

THE EU BIOFUELS POLICY AND REGULATORY LANDSCAPE

This sub-chapter discusses the main legislations and regulations that have been and still are driving the production of biofuels in the European Union. More specifically, it presents the overarching biofuels framework in which European and national rules coexist.

Following this general overview, the main legislative packages are analysed: the "Biofuels" Directive¹, the Renewable Energy Directive, the Energy Taxation Directive and the Fuel Quality Directive. Finally the paper describes perspectives and threats of the "green-fuels" sector related to each legislative act presented.

Setting the stage

In a strive to alleviate climate change related environmental degradation as well as the increasing scarcity of conventional energy sources, the European Commission set in 2003 the basis for the promotion of the use of renewable energy in transport. This legislative act was entitled the "Biofuels Directive"² as it mainly laid down indicative targets³ for biofuels use in transport in the European Union from 2005 up to 2010.

Concomitantly the European Commission laid down a comprehensive fiscal framework taking into account the emergence of these new commodities.. Since mineral fuels undergo a special fiscal treatment, incurring excise taxes, the European Commission conceived a particular legal fiscal scheme for the promotion of biofuels. Accordingly, Member States had been given the possibility to create a detaxation system for biofuels. The Council supported this framework and unanimously approved the Energy Taxation Directive⁴.

In 1998, the European Commission defined specifications for fuels (petrol, diesel, gas-oil) for transport ensuring a high level of human protection and environment preservation⁵. In 2007, the European Commission has initiated the revision of these standards by including also biofuels for better climate change mitigation. As a result of the new changes, fuel suppliers will be bound to reduce their greenhouse gas emissions, including by blending biofuels in the conventional fuels.

The first directive on biofuels 2003/30/EC

The European Commission intensified its climate change mitigation work in the recent years. , while at the same time considering the need for improved security of supply and sustained rural development. Standing in the cross-road of these three challenges, biofuels have been acknowledged for their advantages and accordingly the European Commission build a framework for their promotion. The first move towards an EU biofuels policy was represented by the European Commission Green Paper "*Towards a European strategy for the security of energy supply*" published in November 2000.

In May 2003 *Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport* was adopted. Its provisions require Member States to introduce legislation and take the necessary measures to ensure that, as from 2005, biofuels account for a minimum proportion of the fuel sold on their territory. More specifically, the Directive sets EU reference targets on the basis of which Member States shall set their national indicative targets. In practice, Member States must ensure that the minimum share of biofuels sold on their markets is 2% by 31 December 2005 at the latest, and 5.75% by December 2010. Although the targets were "*indicative*", it was anticipated that these objectives would have a strong political value and would influence the choice of EU countries.

¹ Directive of the European Parliament and the Council on the promotion of the use of biofuels or other renewable fuels in transport, 2003/30/EC, Mai 8th, 2003

² idem

³ The "Biofuels Directive" set that the minimum percentage of biofuels or other renewable fuels put on the market in every Member State is 2% for 2005; 5,75% for 2010, and 10% for 2020, calculated on energy content.

⁴ Council Directive 2003/96/EC restructuring the Community framework for the taxation of energy products and electricity, October 27th, 2003

⁵ Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel fuels and amending Directive 93/12/EEC

Moreover Member State setting lower objectives would have had to justify this to the European Commission on the basis of objective criteria.

Also the "Biofuels" Directive provided that Member States should submit before 1 July each year a report to the Commission, detailing the measures taken to promote the use of biofuels and other renewable fuels, the national resources allotted to the production of biomass for energy purposes other than transport and the total quantities of fuels for transport sold in the course of the year. The purpose of the reporting requirement was for the Commission to first present the progress achieved to the European Parliament and to the Council and secondly, to evaluate the potential for legislative updates.

The Renewable Energy Directive amending the "Biofuels" Directive

In 2008, the European Commission released the major legislative act that is defining the evolution of the European biofuels sector in the next ten years. The main provisions of the Renewable Energy Directive are the following: renewable energy for all sectors and especially for the transport sector will have to follow binding targets for 2020; sustainability criteria are imposed for the first time upon a series of products, namely for biofuels; a certification scheme for sustainable biofuels will be put in place; a promotion scheme for advanced biofuels pathways has been developed.

Binding targets for renewable energy in transport (10% in all Member States) and for renewable energy in final energy consumption (20% in all Member States)

The Commission proposal confirmed the conclusion of the March 2007 Energy Council defining a 20% target for all renewable energies and a target of at least 10% for biofuels (meaning that the renewables mix used to attain the overall 20% target shall contain at least 10% of renewable energy in transport in all Member States). !!!

Sustainability criteria for biofuels

The sustainability of biofuels became an essential part of the Commission proposal. As far as greenhouse gases (GHG) emissions savings are concerned, the Commission text indicates that the "cut off value" (to be passed in order to count towards the targets and to benefit from Member States support) should be 35%. A transition period will however apply to biodiesel production facilities in operation in January 2008 (the cut-off will only apply as from 1/04/2013). + 50% threshold as from 2017!!!

Next, the directive detailed "typical" values and "default" values of GHG saving for each biofuels production chain (i.e. biodiesel from rapeseed, ethanol from wheat etc.). The input data used to calculate those values were based on the JEC study⁶.

The methodology has been adapted to take account of the specificity of Used Cooking Oils (UCOs) and animal fats "*Wastes and[...] residues from processing chains, other than biofuel processing chains, with no potential food or feed use shall be considered to have a "0" life-cycle GHG emissions up to the collection of these materials*". This gives a typical GHG saving of 83% and a default value of 77% (third in the ranking of best performing biofuels).

Giving the very explicit provisions in the text of the Renewable Energy Directive related to the legal basis (i.e. Article 95 of the EC Treaty⁷), Member shall not forbid the placing in the market of a biofuel that respect the EU sustainability standard. Another very important aspect is that the Directive aims at establishing a "*complete harmonisation of biofuel sustainability criteria in order to ensure that no criteria would be adopted individually by Member States*", which will have as a legal basis still the

⁶ "Wheel to wheels analysis of future automotive fuels and powertrains in the European Context", Joint Research Center (European Commission)-Eucar (European Council for Automotive R&D)- Concawe (The Oil companies European association for Environment, health and safety in refining and distribution) WTW study version 10/2008; this study was discussed in the chapter on LCAs for biofuels and is being regularly amended by the Joint Research Centre at the request from the Commission

⁷ Article 95 of the EC Treaty provides for the harmonization of the EU internal market

internal market provision. Sustainability criteria will be mandatory and thus prevent Member States from adopting certain measures which would hinder trade in raw materials (Article 15(6)).

Certification of sustainable produced biofuels

The adopted Renewable Energy Directive also creates new important rules for environmental sustainability of biofuels. Biofuels cannot be produced in certain forests areas designated for nature protection purposes and wetlands (principle of the "no-go" areas). The reference date for land use change is 2008.

With regard to verification of compliance with the sustainability criteria, the Commission retained only a mass balance system to be applied for certifying biofuels. However there will be the possibility for Member States to refer to bilateral agreements EU-third countries or to existing voluntary international schemes (e.g. the Round Tables on Palm or Soy). As expected, the systems will need to be accredited by the Commission. Raw material cultivated in the EU shall be obviously produced according to the CAP cross-compliance rules.

Advanced biofuels

The Directive aims provides extra incentives (double-counting towards the targets for instance) for "*biofuels made from wastes, residues, non-food cellulosic material and ligno-cellulosic material*". This will ensure the further deployment of High GHG savings biofuels. It should however be noted that neither jatropha nor algae based biodiesel are specifically mentioned, although getting every day closer to the commercialization phase and are expected to yield very high emission savings.

The Energy Taxation Directive

The Energy Taxation Directive⁸ represents one of the two main legislative pillars subjecting the biodiesel sector in Europe along with the Renewable Energy Directive. Essentially it sets the fiscal structures for taxing energy products in Europe and in particular it defines the framework for biodiesel detaxation at national level.

The Energy Taxation Directive is currently undergoing a thorough revision process, which started recently with the release of the new Commission proposal. Following the preparatory stages including industry consultations, the revision of the Energy Taxation Directive entered in 2009 in a concluding stage aiming for a final unanimous decision by the Member States in the Council.

The new proposed fiscal structure is better adapted to account for the biofuels renewable fuel nature. Indeed, the proposal foresees a two-part tax for energy products 1) *an environmental tax* so-called CO2 emission tax and 2) *an energy tax* based on the energy content of the products. Biofuels will not be subject to the environmental tax, but only to the energy tax.

The proposal that biofuels should not be subject to the environmental tax is a welcome move, which is fully in line with international and EU commitments to promote low carbon technologies, especially in the transport sector. Still, a clear and sound definition of low carbon technologies will be necessary, to incentivise truly renewable energy and forward looking pathways (cellulosic ethanol, algae biodiesel).

Another important point to be considered during the review process of the Energy taxation Directive is the need to maintain the coexistence of biofuels detaxations and biofuels mandates (obligations). CO2 tax exemption and detaxation. This is essential to maintain an equitable tax burden sharing between final consumers and the State budget and will contribute to wide public acceptance of biofuels.

⁸ Directive 2003/96/EC restructuring the Community framework for the taxation of energy products and electricity

Fuel standards: Fuel Quality Directive

Another legislative act issued by the Commission in parallel to the revision of the "Biofuels" Directive 2003/30, is the revision of *Directive 98/70/EC relating to the quality of petrol and diesel fuels* (referred to as the EU Fuel Quality Directive).

Although the Commission proposal was initially designed to pave the way for an ambitious review of the EU policy for CO₂ reduction in the transport sector, the timing of the release made it fully tied to the Renewable Energy Directive with respect to biofuels sustainability.

This is why maximal consistency between the two texts, especially on such issues as biofuels sustainability has been ensured during the negotiation steps in 2008.

Background

Approved in 1998, the Fuel Quality Directive, 98/70/EC sets EU-wide specifications for road transport fuels in an environmental-driven context. It has been designed having in mind that road transport fuels account for around 20% of the EU's greenhouse gas emissions. Consequently, and in parallel to Community policies on CO₂ emissions from cars, the reduction of greenhouse gas emissions from fuels has always been considered as a major tool to secure the EU's commitments under the Kyoto Protocol.

Moreover the relevance of this legislation in mitigating climate change is crucial considering that transport sector in Europe is not yet covered by the EU Emission Trading System (a cap-and trade emissions system).

Main lines and actions

The Revised Fuel Quality Directive set a number of key objectives : CO₂ emission reduction, support of new technologies and the deployment of alternative fuels, promotion of biofuels for achieving the Community targets, ensuring air quality objectives.

Amongst the key provisions are those laying down the obligations for fuel suppliers as from 2010 to cut the greenhouse gas emissions from the fuels they supply by 1% per year based on the level of 2010 and along the whole product life-cycle (Article 7a).

However, during the negotiation process, the 10% target was watered down to 6% CO₂ reduction from the supplied fuels with another 4% non-binding reductions to be achieved notably with Carbon Capture and Storage (CCS) and CDM credits, which are only intermediate solutions and not solve the core of the transport emissions problem. Also, the Commission proposal called for a mandatory monitoring of life-cycle greenhouse gases to be introduced as from 2009, covering both road transport and non-road fuel suppliers.

Conclusions

In the recent years the EU has established an ambitious although complex legislative and regulatory setting for the promotion of the use of renewable energy in all sectors and especially in transport. This move will indisputably represent an important step towards an international coordinated approach to climate change mitigation.