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NOTE

From : General Secretariat of the Council

To : Delegations

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Subject : Proposal for a Directive of the European Parliament and of the Council
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 (**first reading**)

The annex to this note contains the text of the above-mentioned proposal with new or amended Presidency suggestions for some elements of the proposed Directive, based on positions expressed and comments received from delegations.

Underlining in bold indicates new changes to the Commission's proposal and "[...]" deletion.

Earlier proposed changes are marked in **bold**.

Overall coherence, such as in relation to recitals (omitted) and procedural articles, will need to be ensured as the text evolves.

Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

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

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 192(1) thereof, **and** Article 114 thereof in relation to Article 1(2) to 1(9) and Article 2(5) to 2(7) of this Directive,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national Parliaments,

Having regard to the opinion of the European Economic and Social Committee¹,

Having regard to the opinion of the Committee of the Regions²,

Acting in accordance with the ordinary legislative procedure,

Whereas:

[Recitals omitted]

HAVE ADOPTED THIS DIRECTIVE:

¹ OJ C 198 of 10 July 2013, p. 56.

² OJ C , , p. .

Article 1
Amendments to Directive 98/70/EC

Directive 98/70/EC is amended as follows:

-1. The following point 10 is added to Article 2:

'10. 'starch-rich crops' means crops comprising mainly cereals (regardless whether only the grains are used or the whole plant such as green maize), tubers and root crops (such as potatoes, jerusalem artichoke, sweat potatoes, cassava and yams), and corm crops (such as taro and cocoyam).'

1. Article 7a is amended as follows:

(a)³ Paragraph 5 [...] is replaced by the following:

'5. In order to ensure the uniform implementation of this Article, the Commission shall adopt implementing acts in accordance with Article 11(4) to set out:

(a) the methodology for the calculation of life cycle greenhouse gas emissions from fuels other than biofuels and from energy;

(b) the methodology specifying, before 1 January 2011, the fuel baseline standard based on the life cycle greenhouse gas emissions per unit of energy from fossil fuels in 2010 for the purposes of paragraph 2;

(c) rules to ensure as uniform an approach as possible to Member States' implementation of paragraph 4;

(d) the methodology to calculate the contribution of electric road vehicles, which shall be compatible with Article 3(4) of Directive 2009/28/EC.'

³ Legal-linguistic correction: the order of points (a) and (b) is changed.

(b) the following paragraph [...] is inserted:

'6. **Member States shall ensure that fuel suppliers report** by 31 March each year [...] to the authority designated by the Member State, the biofuel production pathways, volumes, and the life cycle greenhouse gas emissions per unit of energy, including the estimated indirect land-use change emissions set out in Annex V. Member States shall report these data to the Commission.'

2. Article 7b is amended as follows:

(a) paragraph 2 is replaced by the following:

'2. The greenhouse gas emission saving from the use of biofuels taken into account for the purposes referred to in paragraph 1 shall be at least 60 % for biofuels produced in installations starting operation after 1st July 2014. An installation is “in operation” if the physical production of biofuels has taken place.

In the case of installations that were in operation on or before 1st July 2014 , for the purposes referred to in paragraph 1, biofuels shall achieve a greenhouse gas emission saving of at least 35% until 31 December 2017 and at least 50% from 1 January 2018.

The greenhouse gas emission saving from the use of biofuels shall be calculated in accordance with Article 7d(1).'

(b) in paragraph 3, the second subparagraph is replaced by the following:

'In order to ensure the uniform application of point (c) of the first subparagraph, the Commission shall adopt implementing acts establishing the criteria and geographic ranges to determine which grassland is covered by that provision. Those implementing acts shall be adopted in accordance with the examination procedure laid down in Article 11(4).'

3. Article 7d is amended as follows:

(a) paragraphs 3 to 6 are replaced by the following:

'3. The typical greenhouse gas emissions from cultivation of agricultural raw materials in the reports referred to in Article 7d(2) in the case of Member States, and, **in the case of territories outside the Union,** in reports equivalent to those **and drawn up by competent bodies,** may be submitted to the Commission.'

4. The Commission may decide, by means of an implementing act adopted in accordance with advisory procedure referred to in Article 11(3), that the reports referred to in paragraph 3 contain accurate data for the purposes of measuring the greenhouse gas emissions associated with the cultivation of biofuel feedstocks typically produced in those areas for the purposes of Article 7b(2).

5. By 31 December 2012 at the latest and every two years thereafter, the Commission shall draw up a report on the estimated typical and default values in Parts B and E of Annex IV, paying special attention to greenhouse gas emissions from transport and processing.

In the event that those reports indicate that the estimated typical and default values in Parts B and E of Annex IV might need to be adjusted on the basis of latest scientific evidence, the Commission shall make a legislative proposal as appropriate.'

6. [...]

(b) Paragraph 7 [...] is replaced by the following:

'7. The Commission shall **keep Annex IV under review, with a view, where justified, to the addition of values for further biofuel production pathways for the same or for other raw materials. That review shall also consider the modification of the methodology laid down in Part C, particularly with regard to:**

- **the method of accounting for wastes and residues;**
- **the method of accounting for co-products;**
- **the method of accounting for cogeneration, and**
- **the status given to agricultural crop residues as co-products.**

The default values for waste vegetable or animal oil or biodiesel shall be reviewed as soon as possible. In the event that the Commission's review concludes that Annex IV should be amended, the Commission shall make a legislative proposal as appropriate.'

(c) **Paragraph 8 is replaced by the following:**

'Where necessary in order to ensure the uniform application of Annex IV, Part C, point 9, the Commission may adopt implementing acts setting out detailed technical specifications and definitions.'

4. Article 8 is amended as follows:

(a) paragraph 1 is replaced by the following:

'1. Member States shall monitor compliance with the requirements of Articles 3 and 4, in respect of petrol and diesel fuels, on the basis of the analytical methods referred to in [...] the European standards EN 228 and EN 590 respectively, **or any European standards which replace or amend those standards, and the references to which have been published by the Commission in the Official Journal of the European Union in accordance with Regulation (EU) No 1025/2012 of the European Parliament and of the Council.'**

(b) paragraph 3 is replaced by the following:

'3. Each year by 30 June, the Member States shall submit a report of national fuel quality data for the preceding calendar year. The Commission shall establish a common format for the submission of a summary of national fuel quality by means of an implementing act adopted in accordance with the advisory procedure referred to in Article 11(3). The first report shall be submitted by 30 June 2002. From 1 January 2004, the format for this report shall be consistent with that described in the relevant European standard. In addition, Member States shall report the total volumes of petrol and diesel fuels marketed in their territories and the volumes of unleaded petrol and diesel fuels marketed with a maximum sulphur content of 10 mg/kg. Furthermore, Member States shall report annually on the availability on an appropriately balanced geographical basis of petrol and diesel fuels with a maximum sulphur content of 10 mg/kg that are marketed within their territory.'

5. Article 8a(3) is **replaced by the following**:

'3. In the light of the assessment carried out using the test methodology referred to in paragraph 1, the European Parliament and the Council may revise the limit for the MMT content of fuel specified in paragraph 2, on the basis of a proposal from the Commission.

6. [...] Article 10 is **deleted**.

[...]

7. [...]

8. Article 11(4) is **replaced by the following**:

'4. Where reference is made to this paragraph, Article 5 of Regulation (EU) No 182/2011 shall apply.

Where the Committee delivers no opinion, the Commission shall not adopt the draft implementing act and the third subparagraph of Article 5(4) of Regulation (EU) No 182/2011 shall apply.'

9. Annexes are amended as set out in Annex I to this Directive.

Article 2

Amendments to Directive 2009/28/EC

Directive 2009/28/EC is amended as follows:

1. **The following points are added to Article 2:**

'p) 'waste' shall be defined as in Article 3(1) of Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives⁴. Substances that have been intentionally modified or contaminated to meet that definition are not covered by this category;

⁴ OJ L 312 of 22 November 2008, p.3.

q) 'starch-rich crops' means crops comprising mainly cereals (regardless whether only the grains are used or the whole plant such as green maize), tubers and root crops (such as potatoes, jerusalem artichoke, sweat potatoes, cassava and yams), and corm crops (such as taro and cocoyam);

r) 'non-food cellulosic material' means material including food and feed crop residues (such as straw, stower, husks and shells), grassy energy crops with a low starch content (such as switchgrass, miscanthus, giant cane), industrial residues (including from food and feed crops after vegetal oils, sugar, starch and proteins have been extracted), and material from biowaste. These feedstocks are mainly composed of cellulose and hemicellulose, and have a lower lignin-content than ligno-cellulosic material;

s) 'ligno-cellulosic material' means material including woody energy crops (such as from short rotation forestry and short rotation coppice), primary, secondary and tertiary forest and forest-based industries' residues, and industrial and other wastes. These feedstocks are composed of lignin, cellulose and hemicellulose.'

2. Article 3 is amended as follows:

(a) the title is replaced by the following:

'Mandatory national targets and measures for the use of energy from renewable sources'.

(b) in paragraph 1, the following [...] subparagraph is added:

'For the purpose of compliance with target referred to in the first subparagraph, the maximum joint contribution from biofuels and bioliquids produced from cereal and other starch rich crops, sugars and oil crops shall be no more than the energy quantity corresponding to the maximum contribution as set out in Article 3(4)d.'

(c) paragraph 4 is amended as follows:

(i) in point (b), the following phrase is added:

"This indent shall be without prejudice to Articles 17(1)a and 3(4)d;"

(ii) point (c) is replaced by the following:

'for the calculation of the contribution from electricity produced from renewable sources and consumed in all types of electric vehicles for the purpose of points (a) and (b), Member States may choose to use either the average share of electricity from renewable energy sources in the Community or the share of electricity from renewable energy sources in their own country as measured two years before the year in question. Furthermore, for the calculation of the electricity from renewable energy sources consumed by electrified rail transport, that consumption shall be considered to be 2.5 times the energy content of the input of electricity from renewable energy sources. For the calculation of the electricity from renewable energy sources consumed by electric road vehicles in point b), that consumption shall be considered to be five times the energy content of the input of electricity from renewable energy sources.'

(iii) the following point [...] is added:

(d) for the calculation of biofuels in the numerator, the share of energy from biofuels produced from cereal and other starch rich crops, sugars and oil crops shall be no more than 7 % [...] of the final consumption of energy in transport in 2020.

(iv) the following points [...] are added:

'(e) Each Member State shall ensure that at least 1 % of the share of energy from renewable sources in all forms of transport in 2020 referred to in the first subparagraph is met with biofuels produced from feedstocks and fuels listed in Part A of Annex IX;

'(f) Biofuels produced from feedstocks listed in [...] Annex IX shall be considered to be twice their energy content.

[...]

[...]

(d) the following new paragraph 5 is added:

'5. With a view to minimising the risk of single consignments being claimed more than once in the EU, Member States and the Commission shall endeavour to strengthen cooperation among national systems and between national systems and voluntary schemes established pursuant to Article 18, including where appropriate the exchange of data. To prevent materials from being intentionally modified or discarded in order to fall under Part B of Annex IX, Member States shall encourage the development and use of systems which track and trace feedstocks and the resulting biofuels over the whole value chain. Member States shall ensure that when fraud is detected, appropriate action is taken.'

3. [...] Article 5(5) is **deleted**.

[...]

4. [...] Article 6 **is amended as follows**:

(a) paragraph 1 is replaced by the following:

'1. Member States may agree on and may make arrangements for the statistical transfer of a specified amount of energy from renewable sources from one Member State to another Member State. The transferred quantity shall be:

(a) **deducted from the amount of energy from renewable sources that is taken into account in measuring compliance by the Member State making the transfer with the requirements of Article 3(1), (2) and (4); and**

(b) **added to the amount of energy from renewable sources that is taken into account in measuring compliance by another Member State accepting the transfer with the requirements of Article 3(1), (2) and (4).**

Provided that, with respect to an arrangement for a statistical transfer made in respect of Article 3(4), such transfer may only be made following the approval by the Commission of a request to this effect submitted by the Member States concerned to the Commission by 31 January 2020, indicating the reasons for such transfer. The Commission shall provide a reply to either approve or reject such transfer within two months of the submission of such request.”

(b) paragraph 2 is replaced by the following:

‘2. The arrangements referred to in paragraph 1 in respect of Article 3(1) and (2) may have a duration of one or more years. They shall be notified to the Commission not later than three months after the end of each year in which they have effect. The information sent to the Commission shall include the quantity and price of the energy involved.’

5. Article 17 is amended as follows:

(a) paragraph 2 is replaced by the following:

‘2. The greenhouse gas emission saving from the use of biofuels and bioliquids taken into account for the purposes referred to in paragraph 1 shall be at least 60 % for biofuels and bioliquids produced in installations starting operation after 1st July 2014. An installation is “in operation” if the physical production of biofuels or bioliquids has taken place.

In the case of installations that were in operation on or before 1st of July 2014, for the purposes referred to in paragraph 1, biofuels and bioliquids shall achieve a greenhouse gas emission saving of at least 35% until 31 December 2017 and at least 50% from 1 January 2018.

The greenhouse gas emission saving from the use of biofuels and bioliquids shall be calculated in accordance with Article 19(1).’

(b) in paragraph 3, the second subparagraph is replaced by the following:

'In order to ensure the uniform application of point (c) of the first subparagraph, the Commission shall adopt implementing acts establishing the criteria and geographic ranges to determine which grassland is covered by that provision. Those implementing acts shall be adopted in accordance with the examination procedure laid down in Article 25(4).'

6. [...] Article 18 (4), **is amended as follows:**

(a) the second subparagraph is replaced by the following:

'The Commission may decide that voluntary national or international schemes setting standards for the production of biomass products contain accurate data for the purposes of Article 17(2), **and/or** demonstrate that consignments of biofuel or bioliquid comply with the sustainability criteria set out in Article 17(3) to (5), **and/or that no materials have been intentionally modified or discarded so that the consignment or part thereof would fall under Part B of Annex IX.** The Commission may decide that those schemes contain accurate data for the purposes of information on measures taken for the conservation of areas that provide, in critical situations, basic ecosystem services (such as watershed protection and erosion control), for soil, water and air protection, the restoration of degraded land, the avoidance of excessive water consumption in areas where water is scarce and on the issues referred to in the second subparagraph of Article 17(7). The Commission may also recognise areas for the protection of rare, threatened or endangered ecosystems or species recognised by international agreements or included in lists drawn up by intergovernmental organisations or the International Union for the Conservation of Nature for the purposes of Article 17 (3)(b) (ii).'

(b) **the following sub-paragraphs are added:**

'In order to facilitate mutual bilateral or multilateral recognition of schemes for verification of compliance with the sustainability criteria for biofuels and bioliquids, a Member State may notify its national scheme to the Commission.

A decision on a national scheme's compliance with the conditions of this Directive shall be adopted in accordance with the procedure referred to in Article 25(4). Where the decision is positive, schemes established in accordance with this Article shall not refuse mutual recognition with that Member State's scheme.'⁵

7. Article 19 is amended as follows:

(a) paragraphs 3 and 4 are replaced by the following:

'3. The typical greenhouse gas emissions from cultivation of agricultural raw materials in the reports referred to in Article 19(2) in the case of Member States, and in reports equivalent to those in the case of territories outside the Union, may be submitted to the Commission.

4. The Commission may decide, by means of an implementing act adopted in accordance with advisory procedure referred to in Article 25(3), that the reports referred to in paragraph 3 contain accurate data for the purposes of measuring the greenhouse gas emissions associated with the cultivation of biofuel and bioliquid feedstocks typically produced in those areas for the purposes of Article 17(2).'

(b) **Paragraph 5 is replaced with the following:**

'5. By 31 December 2012 at the latest and every two years thereafter, the Commission shall draw up a report on the estimated typical and default values in Parts B and E of Annex V, paying special attention to greenhouse gas emissions from transport and processing.

In the event that those reports indicate that the estimated typical and default values in Parts B and E of Annex V might need to be adjusted on the basis of latest scientific evidence, the Commission shall make a legislative proposal as appropriate.'

⁵ The following recital is added:

"In order to facilitate the smooth functioning of the internal market, it is appropriate to clarify the conditions under which the mutual recognition principle applies as between all schemes for verification of compliance with the sustainability criteria for biofuels and bioliquids established in accordance with Directive 2009/28/EC."

(c) [...]

(d) in paragraph 7, the first subparagraph is replaced by the following:

'7. The Commission shall **keep Annex V under review, with a view, where justified, to the addition of values for further biofuel production pathways for the same or for other raw materials. That review shall also consider the modification of the methodology laid down in Part C, particularly with regard to:**

- **the method of accounting for wastes and residues;**
- **the method of accounting for co-products;**
- **the method of accounting for cogeneration, and**
- **the status given to agricultural crop residues as co-products.**

The default values for waste vegetable or animal oil or biodiesel shall be reviewed as soon as possible. In the event that the Commission's review concludes that Annex V should be amended, the Commission shall make a legislative proposal as appropriate.

(e) Paragraph 8 is replaced by the following:

'Where necessary in order to ensure the uniform application of Annex V, Part C, point 9, the Commission may adopt implementing acts setting out detailed technical specifications and definitions.'

8. Article 21 is deleted.

9. In Article 22, paragraph 2 is replaced by the following:

'2. In estimating net greenhouse gas emission saving from the use of biofuels, the Member State may, for the purpose of the reports referred to in paragraph 1, use the typical values given in part A and part B of Annex V, and shall add the estimates for indirect land-use change emissions set out in Annex VIII.'

9a. In Article 23(8), point (b) is replaced by the following:

'(b) with respect to the targets referred to in Article 3(4), a review of:

(i) the cost-efficiency of the measures to be implemented to achieve the targets;

(ii) an assessment of the feasibility of reaching the targets whilst ensuring the sustainability of biofuels production in the Union and in third countries, and considering economic, environmental and social impacts, including indirect effects and impacts on biodiversity, as well as the commercial availability of second-generation biofuels;

(iii) the impact of the implementation of the targets on the availability of foodstuffs at affordable prices;

(iv) the commercial availability of electric, hybrid and hydrogen powered vehicles, as well as the methodology chosen to calculate the share of energy from renewable sources consumed in the transport sector;

(v) the evaluation of specific market conditions, considering, in particular, markets on which transport fuels represent more than half of the final energy consumption, and markets which are fully dependent on imported biofuels;'

10. In Article 25, paragraphs 3 and 4 are replaced by the following:

'3. Where reference is made to this paragraph, Article 4 of Regulation (EU) 182/2011 shall apply.

4. Where reference is made to this paragraph, Article 5 of Regulation (EU) 182/2011 shall apply.'

Where the Committee delivers no opinion, the Commission shall not adopt the draft implementing act and the third subparagraph of Article 5(4) of Regulation (EU) 182/2011 shall apply.

11. [...]
12. Annexes I to VII are hereby amended in accordance with Annex II to this Directive.

Article 3

Review

1. The Commission shall, before 31 December 2014, submit a report to the European Parliament and to the Council including an assessment of the availability of the necessary quantities of cost-efficient biofuels in the EU from non-land using feedstocks and non-food crops by 2020, including the need for additional criteria to ensure their sustainability, and of the best available scientific evidence on indirect land-use change greenhouse gas emissions associated with the production of biofuels and bioliquids. The report shall be accompanied, if appropriate, by proposals for further measures, taking into account economic, social and environmental considerations. The report shall also evaluate the availability of ILUC free biofuels and bioliquids, including their certification, with a view to adjusting Part B of Annex V of Directive 98/70/EC and Part B of Annex VIII of Directive 2009/28/EC, if appropriate.⁶

⁶ The Presidency suggests to add the following recital:
"Yield increases in Member States' agricultural sectors through intensified research, technological development and knowledge transfer beyond levels which would have prevailed in the absence of productivity-promoting support schemes for food and feed crop based biofuels, as well as the cultivation of a second annual crop on areas which were previously not used for growing a second annual crop, can contribute to mitigating ILUC. To the extent that the resulting ILUC mitigation effect at national level can be quantified, measures introduced by this Directive could reflect these productivity improvements both in terms of reduced estimated ILUC emission values to be reported and the contribution of food and feed crop based biofuels towards the share of energy from renewable sources in transport to be achieved in 2020."

2. The Commission shall, before 31 December 2017, submit a report to the European Parliament and to the Council reviewing, on the basis of the best latest available scientific evidence, the effectiveness of the measures introduced by this Directive in limiting indirect land-use change greenhouse gas emissions associated with the production of biofuel and bioliquids. **This report shall also examine developments in relation to certification schemes for biofuel and bioliquid feedstocks, contained in Annex V of Directive 98/70/EC and Annex VIII of Directive 2009/28/EC but produced under low risk of ILUC by way of project-level mitigation measures, and their effectiveness.**⁷ Such report shall, if appropriate, be accompanied by a legislative proposal based on the best available scientific evidence, for introducing estimated indirect land use change emissions factors into the appropriate sustainability criteria [...] and a review of the effectiveness of the incentives provided for biofuels from non-land using feedstocks and non-food crops under Article 3(4)(d) of Directive 2009/28/EC.

Article 4

Transposition

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by [*twelve months after adoption*] at the latest. They shall forthwith communicate to the Commission the text of those provisions.

When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

⁷ The Presidency suggests to add the following recital:
"Although food and feed crop-based biofuels are generally associated with ILUC risks, there are also exceptions. Member States and the Commission should encourage the development and use of schemes which can reliably prove that a determined amount of biofuel feedstocks produced in a given project did not displace production for other purposes. This may, for example, be the case where the biofuel production equals the amount of additional production achieved through investments into improved productivity above levels which would have otherwise been achieved, or where biofuel production takes place on land where direct land-use change occurred without negative impacts on pre-existing ecosystem services delivered by that land, including protection of carbon stocks and biodiversity."

2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

Article 5

Entry into force

This Directive shall enter into force on the twentieth day following that of its publication in the Official Journal of the European Union.

Article 6

This Directive is addressed to the Member States.

Done at Brussels,

For the European Parliament

The President

For the Council

The President

ANNEX I

Annexes to Directive 98/70/EC are amended as follows:

(1) Annex IV, part C is amended as follows:

(a) point 7 is replaced by the following:

'7. Annualised emissions from carbon stock changes caused by land-use change, e_l , shall be calculated by dividing total emissions equally over 20 years. For the calculation of these emissions the following rule shall be applied:

$$e_l = (CS_R - CS_A) \times 3,664 \times 1/20 \times 1/P - e_B,$$

where

e_l = annualised greenhouse gas emissions from carbon stock change due to land-use change (measured as mass (grams) of CO₂-equivalent per unit biofuel energy (megajoules));

CS_R = the carbon stock per unit area associated with the reference land-use (measured as mass (tonnes) of carbon per unit area, including both soil and vegetation). The reference land-use shall be the land use in January 2008 or 20 years before the raw material was obtained, whichever was the later;

CS_A = the carbon stock per unit area associated with the actual land-use (measured as mass (tonnes) of carbon per unit area, including both soil and vegetation). In cases where the carbon stock accumulates over more than one year, the value attributed to CS_A shall be the estimated stock per unit area after 20 years or when the crop reaches maturity, whichever the earlier; and

P = the productivity of the crop (measured as biofuel or energy per unit area per year).

e_B = **bonus of 29 gCO_{2eq}/MJ biofuel or bioliquid if biomass is obtained from restored degraded land under the conditions provided for in point 8.'**

(b) [...]

(2) The following Annex V is added:

'Annex V

Part A. Estimated indirect land-use change emissions from biofuels

Feedstock group	Estimated indirect land-use change emissions (gCO _{2eq} /MJ)
Cereals and other starch rich crops	12
Sugars	13
Oil crops	55

Part B. Biofuels for which the estimated indirect land-use change emissions are considered to be zero

Biofuels produced from the following feedstock categories will be considered to have estimated indirect land-use change emissions of zero:

- (a) feedstocks which are not included under Part A of this Annex.
- (b) feedstocks whose production has led to direct land use change, i.e. a change from one of the following IPCC land cover categories; forest land, grassland, wetlands, settlements, or other land, to cropland or perennial cropland⁸. In such a case a "direct land use change emission value (el) should have been calculated in accordance to Part C, paragraph 7 of Annex IV.'

⁸ Perennial crops are defined as multi-annual crops whose stem is usually not annually harvested such as short rotation coppice and oil palm as defined in (2010/C 160/02).

ANNEX II

Annexes to Directive 2009/28/EC are amended as follows:

(1) Annex V, part C is amended as follows:

(a) point 7 is replaced by the following:

'7. Annualised emissions from carbon stock changes caused by land-use change, e_l , shall be calculated by dividing total emissions equally over 20 years. For the calculation of these emissions the following rule shall be applied:

$$e_l = (CS_R - CS_A) \times 3,664 \times 1/20 \times 1/P - e_B,$$

where

e_l = annualised greenhouse gas emissions from carbon stock change due to land-use change (measured as mass (grams) of CO₂-equivalent per unit biofuel energy (megajoules));

CS_R = the carbon stock per unit area associated with the reference land use (measured as mass (tonnes) of carbon per unit area, including both soil and vegetation). The reference land-use shall be the land-use in January 2008 or 20 years before the raw material was obtained, whichever was the later;

CS_A = the carbon stock per unit area associated with the actual land-use (measured as mass (tonnes) of carbon per unit area, including both soil and vegetation). In cases where the carbon stock accumulates over more than one year, the value attributed to CS_A shall be the estimated stock per unit area after 20 years or when the crop reaches maturity, whichever the earlier; and

P = the productivity of the crop (measured as biofuel or bioliquid energy per unit area per year).

e_B = **bonus of 29 gCO_{2eq}/MJ biofuel or bioliquid if biomass is obtained from restored degraded land under the conditions provided for in point 8.'**

(b) [...]

(2) The following Annex VIII is added:

'Annex VIII

Part A. Estimated indirect land-use change emissions from biofuel and bioliquid feedstocks

Feedstock group	Estimated indirect land-use change emissions (gCO _{2eq} /MJ)
Cereals and other starch rich crops	12
Sugars	13
Oil crops	55

Part B. Biofuels and bioliquids for which the estimated indirect land-use change emissions are considered to be zero

Biofuels and bioliquids produced from the following feedstock categories will be considered to have estimated indirect land-use change emissions of zero:

- (a) feedstocks which are not included under Part A of this Annex.
- (b) feedstocks whose production has led to direct land use change, i.e. a change from one of the following IPCC land cover categories; forest land, grassland, wetlands, settlements, or other land, to cropland or perennial cropland⁹. In such a case a "direct land use change emission value (*e_l*) should have been calculated in accordance to Part C, paragraph 7 of Annex V.'

⁹ Perennial crops are defined as multi-annual crops whose stem is usually not annually harvested such as short rotation coppice and oil palm as defined in (2010/C 160/02).

(3) The following Annex IX is added:

'Annex IX

Part A. Feedstocks and fuels whose contribution towards the target referred to in Article 3(4)(e) shall be considered to be twice their energy content

- (a) Algae.
- (b) Biomass fraction of mixed municipal waste, but not separated household waste subject to recycling targets under Article 11(2)(a) of Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives.
- (c) Biomass fraction of industrial waste.
- (d) Straw.
- (e) Animal manure and sewage sludge.
- (f) Palm oil mill effluent and empty palm fruit bunches.
- (g) Tall oil pitch.
- (h) Crude glycerine.
- (i) Bagasse.
- (j) Grape marcs and wine lees.
- (k) Nut shells.
- (l) Husks.
- (m) Cobs.
- (n) **Biomass fraction of wastes and residues from forestry and forestry related industries, i.e. bark, branches, leaves, needles, tree tops, saw dust, cutter shavings, black liquor, brown liquor, lignin and tall oil.**
- (o) **Non-food cellulosic material.**
- (p) **Ligno-cellulosic material except saw logs and veneer logs.**
- (q) **Renewable liquid and gaseous fuels of non-biological origin.**

Part B. Feedstocks whose contribution towards the target referred to in **the first subparagraph of Article 3(4)** shall be considered to be twice their energy content

- (a) Used cooking oil.
 - (b) Animal fats classified as category I and II in accordance with EC/1774/2002 laying down health rules concerning animal by-products not intended for human consumption¹⁰.
 - (c) [...]
 - (d) [...]
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¹⁰ OJ L 273, 10.10.2002, p. 1