

# Implementation of the biofuel policy in Bulgaria - Renewable Energy Directive and Fuel Quality Directive



Ministry of Environment and  
Water

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## European legislation

- ▶ *Directive 2009/28/EO on the promotion of the use of energy from renewable sources*
- ▶ *Directive 2009/30/EC as regards the specification of petrol, diesel and gas-oil and introducing a mechanism to monitor and reduce greenhouse gas emissions*
- ▶ *Directive (EU) 2015/1513 amending Directive 98/70/EC relating to the quality of petrol and diesel fuels and amending Directive 2009/28/EC on the promotion of the use of energy from renewable sources*
- ▶ *Directive (EU) 2015/652 laying down calculation methods and reporting requirements pursuant to Directive 98/70/EC of the European Parliament and of the Council relating to the quality of petrol and diesel fuels*

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## Renewable Energy Directive 2009/28/EC

- ▶ *EU targets: by 2020, 20 % share of RES in final energy consumption, 20 % increase in energy efficiency*
- ▶ *10 % target for RES in transport in each Member State*
- ▶ *Burden sharing for RES targets except transport*
- ▶ *Harmonized approach with Fuel Quality Directive*
- ▶ *No biofuels from carbon rich or biodiverse land*
- ▶ *Reporting on compliance with environmental and social sustainability criteria*
- ▶ *Bonus of 29 g CO<sub>2</sub> /MJ for biofuels from degraded/contaminated land; Biofuels from waste, residues, non food cellulosic material, and lignocellulose material count twice for RES transport target*
- ▶ *Mass balance approach for certification of sustainability*

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## Directive 2009/30/EC - amendment to Directive 98/70/EC on environmental quality standards for fuel (Fuel Quality Directive)

- ▶ *Further tightening the environmental quality standards for a number of fuel parameters,*
- ▶ *Enabling more widespread use of ethanol in petrol and introducing a mechanism for reporting and reduction of the life cycle greenhouse gas emissions from fuel.*
- ▶ *Reduction in life cycle GHG emissions from energy supplied. Binding target of 6% as first step while leaving open the possibility for increasing the future level of ambition to 10%.*
- ▶ *Incorporation of sustainability criteria for biofuels used to meet GHG reduction requirement.*
- ▶ *Phasing in of 10% Ethanol (E10) petrol.*
- ▶ *Increase of allowed biodiesel content in diesel to 7% (B7) by volume, with an option for more than 7% with consumer info.*

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## Fuel Quality Directive

- ▶ *Implementation of Article 7a FQD*
- ▶ *Calculation methods and reporting requirements pursuant to Directive 98/70/EC*
- ▶ *Council Directive (EU) 2015/652*



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## National legislation

- ▶ *Climate Change Mitigation Act - Promulgated, State Gazette No. 22/11.03.2014, amended, SG No. 56/24.07.2015*
- ▶ *Renewable Energy Act - Promulgated, State Gazette No. 35/3.05.2011, amended, SG No. 100/18.12.2015*
- ▶ *Clean Ambient Air Act - Promulgated in SG No. 45/28.05.1996, amended, SG No. 98/28.11.2014*
- ▶ *Ordinance to determine the sustainability criteria for biofuels and liquid fuels from biomass*
- ▶ *Methodology for calculating the reduction of greenhouse gas emissions from the lifecycle of biofuels and liquid fuels from biomass*
- ▶ *Third National Climate Change Action Plan (2013 – 2020)*
- ▶ *Programme for Promotion of Biofuels Use in the Transport Sector 2008-2020*



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## Lessons learned

### ► **Problems in transposition**

- *Lack of accredited laboratories for analysis and control of the biofuels' quality and composition.*
- *Additional technological time is needed for implementation of the investment programs of the fuels' producers and importers for the technical preparations of the distribution systems*
- *Problems with the quality control of biofuels and biofuels blended with petroleum fuels; effective system to impose sanctions needed.*



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## Lessons learned - 2

### ► **Solutions**

- *Introduction of requirements for phasing in the obligatory blending with biofuels.*
- *Clear division of responsibilities; the control body to be clear identified.*
- *Coercive administrative measures and higher sanctions to be imposed.*
- *Terminological equivalence in the different legislative pieces to achieve clarity and unified approach in the obliged persons definition.*
- *Financial resources from the state budget to provide the necessary testing equipment in the control body (in BG – the State Agency for Metrological and Technical Surveillance).*



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## NEXT STEPS

Transposition of Directive (EU) 2015/1513 and Directive (EU) 2015/652 to:

- Climate Change Mitigation Act
- Ordinance on biofuel sustainability taking into account indirect land use changes
- Methodology for determining the greenhouse gas emissions of the lifecycle of biofuels as a result of direct and indirect land use change



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## Directive (EU) 2015/1513 about ILUC

- **Limitation 7% of the contribution of conventional biofuels** for 2020. Obligation of MS to establish **indicative national target of advanced biofuels** for 2020, with a reference value of **0,5%** (can be lower for objective reasons).
- **Double counting of all the biofuels produced from raw materials included in the new annex IX** of the Directive 2009/28/CE of renewable energies.
- **Increase in the multipliers factors of electricity produced from renewable energy sources** consumed by electric road vehicles (from 2.5 to 5) and rail transport (from 1 to 2.5) for the calculation of market share of renewables in transport.
- Obligation of fuel suppliers **to report annually** the provisional mean values of the estimated indirect land-use change emissions from biofuels traded.
- **Increase of the minimum reduction threshold of greenhouse gas (GHG) emission applying to biofuels and bioliquids produced in new installations** (GHG emission saving from the use of biofuels shall be at least 60% for biofuels produced in installations starting operation after 5 October 2015. In the case of installations that were in operation on or before 5 October 2015, biofuels shall achieve a GHG emission saving of at least 35 % until 31 December 2017 and at least 50 % from 1 January 2018).



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## Reporting requirements of the FQD/7a – 2 basic reporting requirements with a different objective

- ▶ *A. Compliance reporting by each obligated fuel supplier in his member state. This reporting needs to address the performance of each fuel supplier with respect to the 6% GHG intensity reduction target of road transport fuels in 2020.*
- ▶ *B. The ability to determine the GHG emission intensity of road fuels in the Union based on the origin of the feedstocks used. This requires reporting by the fuel supplier on the origin of feedstocks and place of purchase of finished fuels that are used to put road fuels on the market in the Union.*

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## **Problems identified**

### **Sub-target for advanced biofuels**

- ▶ *development of the advanced biofuel industry and the extent to which sufficient production capacity will be available*
- ▶ *alternative uses of the feedstocks in question and competition between these different applications.*
- ▶ *potential environmental impacts of extraction of waste and residues from specific areas.*
- ▶ *worries about fraud with regards to used cooking oil (UCO).*

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## Problems identified - 2

### **Market expectations**

- ▶ *Completely new pathways are unlikely to arise before 2020, or at least will not become available on a commercial scale.*
- ▶ *any fiscal or financial incentives for advanced biofuel production will come too late to pay off before 2020: the delay in arriving at a decision on ILUC meant that investment certainty for the biofuel industry has been very low in recent years and not many investments have been made.*
- ▶ *the ILUC Directive will only be valid between 2017 and 2020 and many advanced biofuel pathways are still in the R&D phase, Member States are more likely to benefit from these investments in the post-2020 period rather than in the period before 2020.*

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## Provisions of FQD Article 7a

*(1) "fuel suppliers" report annually to Member State competent authorities:*

- **Volume of fuel/electricity supplied, its origin and place of purchase**
- **Its lifecycle GHG emissions per unit of energy**

*(2) 6% GHG reduction target*

*(3) possibility for suppliers to meet target jointly*

*(4) Council Directive 2015/652 establishes GHG methodology for non-biofuels and baseline for reduction target*

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## Implementing Directive – main features

- A method for calculating the GHG emissions of fuels and energy from non-biological sources based on default values of the fuels' life-cycle carbon intensity (biofuels GHG calculation already included in Annex IV of the Directive)
- Method for supplier reporting
- Calculation of the baseline fossil fuel GHG intensity
- Basic rules for the calculation and verification of the GHG intensity of electricity for electric vehicles
- Harmonized annual reporting by suppliers to Member States and by Member States to the Commission needed for monitoring the reduction of GHG emissions and of information related to the origin, and types of fuels being consumed
- **Intended subsidiarity for MS implementation**

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## Compliance options to reduce the Carbon Intensity of the fuels

BIOFUEL- *blend / supply higher shares of biofuel*

*(but respect the blendwalls in FQD Art.3 and 4 respective Annex 1 and 2: 7% FAME (B7) and 10% ethanol (E10))*

ALTERNATIVE FUELS - *supply higher shares of alternative fuels or energy with below baseline carbon intensity such as LPG, CNG, H2 for fuel cells etc*

ELECTRICITY - *provide renewable electricity for transport (respectively report jointly with a supplier of renewable electricity).*

UER - *reduce, let certify and report upstream emission reductions (mainly reducing flaring and venting) or obtain certified upstream emission reductions from a relevant project*

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## Compliance reporting

*Member States need to oblige suppliers to use methodology set out in Annex I including:*

- *comparison of GHG reductions with baseline for the propose of Art. 7a(2)*
- *use the mechanism through GHG default values for each fuel type*
- *implementing rules for the calculation and verification of the GHG intensity of electricity for electric vehicles report to MS*
- *implementing rules for UER*

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## UER – upstream emission reductions (1)

### Definition:

*UER means all greenhouse gas emissions occurring prior to the raw material entering a refinery or a processing plant where the fuel was produced;*

*For instance: Recovery and utilization of gas from oil wells that would otherwise be flared or vented.*

### Eligibility

*Reductions only be applied to the upstream emission's part of the default values for petrol, diesel, CNG or LPG*

*UER originating from any country may be counted as a reduction against fuels from any feedstock source supplied by any fuel supplier.*

*Only counted if project started after 1 January 2011*

*No need to prove that UER would not have taken place without reporting requirement set out in Article 7a*

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## UER – upstream emission reductions (2)

### Validation

*UER estimated and validated in accordance with principles and standards identified in International Standards (ISO 14064, ISO 14065 and ISO 14066).*

*UERs and baseline emissions are to be monitored, reported and verified in accordance with ISO 14064 and providing results of equivalent confidence of Regulation (EU) No 600/2012 and Regulation (EU) No 601/2012.*

*The verification of methods for estimating UERs must be done in accordance with ISO 14064-3 and the organisation verifying this must be accredited in accordance with ISO 14065;*

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## Electricity in road transport

- **reporting by energy suppliers of electricity consumed by electric vehicles and motorcycles,**
- **Member States should calculate national average life cycle default values in accordance with appropriate International Standards**
- **Member States may permit their suppliers to establish unit greenhouse gas intensity values (gCO<sub>2</sub>eq/MJ) for electricity from data reported by Member States on the basis of:**
  - (i) Regulation (EC) No 1099/2008 of 22 October 2008 on energy statistics or,
  - (ii) Regulation (EU) No 525/2013 on a mechanism for monitoring and reporting greenhouse gas emissions and for reporting other information at national and Union level relevant to climate change or,
  - (iii) Commission delegated regulation (EU) No 666/2014 establishing substantive requirements for a Union inventory system and taking into account changes in the global warming potentials and internationally agreed inventory guidelines

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## Marketable crude oil name (MCON) reporting

Monitoring information related to the origin, and types of fuels being consumed

Reporting requirements broadly based on existing obligations (i.e. energy statistics, customs legislation)

- **a) MCON reporting in respect of "origin" and "place of purchase": distinguishing between importers of crude oil and importers of refined product**
- **b) exempting SMEs from marketable crude oils names reporting.** (SMEs will just need to report the "origin" and "place of purchase" of fuel supplied –as simply "EU" or "non-EU")

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## MCON reporting (2)

a. Crude oil importers required to report MCON (these data are already aggregated in accordance with reporting under Regulation (EC) 2694/95)

b. Product importers (either from outside or inside the EU) to report the location of the refinery of the fuel in accordance with Regulation (EEC) 2454/93;

the information is part of a long-standing legislation and readily available to fuel suppliers

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## Penalties

*Penalties determined for breaches of the provisions must be effective, proportionate and dissuasive*

*→ it should not be cheaper to pay the penalty rather than to comply with the 6% target and ensure annual reporting*



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## Reporting by Member States

*For each fuel (and energy) MS to report by 31 December to the Commission aggregated data:*

- (a) fuel or energy type;
- (b) volume or quantity of electric energy;
- (c) greenhouse gas intensity;
- (d) UERs;
- (e) origin;
- (f) place of purchase.

*using the ReportNet tool of the Central Data Repository managed by EEA and using the templates in Annex 4*

*First report due by 31 December 2018 (covering 2017)*



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## What could be issues ?

- Expected role of upstream emission reductions is limited
- Efforts required for implementation will be quite high in comparison to the expected role foreseen for UER
- High contribution from UER might also endanger realisation of the RED
- Because there will be no overall EU verification system, the level of harmonisation will be under pressure.
- MCON reporting - trade names which does not cover all the commercial used designation names, new fields
- Confidentiality of supplied origin/place of purchase information.
- Upstream emission reductions (UERs) as compliance option
- The methodologies to account for the simultaneous co-processing of fossil fuels and biofuels

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## Possible solutions

- Upstream emissions credits, though it is still currently unclear precisely how these will work.
- Political incentives
- A new policy instrument may be required in addition to the GHG quota to regulate the contribution from UER.
- Need to provide a mean to update regularly the list of MCON's
- Non-legislative guidance on approaches to quantify, verify, validate, monitor and report upstream emission reductions  
The information on supplied origin/place of purchase is available at a disaggregated stage on member state level. At least the same confidentiality measure as used for regulation 2964/95 should be used to avoid publication of commercial sensitive data.
- Avoid public reporting on a member state level but only at the EU level
- Ensure that confidentiality of information is obtained since reporting on MCON and place of purchase will probably require more stricter rules than when using generic feedstock origin names.

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## Non-legislative guidance

- to facilitate the implementation by Member States of legislation on upstream emission reductions (UERs) and to provide practical aspects
  - a. for criteria for assessing project baselines
  - b. for methodologies to calculate emissions in the UER project and baseline scenarios
  - c. for monitoring and verification of emission reductions by UER projects
  - d. for validation of UER projects after they have started
  - e. for assessing additionality in line with ISO 14064
  - f. temporal eligibility of upstream emission reduction projects and definition of start date
  - g. for criteria to identify sources and sinks of GHG to be accounted / project boundaries
  - h. for application of the principles of conservativeness, completeness, consistency, and accuracy, which are required under ISO 14064
  - i. for managing the risk of multiple claiming upstream emissions reductions (UER)

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## Legislation on cars and vans

- Regulation (EC) 443/2009 for cars
- Regulation (EU) 510/2011 for vans
- Commission Regulation (EU) No 397/2013 regarding the monitoring of CO<sub>2</sub> emissions
- Regulation (EU) No 333/2014 to define the modalities for reaching the 2020 target for reducing the CO<sub>2</sub> emissions from new passenger cars
- Commission Delegated Regulation (EU) 2015/6 in order to take into account the evolution of the mass of new passenger cars registered in 2011, 2012 and 2013
- Directive 1999/94/EC (car labelling directive)

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## Car Labelling Directive

As demand-side policy is considered an important complementary measure to help car manufacturers to meet their specific CO<sub>2</sub> emission targets.

Specifically, the 'car labelling Directive' requires:

- ▶ A label showing fuel economy and CO<sub>2</sub> emissions to be attached to all new cars or displayed nearby at the point of sale;
- ▶ A poster or display to be exhibited showing prominently the official fuel consumption and CO<sub>2</sub> emissions data of all new car models displayed or offered for sale or lease at or through the respective point of sale;
- ▶ A guide on fuel economy and CO<sub>2</sub> emissions from new cars to be produced in consultation with manufacturers at least annually. The guide should be available free of charge at the point of sale and from a designated body within each Member State;
- ▶ All promotional literature to contain the official fuel consumption and specific CO<sub>2</sub> emissions data for the passenger car model to which it refers.
- ▶ Annexes to the directive set out minimum requirements that each of these consumer information items must meet.

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## Reducing CO<sub>2</sub> emissions from passenger cars

- ▶ By 2021, phased in from 2020, the fleet average to be achieved by all new cars is **95 grams** of CO<sub>2</sub> per km. This means a fuel consumption of around 4.1 l/100 km of petrol or 3.6 l/100 km of diesel.
- ▶ Emission limits are set according to the mass of vehicle, using a limit value curve.
- ▶ If the average CO<sub>2</sub> emissions of a manufacturer's fleet exceed its limit value in any year from 2012, the manufacturer has to pay an excess emissions premium for each car registered.
- ▶ To encourage eco-innovation, manufacturers can be granted emission credits equivalent to a maximum emissions saving of 7g/km per year for their fleet if they equip vehicles with innovative technologies, based on independently verified data.
- ▶ additional incentives and supercredits to produce vehicles with extremely low emissions (**below 50g/km**).
- ▶ Manufacturers can **group together** and act jointly to meet the emissions target.

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## Situation in Bulgaria

- ▶ **Litex Motors - Assembly Plant for Great Wall Motor Vehicles (Chinese brand)**
- ▶ **Reduced capacity since January 1, 2016 – does not meet the Euro 6 emissions standards for cars**
- ▶ **Should meet the Euro 6 emissions standards for vans till September 2016**



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Thank you for your  
attention !



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