special subsidy for investment in solar cells and biogas is available during the 2009–2011 period. The total framework of this subsidy amounts to SEK 339 million.

3) Total fuel sales last year and the proportion of biofuels, etc.

Vehicles running on biofuels

At the end of 2008, there were some 4.3 million passenger cars on the road in Sweden, of which about 149 000 were vehicles that can operate mainly on renewable fuel. The number of passenger cars running on renewable fuel grew by 62% when compared to the previous year, and constitutes 3.5% of the total number of registered passenger cars.

Number of filling stations

Of the country's 3 250 filling stations, just over 45% provided an alternative fuel at the end of 2007. This can be compared with the corresponding figure for 2008, which was 299% [sic.]. Over 90% of the filling stations with alternative fuels provide E85.

The increase in the number of sales outlets is due to greater demand for renewable fuels and the above-mentioned Act under which filling stations of a given size must provide a renewable fuel.

Use of biofuels in Sweden

The share of biofuel, calculated by energy content, was 4.9% for 200,¹ [sic.] equivalent to 4.4 TWh, an increase of 0.5 TWh or 0.9 percentage points on the previous year. The main renewable fuels used in Sweden are bioethanol, FAME² and biogas. The biofuels ethanol, FAME and biogas are related to the overall total of petrol, diesel and biofuels.

1 According to preliminary statistics on biofuels for transport purposes, Monthly Fuel Statistics, Statistics Sweden. Final statistics for fuel use for transport purposes for 2007 are published on 22 December 2008. The usual case is that diesel shows the greatest discrepancy compared to final statistics: in 2006, diesel for transport purposes was approximately 0.1 million m³ lower in the final statistics. This means that the proportion of biofuels will be somewhat higher when final statistics are used. The difference is because the diesel use of some machinery is included in the preliminary statistics, which is not to be included in statistics for transport purposes.

2 FAME is Fatty Acid Methyl Ester. The most common type in Europe is Rapeseed Methyl Ester (RME).