

The sustainability criteria for biofuels in the Renewable Energy Directive and the Fuel Quality Directive

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Slide 1

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Renewable Energy Directive (RED)

- Legislated on June 15, 2009
- RED and Fuel Quality Directive: same sustainability criteria including GHG
- Article 3.4: 10% renewables in transport sector
- RED Articles 17 to 24 relevant for biofuels

RED Article 17: „Sustainability criteria for biofuels and bioliquids“

- Minimum GHG emission savings (17.2)
 - 35%
 - for installations that were in operation on 23 January 2008: binding from 1 April 2013
 - 2017 50%
 - 2018 60% for new installations
- no raw materials from (17.3-17.5.)
 - primary forest
 - protected area
 - highly biodiverse grassland
 - areas with high stocks of carbon
 - peatlands
 - reference date: January 2008
- Reports on social criteria (17.7)
 - food prices, land rights, international labor conventions

RED Art. 18: Verification of compliance with the sustainability criteria

- Responsibility (18.1 and 18.3)
 - Economic operators must...
 - show that the sustainability criteria have been fulfilled
 - arrange for an adequate standard of independent auditing
 - use mass balance system
 - Member states hold economic operators responsible
 - MS submit information in aggregated form to EC
 - EC publishes GHG savings on transparency platform
- EC (18.4)
 - concludes agreements with third countries on sustainability criteria
 - approves voluntary certification schemes
- EC report by 31 Dec. 2012 on the effectiveness of the system (18.9)

RED Art. 19: Calculation of the greenhouse gas impact

- Economic operators may use...(19.1)
 - default values, if land use change ≤ 0
 - actual values calculated according to the methodology in Annex V.C
 - sum of actual values and disaggregated default values
- MS set up a list of areas... (19.2)
 - where typical greenhouse gas emissions from cultivation \leq disaggregated default values
- Default values (19.3)
 - valid when feedstock is produced in area on the list or from waste/residue
- EC
 - equivalent lists of areas in third countries by March 31, 2010 (19.4)
 - report on indirect land use change by Dec. 31, 2010 (19.5)
 - biannual update of default values (19.6)
- Default values must be conservative compared to normal production processes (19.7.b)

RED Art. 21: double counting

- The contributions made by biofuels produced from wastes, residues, non-food cellulosic material, and ligno-cellulosic material shall be considered to be twice that made by other biofuels. (21.2)

RED Art. 24: „Transparency platform“

- EC publishes

- Member States' national renewable energy action plans
- Member States' national reports
- EC reports

http://ec.europa.eu/energy/renewables/transparency_platform/transparency_platform_en.htm

RED Annex V.a

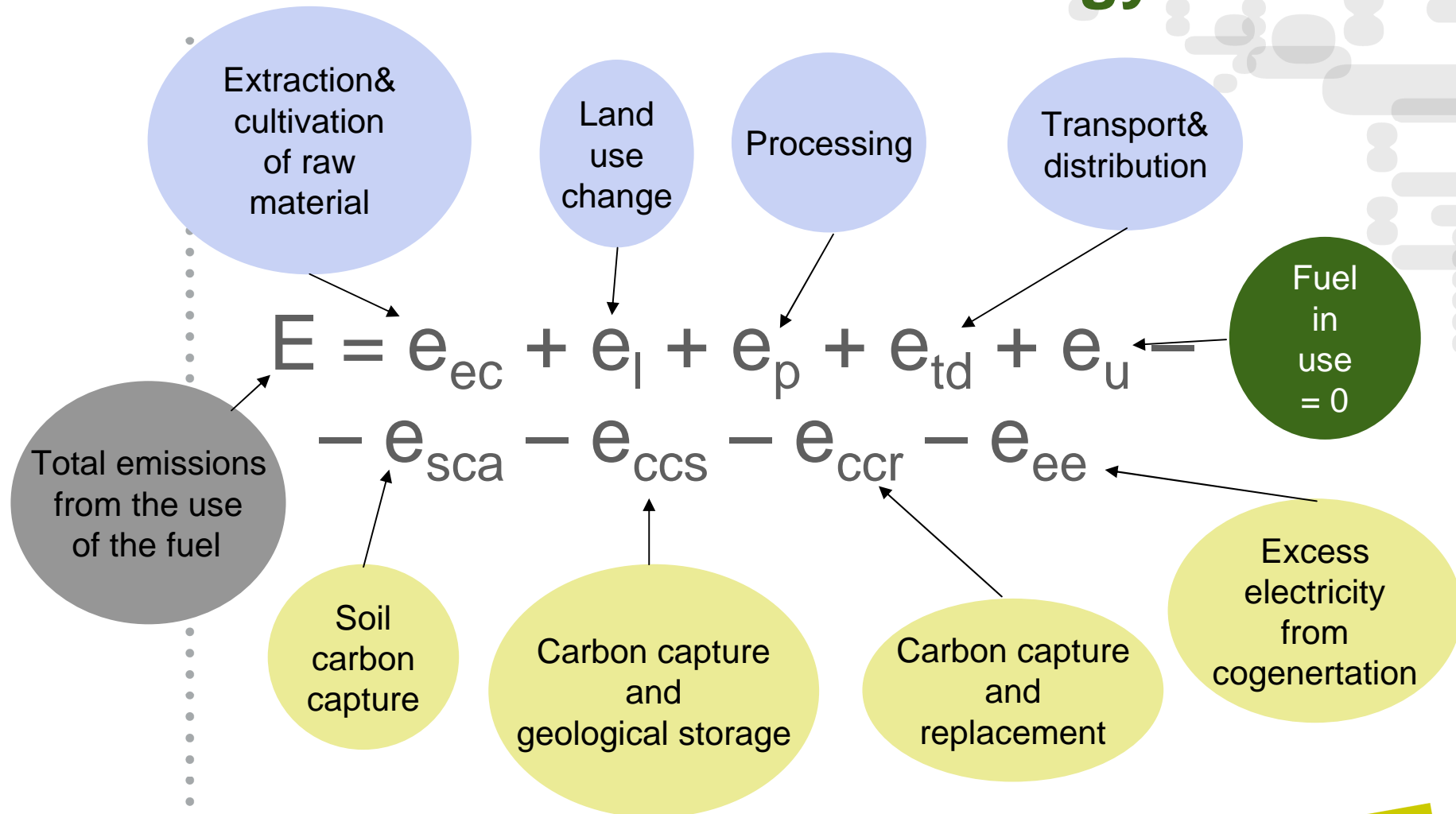
A. Typical and default values for biofuels if produced with no net carbon emissions from land-use change

Biofuel production pathway	Typical greenhouse gas emission saving	Default greenhouse gas emission saving
sugar beet ethanol	61 %	52 %
wheat ethanol (process fuel not specified)	32 %	16 %
wheat ethanol (process fuel specified)	32 %	16 %
conventional	45 %	34 %
	53 %	47 %
	69 %	69 %
	56 %	49 %
	71 %	71 %
the part from renewable sources of tertiary-amiyl-ethyl-ether (ETBE)	Equal to that of the ethanol production pathway used	
the part from renewable sources of tertiary-amiyl-ethyl-ether (TAEE)	Equal to that of the ethanol production pathway used	
rape seed biodiesel	45 %	38 %
sunflower biodiesel	58 %	51 %
soybean biodiesel		31 %
palm oil biodiesel (process not specified)		19 %
palm oil biodiesel (process with methane capture)		56 %
waste vegetable or animal (*) oil		7 %
hydrotreated vegetable oil from rapeseed		7 %
hydrotreated vegetable oil from sunflower		52 %
hydrotreated vegetable oil from palm oil		26 %
hydrotreated vegetable oil from palm oil (process with methane capture at oil mill)		65 %
pure vegetable oil from rape seed	58 %	57 %
biogas from municipal organic waste as compressed natural gas	80 %	73 %
biogas from wet manure as compressed natural gas	84 %	81 %
biogas from dry manure as compressed natural gas	86 %	82 %

Ethanol from sugar beet
Typical savings: 61%
Default value: 52%

Rape seed biodiesel
Typical savings: 45%
Default value: 38%

RED Annex V.c: Methodology



RED Annex V.d: Disaggregated default values for biofuels and bioliquids

- Cultivation
- Processing
- Transport
- Total for cultivation, processing & transport

RELATED DOCUMENTS

Feb. 2010	EC REPORT: criteria for all kinds of bioenergy?	August 2010	EC REPORT on lists of areas in third countries
March 2010	Emissions from cultivation in MS	Sep. 2010	Calculation examples using stadard values
June 2010	EC DECISION on guidelines for the calculation of land carbon stocks	Dec. 2010	EC REPORT on indirect land use change
June 2010	EC COMMUNICATION on voluntary schemes, default values, counting rules	Jan. 2010	EC DECISION on certain types of information about biofuels to be submitted by economic operators to MS
June 2010	EC COMMUNICATION on practical implementation of criteria		

EC REPORT on sustainability requirements for the use of solid and gaseous biomass sources in electricity, heating and cooling

- 25.2.2010; COM(2010) 11 final
- According to RED 17.9
- No binding rules
- Recommended the same criteria as for biofuels
- Only 3% import
- Most cost-efficient to control no go areas

Emissions from cultivation in Member States

- 31.3.2010
- According to RED Article 19.2
- List of MS reports
- Regional default across energy crops
- Have to be \leq disaggregated default values of Annex V.c

EC DECISION on guidelines for the calculation of land carbon stocks

- 10.6.2010, C(2010) 3751
- for the purpose of Annex V to Directive 2009/28/EC
- Detailed calculation rules
- Worldwide accross energy crops and climate zones
- soil carbon stock, below& above ground vegetation carbon stocks

EC COMMUNICATION on voluntary schemes and default values and bioliquids sustainability scheme and on counting rules for biofuels

- 19.6.2010, 2010/C 160/01
- Economic operators show compliance to
 - National system
 - Voluntary scheme
 - Bilateral or multilateral agreements
- Rules for the recognition of voluntary schemes
 - Requirements for auditors
 - Regular, at least yearly, retrospective auditing by voluntary scheme
 - Non-typical voluntary schemes
 - Valid for 5 years at maximum

EC COMMUNICATION on the practical implementation of the EU biofuels and bioliquids sustainability scheme and on counting rules for biofuels

- 19.6.2010, 2010/C 160/02
- For a large part the repetition of the RED Art. 17-19.

EC- REPORT on the feasibility of drawing up lists of areas in third countries with low greenhouse gas emissions from cultivation

- 10.8.2010, COM(2010) 427 final
- According to RED Article 19.4
- List not yet feasible (underlying calculation is uncertain)
- preliminary results on the webpage of the JRC
- New assessment in 2012

EC REPORT on indirect land-use change (...)

- 22.12.2010, COM(2010) 811 final
- According to RED Art. 19.6
- indirect land-use change can have an impact on GHG emissions
- EC is currently finalising its impact assessment

EC DECISION on certain types of information about biofuels and bioliquids to be submitted by economic operators to Member States

- 13.1.2011, C(2011) 36
- Economic operators report
 - Certified according to which voluntary scheme
 - Which GHG saving bonus was obtained
- Only mentions voluntary schemes, does not mention national system

Further related documents

- Annotated example for the calculation of an actual greenhouse gas value
 - Refers to BioGrace standard values
- Annotated example of land carbon stock calculation using standard values
 - Refers to BioGrace standard values
- Direct link to the BioGrace standard values from the DG Energy website...

Renewable energy

- Targets by 2020
- Progress reports
- Transparency Platform
- Background documents
- European Technology Platforms (ETPs)
- Electricity
- Bioenergy
- Biofuels
 - Members states reports
 - Standards
 - Sustainability Criteria
 - Land use change
 - Projects
- Wind Energy
- Solar Electricity
- Solar Heating and Cooling
- Geothermal Energy
- Ocean Energy
- Grid
- Hydrogen for Transport
- CONCERTO
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- Links

Facts, Figures, Analysis

- Market Observatory
- Statistics
- Evaluations
- Studies

Legislation

- Legislation
- Infringements

News room

- Press releases


Renewable energy

Biofuels: Sustainability Criteria

Commission sets up system for certifying sustainable biofuels

The Commission decided on 10 June 2010 to encourage industry, governments and NGOs to set up certification schemes for all types of biofuels, including those imported into the EU. It laid down what the schemes must do to be recognised by the Commission. This will help implement the EU's requirements that biofuels must deliver substantial reductions in greenhouse gas emissions and should not come from forests, wetlands and nature protection areas. The rules for certification schemes are part of a set of guidelines explaining how the Renewable Energy Directive, coming into effect in December 2010, should be implemented.



- Press release [IP/10/711, 10/06/2010] 
- Memo [MEMO/10/247, 10/06/2010] 

Related documents

► Communications and Decision

[Communication on the practical implementation of the EU biofuels and bioliquids sustainability scheme and on accounting rules for biofuels \[OJ C160, page 8\]](#)

► [Standard values, derived from the datasets used to establish the default values](#)

► [Annotated example for the calculation of an actual greenhouse gas value](#)  [133 KB]

► [Annotated example for the calculation of emissions from carbon stock changes due to land use change](#)  [596 KB]

[Communication on voluntary schemes and default values in the EU biofuels and bioliquids sustainability scheme \[OJ C160, page 1\]](#)

[Commission decision on guidelines for the calculation of land carbon stocks for the purpose of Annex V of Directive 2009/28/EC \[OJ L151, page 19\]](#)

► [Data layers on climate regions and soil type](#)

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[14/02] Job opportunities at the Research Executive Agency (REA)

[21/02] Public consultation "The external dimension of the EU energy policy"

[22/02] Job opportunities at the Research Executive Agency (REA)

[28/02] Job opportunities at the Agency for the Cooperation of Energy Regulators (ACER)

[07/03] Public consultation "Energy Roadmap 2050"



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