Information about the conversion of the biofuel promotion from an energy quota to a greenhouse gas quota starting in 2015

In the amendment to the law for promoting biofuels dated July 15, 2009 (Federal Gazette I p. 1804), the German Bundestag already stated that the energy-related biofuel quota would be converted to a greenhouse gas quota starting in 2015. The 12th amendment to the Bundes-Immissionsschutzgesetzes (Federal Emissions Protection Act) dated November 20, 2014 (Federal Gazette I p. 1740) also includes a number of new provisions for ensuring proper implementation of the greenhouse gas quota. This pamphlet explains practical frequently asked questions regarding calculating the greenhouse gas quota, so-called penalties, quota trading, handling excess quantities and the quota registration process. It should ease the transition to the new statutory framework conditions for companies in the mineral oil and biofuel sectors obligated to fulfil quotas.

• WHAT IS THE CALCULATION PROCEDURE FOR WHETHER THE STATUTORY GREENHOUSE GAS REDUCTION (QUOTA) HAS BEEN REACHED ?

To calculate whether the company obligated to fulfil a quota (the obligated party) has achieved the statutory greenhouse gas reduction, first, three values must be determined:

(a) the reference value,
(b) the value of the actual greenhouse gas emissions from the fossil gasoline fuels, fossil diesel fuels and biofuels utilized by the obligated party and
(c) the scope of the statutory greenhouse gas reduction (quota).

Based on the difference between the reference value and the value of the actual greenhouse gas emissions, it is then determined whether the company obligated to fulfil a quota has fulfilled the quota.

a) Reference value

The reference value is the value with which the greenhouse gas reduction is compared. In accordance with § 37 Paragraph 4 Sentence 3 of the Federal Emissions Protection Act (BImSchG – Bundes-Immissionsschutzgesetz), this value is calculated by multiplying the statutory base value with the energy quantity of fossil gasoline fuels, fossil diesel fuels and biofuels introduced by the obligated party. Accordingly, the quantities of the different fuels introduced (each determined in litres at 15°C), with the respective specific energy content are first converted into an energy quantity (expressed in gigajoule) and then multiplied by the base value. The base value is 83.8 kilograms of carbon dioxide-equivalent per gigajoule (§ 37a Paragraph 4 Sentence 4 of the BImSchG). This value corresponds with the comparison value for fossil fuels in the Biokraftstoff-Nachhaltigkeitsverordnung (Biofuel Sustainability Directive) (see Number 19 in Appendix 1 of the Biofuel Sustainability Directive). The base value can be changed by an ordinance from the federal government (§ 37d Paragraph 2 Sentence 1 Number 6 of the BImSchG). The result of this calculation is the reference value for the obligated party (in kilograms of carbon dioxide-equivalent).

→ Example

The obligated party introduces the following fuel quantities:

46,500 litres of fossil diesel fuel in addition to 3,500 litres of added biodiesel (FAME);
76,000 litres of fossil gasoline fuel and 4,000 litres of added bioethanol;
10 MWh biomethane.

The reference value is calculated as follows:

46,500 l fossil diesel fuel x 0.036 GJ/l = 1,674.0 GJ x 83.8 kg CO_{2eq}/GJ	140,281.2 kg CO_{2eq}
3,500 l biodiesel (FAME) x 0.033 GJ/l = 115.5 GJ x 83.8 kg CO_{2eq}/GJ	9,678.9 kg CO_{2eq}
76,000 l fossil gasoline fuel x 0.032 GJ/l = 2,432.0 GJ x 83.8 kg CO2eq/GJ	203,801.6 kg CO_{2eq}
4,000 l bioethanol x 0.021 GJ/l = 84.0 GJ x 83.8 kg CO_{2eq}/GJ	7,039.2 kg CO_{2eq}
10 MWh biomethane x 3.6 GJ/MWh = 36.0 GJ x 83.8 kg CO_{2eq}/GJ	3,016.8 kg CO_{2eq}
	363,817.6 kg CO_{2eq}

(to be continued)

b) Value of the actual greenhouse gas emissions

The value of the actual greenhouse gas emissions introduced by the obligated party is determined as follows:
For fossil gasoline and fossil diesel fuels introduced by the obligated party, the actual greenhouse gas emissions are calculated by multiplying the energy quantities of fossil gasoline and fossil diesel fuels by the base value (§ 37a Paragraph 4 Sentence 5 of the BImSchG). In this respect, there is no difference to calculating the reference value. For biofuel quantities introduced by the obligated party, the actual greenhouse gas emissions are calculated by multiplying the respective energy quantity of a biofuel with the greenhouse gas emission value specified in the corresponding (partial) sustainability certificate (sustainability certificate) (§ 37a Paragraph 4 Sentence 6 of the BImSchG). The total value used as a basis for calculating the quotas for the actual greenhouse gas emissions is calculated by adding the greenhouse gas emissions of the fossil gasoline and fossil diesel fuels introduced by the company obligated to fulfil a quota and the greenhouse gas emissions of the different biofuel quantities introduced by the company obligated to fulfil a quota.

In the quota declaration for the competent authority (custom office), the greenhouse gas emissions of the individual biofuel quantities must be accordingly reported and verified by submitting corresponding sustainability certificates. The use of company or fuel-specific flat values is not provided for in the law.

Biofuels for which no sustainability certificates are submitted shall be treated as fossil gasoline or fossil diesel fuels (§ 37a Paragraph 4 Sentence 7 Number 1 of the BImSchG). The same applies to biofuels for which no greenhouse gas emissions are specified in the sustainability or partial sustainability certificate (§ 37a Paragraph 4 Sentence 7 Number 2 of the BImSchG). Other cases in which the biofuels or biogenic products are to be treated like fossil gasoline or fossil diesel fuels can be found in § 37a Paragraph 4 Sentence 7 Numbers 3 through 5 and Sentence 8 of the BImSchG.

To reduce the effort required for the calculation, summarizing the sustainability certificates for a type of biofuel, insofar as they have an identical emission value, for the annual quota report to the greatest extent possible is recommended.

→ Example (see above)

The following greenhouse gas emissions are indicated on the sustainability certificates for the biofuels:

for 2,500 litres of biodiesel (FAME) 52.0 kg CO_{2eq}/GJ,
for the remaining 1,000 litres of biodiesel (FAME) 14.0 kg CO_{2eq}/GJ,
for the 4,000 litres of bioethanol 32.6 kg CO_{2eq}/GJ and
for the 10 MWh of biomethane 14.0 kg CO_{2eq}/GJ.

The actual greenhouse gas emissions are calculated as follows:

46,500 l fossil diesel fuel ~ 1,674.0 GJ (see above) x 83.8 kg CO_{2eq}/GJ		140,281.2 kg CO_{2eq}
76,000 l fossil gasoline fuel ~ 2,432.0 GJ (see above) x 83.8 kg CO_{2eq}/GJ		203,801.6 kg CO_{2eq}
2,500 l biodiesel (FAME) ~ 82.5 GJ (see above) x 52.0 kg CO_{2eq}/GJ		4,290.0 kg CO_{2eq}
1,000 l biodiesel (FAME) ~ 33.0 GJ (see above) x 14.0 kg CO_{2eq}/GJ		462.0 kg CO_{2eq}
4,000 l bioethanol ~ 84.0 GJ (see above) x 32.6 kg CO_{2eq}/GJ		2,738.4 kg CO_{2eq}
10 MWh biomethane ~ 36.0 GJ (see above) x 14.0 kg CO_{2eq}/GJ	=	504.0 kg CO_{2eq}
		352.077,2 kg CO_{2eq}

(to be continued)

c) Statutory greenhouse gas reduction (quota)

The statutory greenhouse gas reduction is specified in § 37a Paragraph 4 Sentence 2 of the BImSchG. Then, the obligated party must reduce the share of greenhouse gases from the total amount of fossil gasoline fuel, fossil diesel fuel and biofuel it introduces

- in 2015 and 2016 by **3.5 %**,
- in 2017 to 2019 by **4 %** and
- from 2020 by **6 %**.

→ Example (see above)

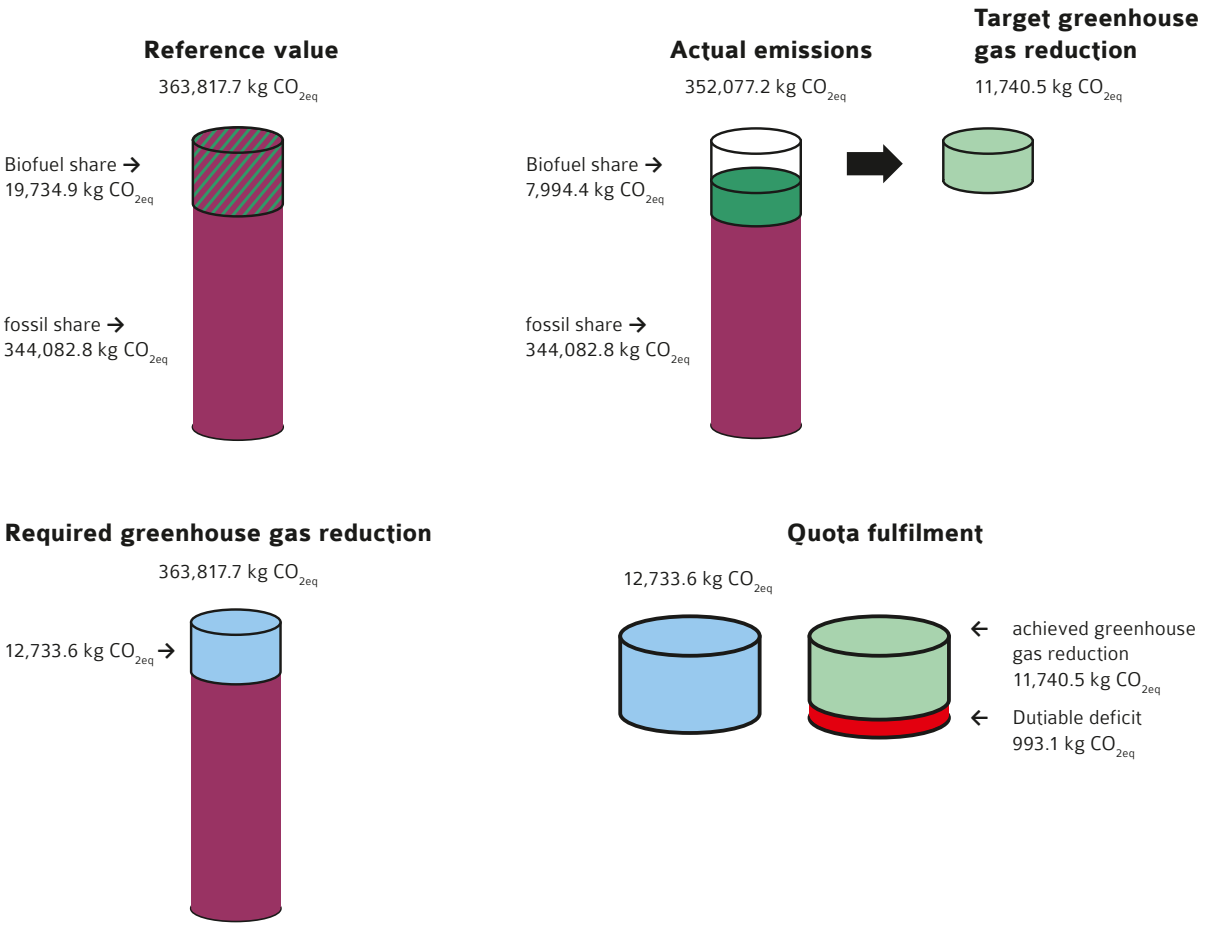
An introduction is assumed for 2015. The percentage by which the company obligated to fulfil a quota must reduce its greenhouse gases in comparison to the reference value by introducing biofuels is thus 3.5%. The required greenhouse gas reduction (ergo the target value) is thus

(363,817.7 kg CO_{2eq} x 3.5 % =) 12,733.6 kg CO_{2eq}

In the example, the difference between the reference value and the actual greenhouse gas emissions is, however, only 11,740.5 kg CO_{2eq} (363,817.7 kg CO_{2eq} – 352,077.2 kg CO_{2eq}), so the target value has been undershot by 993.1 kg CO_{2eq} (deficit).

(to be continued)

The following figure illustrates the example graphically[1]:



How is the penalty calculated?

If the target value described above is undershot, the biofuel quota office shall determine a fee (so-called penalty) for the deficit in accordance with § 37c Paragraph 2 Sentence 1 of the BImSchG. In accordance with § 37c Paragraph 2 Sentence 6 of the BImSchG, this amounts to 0.47 euros per kilogram of carbon dioxide-equivalent greenhouse gas reduction not achieved.

[1] For reasons of understandability, the graphically illustrated parameter ratios do not correspond with the actual proportions

→ Example (see above)

The deficit calculated in the example above would thus be charged the following penalties:

Deficit:	993.1 kg CO_{2eq}
Fee:	0.47 euros/kg CO_{2eq}
Penalty:	466.76 Euros

• WHICH FUELS CAN FULFIL THE QUOTA OBLIGATION?

Obligated parties can fulfil their quota obligation either by adding (i.e. by introducing biofuel which is added to the fossil gasoline or diesel fuel), by introducing pure biofuel and introducing biomethane (§ 37a Paragraph 5 Sentence 1 of the BImSchG). The prerequisite for eligibility for adding a biofuel to the quota is that it is to be taxed in accordance with the fuel taxation rates in § 2 Paragraph 1 Number 1 and 4 of the Energy Tax Act (EnergieStG - Energiesteuergesetz) or, if it pertains to biomethane, § 2 Paragraph 1 Number 7 or Paragraph 2 Number 1 of the EnergieStG. Biofuels that are not taxable in accordance with the aforementioned taxation rates, however, are not relevant for the quota, ergo, in contrast to biofuels that are, in principle, eligible for inclusion but are to be treated like fossil gasoline or fossil diesel fuels in accordance with § 37a Paragraph 4 Sentence 7 of the BImSchG are not taken into account in the calculation of the reference value or in the calculation of the actual greenhouse gas emissions (e.g. certain vegetable fats). These cases are, however, rare exceptions. After all, in § 37a Paragraph 5 Sentence 2 of the BImSchG, initial prerequisites were created so that in the future, electrical energy used in road vehicles can be added to the fulfilment of the quota obligation. This addition requires, however, the issuance of a corresponding, clarifying legal directive.

• HOW DOES QUOTA TRADING WORK?

Obligated parties can contractually transfer the fulfilment of their obligation (but not the obligation itself) to another company. The law now expressly differentiates between

(a) quota trading with companies that are not obligated to fulfil a quota and

(b) quota trading between companies that are obligated to fulfil a quota.

a) Quota trading agreements with companies not obligated to fulfil a quota

Quota trading agreements concluded between the obligated party and third parties not obligated to fulfil a quota must include

o quantity-related information regarding the scope of the obligation into which the third party enters with respect to the obligated party o Information regarding the biofuels the transfer applies to and o Information regarding the greenhouse gas emissions of this biofuels in kilograms of carbon dioxide-equivalent

(§ 37a Paragraph 6 Sentence 2 and 3 of the BImSchG).

The agreements can, in principle, only be fulfilled by biofuels introduced by the third party during the obligation year (§ 37a Paragraph 6 Sentence 4 of the BImSchG). § 37a Paragraph 6 Sentence 5 of the BImSchG does, however, allow for quota agreements with third parties from the obligation year 2016 to be fulfilled by biofuels which were already introduced by the third party in the previous obligation year. To fulfil the quota obligation for the obligation year 2016, biofuels introduced by the third party in 2015 can also be used. However, third parties may only make use of this provision if it was not obligated to fulfil a quota in the previous obligation year and the biofuels were not already the subject of a quota trading agreement.

If the prerequisites for a proper quota trade have been fulfilled, the biofuels introduced by the third party are treated as though the obligated party introduced them itself during the obligation year (§ 37a Paragraph 6 Sentence 7 of the BImSchG). As a result of this fiction, the biofuel quantities introduced by the third party must be taken into ac-count when determining the obligated party's reference value and when calculating the actual greenhouse gas emissions.

If the quota trade is not properly completed, the quantities introduced by the third party are not taken into account in the obligated party's quota fulfilment (neither when determining the reference value nor when calculating the actual greenhouse gas emissions).

In addition, when determining the eligibility of a fuel for being included in the calculation in the framework of the quota trade, the same prerequisites apply as those for including biofuels that were introduced by the obligated party itself in the calculation.

The biofuel quantities introduced by a third party can only be used to fulfil a single obligation transferred by means of a quota trading agreement (see § 37a Paragraph 6 Sentence 9 of the BImSchG). They cannot be the subject of another quota trading agreement.

b) Quota trading agreements with companies obligated to fulfil a quota

Quota trading agreements concluded between an obligated party and a third party also obligated to fulfil a quota only have to include information regarding the scope of the greenhouse gas reduction in kilograms of carbon dioxide-equivalent to be ensured by the respective third party during the obli¬gation year (§ 37a Paragraph 7 Sentence 3 of the BImSchG). These agreements can only be fulfilled by biofuels introduced during the obligation year (§ 37a Paragraph 7 Sentence 4 of the BImSchG).

As a result, the obligated party (quota purchaser) is only allocated the fulfi¬lment provided by the third party also obligated to fulfil a quota (quota seller), without this having an effect on the determination of the respective reference value of the company participating in the quota trading agreement. Accordingly, the contractual greenhouse gas reduction quantity of the obligated party purchasing the quota is mathematically subtracted from the actual greenhouse gas value calculated for this party and added to the actual greenhouse emissions value calculated for the third party selling the quota. The same result is reached when the contractual greenhouse gas reduction is added to the greenhouse gas reduction achieved by the obligated party purchasing the quota and subtracted from the greenhouse gas reduction achieved by the third party selling the quota.

If the quota trade was not properly completed, the fulfilment provided can, in principle, still be added to the third party (trade seller) (if the other inclusion prerequisites have been fulfilled).

When trading quotas between companies obligated to fulfil a quota, the principle also applies that, services provided in the framework of the quota trade may only be taken into account once. Biofuels used to fulfil quota trading agreements can therefore not be the subject of another quota trading agreement.

• HOW WILL OVERFULFILMENT QUANTITIES BE TRANSFERRED IN THE FUTURE?

Greenhouse gas reduction quantities that exceed the statutory greenhouse gas re-duction for a certain obligation year can be transferred by the obligated party, upon request and under certain circumstances, to the following year (see § 37a Paragraph 8 Sentence 1 of the BImSchG). The quantities are then added to the greenhouse gas reduction achieved by the obligated party in the following year. The request can be submitted in the framework of the quota report.

• HOW ARE ENERGY OVERFULFILMENT QUANTITIES PRODUCED IN 2014 TRANSFERRED TO 2015?

Since the overfulfilment quantities from the obligation year 2014 are determined as energy quantities, but the quota fulfilment for the following year is determined based on the greenhouse gas reduction, a factor is required with which the excess values measured in gigajoule from 2014 can be converted to a greenhouse gas reduction quantity. § 37a Paragraph 8 Sentence 2 of the BImSchG states that the fictitious assumption can be made that the energy overfulfilment quantities from the year will be an average emission value of 43.58 kilograms of carbon dioxide-equivalent (corresponds with a 48 percent greenhouse gas reduction). The greenhouse gases to be included in the calculation for 2015 are determined on this basis.

→ Example

Overfulfilment 2014:	**1,500 GJ**
Base value	83.8 kg CO_{2eq}/GJ
./. average emission value	43.58 kg CO_{2eq}/GJ
average greenhouse gas reduction	40.22 kg CO_{2eq}/GJ
→ attributable reduction 2015:	
(1,500 GJ x 40.22 kg CO2eq/GJ)	60,330 kg CO_{2eq}

• HOW IS THE QUOTA REPORT SUBMITTED AND WHICH CERTIFICATES MUST BE SUBMITTED WITH IT?

The deadlines for submitting the quota report and the requirements for documents and certificates to be submitted are largely unchanged.

The obligated party must always submit the following in hardcopy:

- o Sustainability certificates,
- o Copies of the concluded quota trading agreements with the required minimum information and
- **o For bioethanol, vegetable oil (DIN 51605/DIN SPEC 51623), biodiesel (FAME – DIN EN 14214) and biomethane biofuels and E85 fuel at least one certificate of fuel quality compliance per quarter (DIN) (Source fuel standards: http://www.beuth.de/de/)**

The obligation of third parties to report who have assumed a transfer of the fulfilment of obligations as part of a quota trade result from § 37c Paragraph 1 Sentence 4 f. of the BImSchG. Sustainability certificates used for the quota trade must always be issued in the name of the third party.

A new template will be made available by the customs administration for reporting quotas using the greenhouse gas quotas.

Source:
http://www.zoll.de/DE/Fachthemen/Steuern/Verbrauchsteuern/Energie/Besonderheiten/Biokraftstoffquote/Allgemeines/allgemeines_node.html