

Implementation of Article 7a of the Fuel Quality Directive in Germany

TAIEX/ECRAN Workshop on Climate
Legislation in relation to Transport

14th April 2016

Implementation status

- | | | |
|--|---|-------------------------------|
| <ul style="list-style-type: none">• Directive 98/70/EC• Directive 2009/28/EC | } | Fully implemented |
| <ul style="list-style-type: none">• Directive 2015/652
(laying down calculation methods
and reporting requirements
pursuant to Directive 98/70/EC)• Directive 2015/1513
(biofuels and indirect land use
change) | } | Implementation
in progress |

Structure FQD

- Article 1: scope
- Article 2: definitions
- Article 3-7, 8-10: provisions for **fuel specifications** and free circulation of fuels
- Article 7a-7e: **GHG reduction targets** and compliance rules

Fuel specifications

- Article 3: Petrol
- Article 4: Diesel
- Article 5: free circulation
- Article 6: more stringent specifications
- Article 7: change of supply
- Article 8: Monitoring and reporting in relation to fuel specifications
- Article 8a: Metallic additives

GHG targets

- Article 7a: targets
- Article 7b-7d: sustainability criteria (equivalent to Articles 17-19 of RED)
- Article 7e: implementing powers

FQD – Article 7a

- GHG reduction target for fuels:
 - Fuel suppliers are required to reduce GHG emissions of fuels by 2020 by **at least 6%** compared to fossil fuels in 2010.
 - *“Member States shall require suppliers to **reduce as gradually as possible** life cycle greenhouse gas emissions per unit of energy from fuel”*
- Reduction methods:
 - **Biofuels**
 - *Upstream emission reductions (e.g. of flaring & venting)*
 - *GHG savings in EV, hydrogen, renewable methane*

FQD – Article 7a

- Article 7a of Directive 98/70/EC contains only specific calculation rules on biofuels
 - Biofuels: methodology for GHG calculation to be used as in Article 7d
 - Counting of EVs mentioned, but not specified
 - Other renewable fuels not even mentioned
- Rules for other options contained in Council Directive (EU) 2015/652

Calculation of emissions

$$\text{A supplier's greenhouse gas intensity}_{(\#)} = \frac{\sum_x (GHHi_x \times AF \times MJ_x) - UER}{\sum_x MJ_x}$$

#: supplier's identification

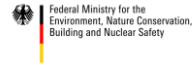
x: fuel and energy types

MJx: total energy supplied

UER: upstream emission reduction

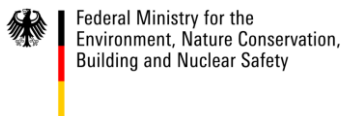
AF: adjustment factor for powertrain efficiency:

Technology	AF
Internal combustion engine	1,0
Electric vehicle	0,4
Hydrogen fuel cell	0,4



FQD – Articles 7b-7e

- Sustainability criteria for biofuels
- Identical with criteria laid down in Articles 17-19 of the renewable energy directive (RED) 2009/28
- More details on the implementation of the sustainability criteria this afternoon



National implementation

GHG targets

- Decision to move to GHG targets was made in 2009 after the adoption of the FQD:
 - no longer biofuels amount, but rather GHG performance
 - technology neutral instrument
- Biofuels counted according to their life cycle GHG emissions
- Effects on biofuels:
 - **GHG performance** affects **value** of biofuels
 - **smaller amount** of biofuels needed in case of better performance
 - biofuels with a **below-average GHG performance**: a **larger overall amount** of biofuels is needed

GHG targets

- Annual GHG targets:

Years	GHG target
2015-16	3,5 %
2017-2019	4 %
from 2020	6 %

- Target continues after 2020 at the level of 6 %
- Biofuels are currently the only way to fulfil the target, other instruments will follow

Modalities

- GHG emissions of biofuels to be calculated on life cycle basis according to **GHG methodology in RED/FQD**
- **National schemes and EU voluntary schemes are recognized:**

*“the certification of greenhouse gas emissions by recognized **voluntary schemes** is as **valid for the purposes of Article 7a** as it is for the purposes of Article 7b(2) of Directive 98/70/EC” (Council Directive 2015/652)*

Modalities

- Obligated entities: companies placing fossil fuels on the market (suppliers)
- Target has to be achieved over the **calendar year**
 - i.e. not for every liter
 - GHG reductions can vary throughout the year / geographically
- **Annual Reports** by suppliers by **15 April** the following year
- Additional GHG reductions above annual target may be **transferred to the following target year**
 - could be an interesting option for 2020 target increase

Modalities

- Article 6 of Directive 2015/652:
*„The penalties provided for must be **effective, proportionate and dissuasive.**“*
- Below-target GHG reductions of a supplier will result in a **penalty**
- Penalty depends on lack in CO₂ emission reduction and is set at **470 Euro / t CO₂**

Modalities

- Suppliers can delegate their quota requirements to a **third party** through **bilateral contracts**
- Third party has to place biofuels on the market within the quota year
- Third party does not have to be an obligated entity (could also be e.g. a **biofuel producer**)
- In case the **third party** does **not fulfil the contract** the **originally obligated entity** has to pay penalty

Authorities

- **Customs authority** is responsible for **monitoring compliance** with GHG obligation, including
 - receiving information on amount of fuels placed on the market by suppliers (annually by 15 April)
 - receiving proofs of sustainability for biofuels (see afternoon presentation for details)
 - calculating balance of individual obligated entity, i.a. for
 - transfer of exceeding amounts to the following year
 - penalties

Directive 2015/652 (FQD) on implementing measures

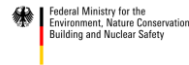
Default values for GHG emissions

- Greenhouse gas calculation for fuels (other than biofuels) **based on default values**
- Default values are **average values for GHG emissions** calculated by Commission / JRC
- Also in case of fossil fuels GHG emissions vary
- in case a fuel has lower emissions the **calculation of actual values is not permitted** by Directive

Baseline standard and default values

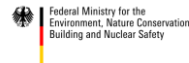
- Fuel baseline standard: 94,1 gCO₂/MJ
- Differentiated default values for petrol and diesel
 - Petrol 93,2 gCO₂/MJ
 - Diesel 95,1 gCO₂/MJ
- Both change in baseline and differentiation have effect on level of ambition of the GHG target
- CNG and LPG are to be included with separate default values:
 - CNG 69,3 gCO₂/MJ (=26 % saving)
 - LPG 74,5 gCO₂/MJ (= 21 % saving)

Renewable fuels of non-biological origin



- Default values for renewable fuels of **non-biological** origin:
 - Renewable Methane (3,3 gCO₂/MJ)
 - Renewable H₂ in fuel cell vehicles (9,1 gCO₂/MJ)
- Provisions for renewable power:
 - Requirements for origin of renewable power
 - Verification procedure

Electric vehicles



- electric power used in EVs to be counted toward GHG targets
- **emission factors** are to be determined according to **average national power mix**
- necessary national requirements (not specified by directive):
 - mechanism and responsible economic entity (can sell GHG reduction units to fuel suppliers)
 - verification procedure / requirements for amount of electric power used in EVs
 - procedure for (regular) publication of emission factor

Upstream Emission Reductions (UER)

- verified project-related emission reductions **prior to enerting a refinery**
- UERs include avoided emissions from **flaring / venting** of associated gas during oil production
- UERs important in context of the 6 % target in 2020
- potential for UERs difficult to estimate (costs, willingness to invest, duration of project mechanism)
- icct study with lots of details:
http://ec.europa.eu/clima/policies/transport/fuel/docs/studies_ghg_venting_flaring_en.pdf

Upstream Emission Reductions (UER)

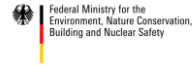
- Key elements:
 - No link to actual oil imports or consignments of oil placed on the market by supplier
“UERs originating **from any country** may be counted as a reduction in greenhouse gas emissions **against fuels from any feedstock source** supplied by any supplier.”
 - Estimation / validation according to ISO standards:
“UERs shall be **estimated** and **validated** in accordance with principles and standards identified in International Standards, and in particular ISO 14064, ISO 14065 and ISO 14066.”
 - reference to Commission Regulations (EU) No **600/2012** [additional **general principles for verification and the accreditation of verifiers**] and No **601/2012** [additional **general principles for monitoring and reporting**]
 - various reporting requirements for UER projects

Upstream Emission Reductions (UER)

- Key challenges:
 - No validation/verification mechanism on EU level; implementation has to be done on MS level
 - Provisions in Directive not very specific in many aspects, i.e. high variation in national implementation not unlikely
 - large share of projects in third countries outside EU expected (e.g. flaring mostly outside EU)
 - No specific rules for suppliers without upstream activities
- Commission working on **non-legislative guidance** to be published during this year

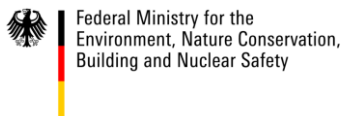
Reporting requirements

- Fuel suppliers have to report **origin** and **place of purchase**
- Fossil fuels:
 - Origin: Trade name of fuels (MCON)
 - Place of purchase: Refinery
- Biofuels:
 - Origin: Biomass / Fuel production pathway
 - Place of purchase: Country of origin of biomass
- **methodology** for tracing of fuel information **not determined** by directive



Outlook

- Commission Guidance on UERs expected for this year
- Implementation deadline of Directive (EU) 2015/652 is **21 April 2017**
- Consultation on national implementing legislation to start in 2nd half of 2016



Thank you!