Fact sheet

Claus Sauter's column dated March 2017

RED II and its effect on the European biofuels market

Renewable Energy Directive (RED)

In German: Erneuerbare-Energien-Richtlinie (EG)

With the Renewable Energy Directive, or to give it its full name *Directive 2009/28/EC of the European Parliament and of the Council of April 23, 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC*, the member states of the European Union entered into formal obligations concerning the share of renewable energy as a proportion of their total energy consumption by 2020, with the objective that the share of renewable energy as a proportion of the total energy consumption in the EU shall be at least 20 percent by that year. The quotas allocated to the member states differ, based on the status already achieved at the date that the directive was issued. These quotas are obligatory, which means that the EU can impose penalties on member states that do not achieve the targets. In addition, a further target was implemented under which each member state should ensure that at least 10 percent of energy consumption in the transport sector should be from renewable sources.

RED II

In order to continue with the RED beyond the year 2020 the EC commission published a draft version of RED II on November 30, 2016. It is intended that the European Union will be the global leader in generating and ensuring the supply of renewable energies by the year 2030. By the year 2030 at least 27 percent of total energy consumption should be generated from renewable energy sources. There will be limitations on quota recognition of conventional first generation biofuels for this purpose. The limits on these will be reduced successively from the current 7 percent to 3.8 percent in the year 2030. In addition, RED II defines a quota for the recognition of advanced second generation biofuels. This quota will increase from 1.5 percent in 2021 to 6.8 percent in 2030. Sub-quotas were also set for the various sources of advanced biofuels as defined in a raw material definition catalogue. This includes an additional sub-quota for advanced biofuels from agricultural waste products, for example biomethane generated from 100 percent straw. This increased from 0.5 percent in 2021 to 3.6 percent in 2030.

Conventional first generation biofuels

First generation biofuels are generated from cultivated biomass which is also capable of being used for human consumption or animal feed, e.g. biodiesel from rape seed oil or bioethanol from grain. Currently, German first generation biofuels achieve a CO_2 saving of up to 70 percent compared to petrol or diesel fossil fuels.

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Advanced second generation biofuels

This includes all biofuels produced using waste products and products not used for human consumption. For example, this includes biodiesel from used grease as well as biomethane from 100 percent straw, a biofuel used in natural gas powered vehicles; these are exemplary given their 90 percent CO_2 savings, high efficiency and competitive production costs. Further, a natural gas vehicle powered by biomethane produced using straw is more environmentally friendly than an electric car powered using the current European electricity mix, which is based on nuclear energy and lignite coal. Natural gas vehicles are a better form of diesel for use by high volume motorists; as well as being cost-efficient they are significantly more environmentally friendly, as natural gas and biomethane release no fine-particle pollution and almost no nitrogen oxide.

Compulsory farm land set-aside policies in the EU until 2007

Up until 2007 up to 15 percent of European agricultural land was set aside unused in order to reduce the overproduction of foods and animal feed and to stabilise market prices for European farmers. Under these policies farmers received money in exchange for not using part of their land for productive purposes. It was only biofuel and biogas production that stopped the pattern of spiralling subsidies in the EU, and the policy of compulsory set-aside of productive land was successively ended. An additional sales market was created for farmers, enabling them to sell their excess production and ensure a stable source of income without the use of subsidies.

GHG quotas – Greenhouse gas reduction quotas

In Germany a greenhouse gas reduction quota has been in force since January 1, 2015. This is incorporated in § 37a of the Regulation on the Implementation of the Federal Emissions Protection Act (Verordnung zur Durchführung des Bundes-Immissionsschutzgesetzes – BImSchV).

This legislation requires that all fuel suppliers are required to supply a minimum volume of biofuel substitution products for petrol-based and diesel fuel. These shall reduce the greenhouse gas emissions generated by the total volume of petrol-based and diesel fuel plus the petrol-based and diesel fuel substitution products by the following quotas:

1. by 3.5 percent from 2015,
2. by 4 percent from 2017, and
3. by 6 percent from 2020

The reference value used for greenhouse reduction purposes is calculated based on the CO_2 equivalent expressed in kilograms per gigajoule equivalent, which is also set out in the BImSchG and the 37. Regulation on the Implementation of the BImSchG.

The more greenhouse gas savings achieved by a particular biofuel, the less volume is needed to meet the statutory quota. For this purpose all greenhouse gas emissions are taken into account – from cultivation of the raw materials through to the filling station. German biofuels currently achieve up to 70 percent greenhouse gas savings due to the use of leading technologies.

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