



# Introduction to the Fuel Quality Directive

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## Main stages for FQD



- Objective:
  - Reduce atmospheric pollution from motor vehicles
  - Improve air quality: protect health and environment
- Basically a ban of leaded petrol from 2000
- Minimum technical specifications
  - Petrol: octane level, vapour pressure, distillation by evaporation, and aromatics, benzene, olefins, oxygen, oxygenates, **sulphur** and lead content
  - Diesel: octane level, density, distillation, polycyclic aromatic hydrocarbons and **sulphur** content

## Main stages for FQD



7 amendments so far, due to:

- progress in vehicle technology
- development and better availability of alternative fuels

## Main stages for FQD



- Sulphur content maximised:
  - 10 mg/kg in petrol and diesel fuels in road transport
  - 2000 mg/kg in gas oils for non-road mobile machinery by 2003
  - 1000 mg/kg in gas oils for non-road mobile machinery by 2008
  - (2009: 10 mg/kg for such gas oils from 2011)
- Monitoring and reporting requirements

## Main stages for FQD



- Reduce life cycle GHG emissions from transport fuels
  - Background:
    - 2020 Climate and Energy package (GHG -20%)
    - 20% of EU GHG from combustion of road transport fuel
- Limit metallic additives: MMT max. 2mg of Mn per litre from 2014

## Main stages for FQD



- Minimise impacts of Indirect Land-Use Change (ILUC)
- Update calculation and targets of life-cycle GHG emissions from biofuels
- Schemes for sustainability criteria for biofuels

## Current legislative framework



- 98/70/EC: FQD
- Commission Decision 2002/159/EC: common format for the submission of summaries of national fuel quality data – expected to change shortly
- Commission Regulation (EU) No 1307/2014: criteria and geographic ranges of highly biodiverse grassland
- Council Directive (EU) 2015/652: calculation methods and reporting requirements

## Art 7a: GHG emissions

- Target: reduce GHG per unit of energy by up to 10 % by 2020
- **min. 6% reduction in the GHG intensity of fuels by 2020** (2010 baseline)
  - + Biofuels
  - + Alternative fuels
  - - Flaring and venting (at production)
- +2% reduction from developments in new technologies (CCS, electric vehicles)
- +2% reduction from the purchase of CDM credits
- Calculation based on **life cycle GHG emissions** per unit of energy
  - Extraction or cultivation (incl. LUC), processing, transport, distribution, combustion
- Suppliers are responsible, can group together.

## Art 7b-e: Biofuels

- **Only sustainable biofuels can count against GHG reduction targets**
- **Criteria:**
  - Achieve min. 35% GHG saving compared to fossil fuels (min. 50% from 2018; min. 60 % from installations starting after 5 October 2015)
  - Prevent loss of biodiversity → No raw materials from (status as of 2008):
    - Primary forest
    - Protected areas
    - Highly biodiverse grassland ((EU) 1307/2014)
    - Land with high carbon stock
    - Peatland
  - Minimise ILUC: Indirect Land Use Change
- **Verification:** mass balance system to show that sustainability criteria are met
- **Life cycle GHG emissions** from biofuels calculated with default values for greenhouse gas emission savings
- **Implementing measures and reporting in harmony with 2009/28/EC**

## Planning

<b>1</b>	<b>Planning and Assessments</b>
<b>1.1</b>	Designate CA (monitoring, reporting, info point, enforcement)
<b>1.2</b>	Assess need for more stringent fuel standards than set by FQD
<b>1.3</b>	Stakeholder consultation
<b>1.4</b>	Plan implementation (consider derogations)
<b>1.5</b>	Design phase-in of reduced-sulphur fuels incl. biofuels
<b>1.6</b>	Plan training of staff implementing technical requirements as well as custom officers
<b>1.7</b>	Design monitoring system: laboratory to determine methods of measurement and FQ
<b>1.8</b>	Plan an incentive system for enhanced use of biofuels
<b>1.9</b>	Put in place an efficient system of mutual recognition of compliant fuels including biofuels

## Regulation

2	Regulations and Enforcement
2.1	<p>Adopt national regulation on:</p> <ul style="list-style-type: none"> <li>• Market restrictions (limitation of lead, sulphur, environmental requirements)</li> <li>• Requirements for biofuels (FAME)</li> <li>• Labelling requirements (eg. metallic additives)</li> <li>• Exceptional circumstances</li> </ul>
2.2	<p>Set up:</p> <ul style="list-style-type: none"> <li>• Monitoring and verification systems</li> <li>• Enforcement system</li> </ul>

## MS obligations

### Monitoring and reporting – GHG compliance

With regard to the GHG target:

- Ensure that fuel suppliers report verified\* information annually to CA:
  - a) Total volume of each type of fuel or energy supplied, indicating where purchased and its origin
  - b) Life cycle GHG emissions per unit of energy.
    - sustainability criteria
    - measures for soil, water and air protection
    - restoration of degraded land
    - avoidance of excessive water consumption in areas where water is scarce

\*systems used by economic operators are accurate, reliable and protected against fraud; frequency and methodology of sampling, robustness of the data

## MS obligations

### Monitoring and reporting – GHG compliance


- **Each year by 31 December: MS report to Commission** in aggregated form:  
(Dir. 2015/652 – ReportNet tool)
  - (a) fuel or energy type;
  - (b) volume or quantity of fuel or electricity;
  - (c) greenhouse gas intensity;
  - (d) UERs (upstream emission reduction);
  - (e) origin;
  - (f) place of purchase

## MS obligations

### Monitoring and reporting – Non-GHG compliance

Non-GHG:

- Art 8: establish a fuel quality monitoring (FQM) system in accordance with the relevant EN standard or of equivalent confidence (common procedures for sampling and testing)
  - EN 14274 indicates the number and location of samples to be taken, minimum number of samples per fuel grade in each of the winter and summer periods
- **Each year by 31 August: report on national fuel quality data of preceding year**
  - total volumes of petrol and diesel fuels marketed in their territories
  - volumes and availability of unleaded petrol and diesel fuels marketed with a maximum sulphur content of 10 mg/kg
- annually updated reporting template:
  - complete and comparable
  - original reporting format: Commission Decision 2002/159/EC

A photograph showing a hand holding a green fuel nozzle, likely for a lawnmower or similar equipment, positioned next to a sugarcane plant. The background is a clear blue sky.

Thank you for your attention!

Any questions?

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