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2012/0288 (COD)

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)

{SWD(2012) 343}  
{SWD(2012) 344}

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## EXPLANATORY MEMORANDUM

### 1. BACKGROUND

Directive 2009/28/EC<sup>1</sup> on the promotion of the use of energy from renewable sources (the "Renewable Energy Directive") established mandatory targets to be achieved by 2020 for a 20% overall share of renewable energy in the EU and a 10% share for renewable energy in the transport sector. At the same time, an amendment to Directive 98/70/EC<sup>2</sup> ("the Fuel Quality Directive") introduced a mandatory target to achieve by 2020 a 6% reduction in the greenhouse gas intensity of fuels used in road transport and non-road mobile machinery.

The contribution of biofuels towards these targets is expected to be significant. Whilst both Directives include sustainability criteria including minimum greenhouse gas saving thresholds, the greenhouse gas emissions associated with changes in the carbon stock of land resulting from indirect changes in land use (ILUC) are not subject to reporting requirements under the current legislation.

The Directives invite<sup>3</sup> the Commission to review the impact of indirect land-use change on greenhouse gas emissions and, if appropriate, propose ways to minimise it whilst respecting existing investments made in biofuels production. Pursuant to this invitation, the Commission adopted a Communication on 22 December 2010<sup>4</sup> summarising the consultations and analytical work conducted on this topic since 2008. In this report, the Commission identified a number of uncertainties and limitations associated with the available numerical models used to quantify indirect land-use change, whilst acknowledging that indirect land-use change can reduce the greenhouse gas emissions savings associated with biofuels and bioliquids, and as such, recommended that this issue was to be addressed under a precautionary approach.

### 2. AIMS OF THE PROPOSAL

Scientific work indicates that emissions from indirect land-use change can vary substantially between feedstocks and can negate some or all of the greenhouse gas savings of individual biofuels relative to the fossil fuels they replace<sup>5</sup>. The aim of the current proposal is to start the transition to biofuels that deliver substantial greenhouse gas savings when also estimated indirect land-use change emissions are reported. While existing investments should be protected, the aims of the current proposal are to:

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<sup>1</sup> OJ L 140 5.6.2009

<sup>2</sup> OJ L 350 28.12.1998

<sup>3</sup> Article 7d(6) of Directive 2009/30/EC and Article 19(6) of Directive 2009/28/EC

<sup>4</sup> COM(2010) 811.

<sup>5</sup> Indirect land-use change emissions estimates are calculated through modelling, which, notwithstanding recent improvements made in the science, remain sensitive to and may vary according to the modelling framework and assumptions made.

- limit the contribution that conventional biofuels (with a risk of ILUC emissions) make towards attainment of the targets in the Renewable Energy Directive;
- improve the greenhouse gas performance of biofuel production processes (reducing associated emissions) by raising the greenhouse gas saving threshold for new installations subject to protecting installations<sup>6</sup> already in operation on 1st July 2014;
- encourage a greater market penetration of advanced (low-ILUC) biofuels by allowing such fuels to contribute more to the targets in the Renewable Energy Directive than conventional biofuels;
- improve the reporting of greenhouse gas emissions by obliging Member States and fuel suppliers to report the estimated indirect land-use change emissions of biofuels.

The proposal also aims at protecting existing investments until 2020. The proposal does not take a position on the actual need for financial support to biofuels before 2020. However, the Commission is of the view that in the period after 2020 biofuels which do not lead to substantial greenhouse gas savings (when emissions from indirect land-use change are included) and are produced from crops used for food and feed should not be subsidised.

### **3. LEGAL ELEMENTS OF THE PROPOSAL**

#### **3.1. Summary of the proposed action**

The main features of this proposal regarding the Renewable Energy Directive are:

- the introduction of a limit to the contribution made from biofuels and bioliquids produced from food crops, such as those based on cereals and other starch rich crops, sugars and oil crops, to the Renewable Energy Directive targets to current consumption levels, without foreseeing any limits on their overall consumption;
- an enhanced incentive scheme in Article 3(4) to further promote sustainable and advanced biofuels from feedstocks that do not create an additional demand for land;
- introduction of reporting estimated emissions from carbon stock changes caused by indirect land-use change, based on the best available scientific evidence, for the purposes of the calculation of the life cycle greenhouse gas emission savings from biofuels and bioliquids, as reported by Member States in Article 22;
- a review process to ensure that this methodology is updated and adapted in light of scientific developments;
- to increase the minimum greenhouse gas saving threshold for biofuels and bioliquids produced in new installations with effect from 1st July 2014 in order to

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<sup>6</sup> As defined in paragraph 3.1.1.1 of C 160 (2010)

improve the overall greenhouse gas balance of the biofuels and bioliquids consumed in the EU as well as discouraging further investments in installations with low greenhouse gas performance;

- simplification of the calculation of greenhouse gas savings for European biofuel producers, leveling the playing field between EU producers and producers in third countries;
- removal of temporary provisions for addressing indirect land-use change, which were contained in the Directives and are no longer necessary in light of a comprehensive approach being adopted;
- adaptation of the Renewable Energy Directive to the entry into force of the Treaty on the Functioning of the European Union, notably the conferral of powers to the Commission to adopt acts in accordance with Article 290 and Article 291 thereof.

The main features of this proposal regarding the Fuel Quality Directive are:

- the introduction of reporting estimated emissions from carbon stock changes caused by indirect land-use change, based on the best available scientific evidence, for the purposes of reporting the life cycle greenhouse gas emission savings from biofuels, as described in Article 7a;
- review process to ensure that this methodology is updated and adapted in light of scientific developments;
- increase of the minimum greenhouse gas saving threshold for biofuels produced in new installations with effect from 1st July 2014 in order to improve the overall greenhouse gas balance of the biofuels consumed in the EU as well as discouraging further investments in installations with low greenhouse gas performance;
- simplification of the calculation of greenhouse gas savings for European biofuel producers, levelling the playing field between EU producers and producers in third countries;
- removal of temporary provisions for addressing indirect land-use change, which were contained in the Directives and are no longer necessary in light of a comprehensive approach being adopted;
- adaptation of the Fuel Quality Directive to the entry into force of the Treaty on the Functioning of the European Union, notably the conferral of powers to the Commission to adopt acts in accordance with Article 290 and Article 291 thereof.

The proposal also includes minor corrections and clarifications in both Directives with regard to non-biofuel issues.

The measures included in this proposal limit the contribution that conventional biofuels can make towards the attainment of the targets in the Renewable Energy Directive. The Commission will consider any impacts on the feasibility of reaching these targets arising from this proposal in its future reports under Article 23 of the Renewable Energy Directive.

### **3.2. Legal basis**

The primary objective of the Directives is the protection of the environment and the functioning of the internal market. This proposal is therefore based on Articles 192(1) and 114 of the Treaty on the Functioning of the European Union.

### **3.3. Subsidiarity principle**

Articles 19(6) and 7d(6) of the respective Directives invite the Commission to address the issue of indirect land-use change. The overall objective of the Fuel Quality and Renewable Energy Directives is to contribute to the goal of reducing economy-wide greenhouse gas emissions. As a way to achieve that, they create an EU-wide market for sustainable biofuels. The Member States are not able to meet these challenges individually as indirect land-use change impacts necessarily have transnational aspects which cannot be dealt with satisfactorily by the Member States alone.

### **3.4. Proportionality principle**

The proposal complies with the proportionality principle for the following reasons:

- It does not go beyond what is necessary to achieve the objective of the reduction of lifecycle greenhouse gas emissions from biofuels consumed in the EU, by taking into consideration their indirect impact on land-use change.
- The proposal takes the form of a Directive which sets out the minimum fuel specification for reasons of environmental protection. Other technical aspects of fuel specifications are not addressed in the Directive but are left to be governed by European standards in line with better regulation principles.
- The proposal does not increase the financial or administrative burden on the Union, national, regional or local governments. The requirements in relation to these bodies are not changed from that in the existing Directive.
- In developing the proposals, all major implications have been analysed in the Impact Assessment.

## **4. BUDGETARY IMPLICATION**

The proposal has no budgetary implication for the Union budget.

## **5. OTHER COMMENTS**

This Commission proposal is accompanied by an Impact Assessment.

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**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, in conjunction with 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 Committee<sup>7</sup>,

Having regard to the opinion of the Committee of the Regions<sup>8</sup>,

Acting in accordance with the ordinary legislative procedure,

Whereas:

- (1) Article 3(4) of Directive 2009/28/EC on the promotion of the use of energy from renewable energy sources and amending and subsequently repealing Directives 2001/777/EC and 2003/30/EC<sup>9</sup> requires Member States to ensure that the share of energy from renewable energy sources in all forms of transport in 2020 is at least 10% of their final energy consumption. The blending of biofuels is one of the methods available for Member States to meet this target, and is expected to be the main contributor.
- (2) In view of the Union's objectives to further reduce greenhouse gas emissions and the significant contribution that road transport fuels make to those emissions, Article 7a(2) of Directive 98/70/EC relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EC<sup>10</sup> requires fuel suppliers to reduce by at least 6% by 31

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<sup>7</sup> OJ C , , p. .

<sup>8</sup> OJ C , , p. .

<sup>9</sup> OJ L 140, 5.6.2009, p. 16.

<sup>10</sup> OJ L 350, 28.12.1998, p. 58.

December 2020 the life cycle greenhouse gas emissions per unit of energy ("greenhouse gas intensity") of fuels used in the Union by road vehicles, non-road mobile machinery, agricultural and forestry tractors and recreational craft when not at sea. The blending of biofuels is one of the methods available for fossil fuel suppliers to reduce the greenhouse gas intensity of the fossil fuels supplied.

- (3) Article 17 of Directive 2009/28/EC establishes sustainability criteria that biofuels and bioliquids need to comply with in order to be counted towards the targets in the Directive and to qualify for inclusion in public support schemes. These criteria include requirements on the minimum greenhouse gas emission savings that biofuels and bioliquids need to achieve compared to fossil fuels. Identical sustainability criteria are established for biofuels under Article 7b of Directive 98/70/EC.
- (4) Where pasture or agricultural land previously destined for the food, feed and fibre markets is diverted to biofuel production, the non-fuel demand will still need to be satisfied either through intensification of current production or by bringing non-agricultural land into production elsewhere. The latter case represents indirect land-use change and when it involves the conversion of high carbon stock land it can lead to significant greenhouse gas emissions. Directives 98/70/EC and 2009/28/EC should therefore include provisions to address indirect land use change given that current biofuels are mainly produced from crops grown on existing agricultural land.
- (5) Based on forecasts of biofuel demand provided by the Member States and estimates of indirect land-use change emissions for different biofuel feedstocks it is likely that greenhouse gas emissions linked to indirect land use change are significant, and could negate some or all of the greenhouse gas savings of individual biofuels. This is because almost the entire biofuel production in 2020 is expected to come from crops grown on land that could be used to satisfy food and feed markets. In order to reduce such emissions, it is appropriate to distinguish between crop groups such as oil crops, cereals, sugars and other starch containing crops accordingly.
- (6) Liquid renewable fuels are likely to be required by the transport sector in order to reduce its greenhouse gas emissions. Advanced biofuels, such as those made from wastes and algae, provide high greenhouse gas savings with low risk of causing indirect land use change and do not compete directly for agricultural land for the food and feed markets. It is appropriate, therefore, to encourage greater production of such advanced biofuels as these are currently not commercially available in large quantities, in part due to competition for public subsidies with established food crop based biofuel technologies. Further incentives should be provided by increasing the weighting of advanced biofuels towards 10% target for transport set in Directive 2009/28/EC compared to conventional biofuels. In this context, only advanced biofuels with low estimated indirect land use change impacts and high overall greenhouse gas savings should be supported as part of the post 2020 renewable energy policy framework.
- (7) In order to ensure the long-term competitiveness of bio-based industrial sectors, and in line with the 2012 Communication "Innovating for Sustainable growth: A Bioeconomy for Europe"<sup>11</sup> and the Roadmap to a Resource Efficient Europe<sup>12</sup>,

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<sup>11</sup> COM(2012) 60.

<sup>12</sup> COM(2012) 571.

promoting integrated and diversified biorefineries across Europe, enhanced incentives under Directive 2009/28/EC should be set in a way that gives preference to the use of biomass feedstocks that do not have a high economic value for other uses than biofuels.

(8) The minimum greenhouse gas saving threshold for biofuels and bioliquids produced in new installations should be increased with effect from 1<sup>st</sup> July 2014 in order to improve their overall greenhouse gas balance as well as discouraging further investments in installations with low greenhouse gas savings performance. This increase provides for investments safeguards in biofuels and bioliquids production capacities already made in conformity with Article 19(6) second subparagraph.

(9) To prepare for the transition towards advanced biofuels and minimise the overall indirect land use change impacts in the period to 2020, it is appropriate to limit the amount of biofuels and bioliquids obtained from food crops as set out in part A of Annex VIII to Directive 2009/28/EC and part A of Annex V to Directive 98/70/EC that can be counted towards targets set out in Directive 2009/28/EC. Without restricting the overall use of such biofuels, the share of biofuels and bioliquids produced from cereal and other starch rich crops, sugar and oil crops that can be counted towards the targets of Directive 2009/28/EC should be limited to the share of such biofuels and bioliquids consumed in 2011.

(109) The 5% limit set up in Article 3(4)d does not affect the Member States' freedom to arrange their own trajectory as to compliance with this prescribed share of conventional biofuels within the overall 10% target. As a consequence, the access to the market of the biofuels produced by the installations in operation before the end of 2013 remains fully open. Therefore this amending directive does not affect the legitimate expectations of the operators of such installations.

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~~This amending Directive does not affect compliance with the sustainability criteria for existing installations, and thus safeguards investments in biofuels and bioliquids production capacities already made. When implementing the The introduction of the 5% limit set up in Article 3(4) d Member States should provide necessary safeguards in order to protect until 31 December 2017 limit will therefore not affect the requirements of Article 19(6) of Directive 2009/28/EC, which requires to protect until 31 December 2017 the legitimate expectations of operators of installations producing biofuels before the end of 2013.~~

(10) The minimum greenhouse gas saving threshold for biofuels and bioliquids produced in new installations should be increased with effect from 1<sup>st</sup> July 2014 in order to improve their overall greenhouse gas balance as well as discouraging further investments in installations with low greenhouse gas savings performance.

(11) The estimated indirect land-use change emissions should be included in the reporting of greenhouse gas emissions from biofuels under Directives 98/70/EC and 2009/28/EC. Biofuels made from feedstocks that do not lead to additional demand for land, such as those from waste feedstocks, should be assigned a zero emissions factor.

(142) The Commission should review the methodology for estimating land-use change emission factors included in Annexes VIII and V to Directives 2009/28/EC and



98/70/EC respectively in the light of adaptation to technical and scientific progress. To this end, and if warranted by the latest available scientific evidence, the Commission should consider the possibility of revising the proposed crop group indirect land-use change factors, as well as introducing factors at further levels of disaggregation and including additional values should new biofuel feedstocks come to market.

- (123) Article 19(8) of Directive 2009/28/EC and Article 7d(8) of Directive 98/70/EC include provisions for encouraging the cultivation of biofuels in severely degraded and heavily contaminated land as an interim measure for mitigating against indirect land-use change. These provisions are no longer adequate in their current form and need to be integrated in the approach laid out in this Directive to ensure that overall actions for minimising emission from indirect land-use change remain coherent.
- (134) It is appropriate to align the rules for using default values to ensure equal treatment for producers regardless of where the production takes place. While third countries are allowed to use default values, EU producers are required to use actual values where they are higher than the default values, or a report has not been submitted by the Member State, increasing their administrative burden. Therefore, current rules should be simplified so that the use of default values is not limited to areas within the Union included in the lists referred to in Article 19(2) of Directive 2009/28/EC and Article 7d(2) of Directive 98/70/EC.
- (145) The objectives of this Directive, to ensure a single market for fuel for road transport and non-road mobile machinery and ensure respect for minimum levels of environmental protection from use of this fuel, cannot be sufficiently achieved by the Member States and can therefore be better achieved at Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on the Functioning of the European Union. In accordance with the principle of proportionality, as set out in that Article, this Directive does not go beyond what is necessary in order to achieve those objectives.
- (156) As a consequence of the entry into force of the Treaty on the Functioning of the European Union, the powers conferred under Directives 2009/28/EC and 98/70/EC upon the Commission need to be aligned to Article 290.
- (176) In order to ensure uniform conditions for the implementation of this Directive, implementing powers should be conferred on the Commission. Those powers should be exercised in accordance with Regulation (EU) 182/2011 of the European Parliament and of the Council of 16 February 2011 laying down the rules and general principles concerning mechanisms for control by the Member States of the Commission's exercise of implementing powers.
- (178) In order to permit adaptation to technical and scientific progress of Directive 98/70/EC, the power to adopt acts in accordance with Article 290 of the Treaty on the Functioning of the European Union should be delegated to the Commission in respect of the mechanism to monitor and reduce greenhouse gas emissions, the methodological principles and values necessary for assessing whether sustainability criteria have been fulfilled in relation to biofuels, criteria and geographic ranges for determining highly diverse grassland, the methodology for the calculation and reporting of lifecycle greenhouse gas emissions, the methodology for the calculation of indirect land-use change emissions, the permitted level related to the metallic

additives content in fuels, the permitted analytical methods related to the fuel specifications and the vapour pressure waiver permitted for petrol containing bioethanol.

- (189) In order to permit adaptation to technical and scientific progress of Directive 2009/28/EC, the power to adopt acts in accordance with Article 290 of the Treaty on the Functioning of the European Union should be delegated to the Commission in respect of the list of biofuel feedstocks that are counted multiple times towards the target set in Article 3(4), the energy content of transport fuels, criteria and geographic ranges for determining highly biodiverse grassland, the methodology for the calculation of indirect land-use change emissions, and the methodological principles and values necessary for assessing whether sustainability criteria have been fulfilled in relation to biofuels and bioliquids.
- (4920) The Commission should review the effectiveness of the measures introduced by this Directive, based on the best and latest available scientific evidence, in limiting indirect land-use change greenhouse gas emissions and addressing ways to further minimise that impact, which could include the introduction of estimated indirect land-use change emission factors in the sustainability scheme as of 1st January 2021.
- (201) It is of particular importance that the Commission in application of this Directive carry out appropriate consultations during its preparatory work, including at expert level. The Commission, when preparing and drawing up delegated acts, should ensure a simultaneous, timely and appropriate transmission of relevant documents to the European Parliament and to the Council.
- (224) In accordance with the Joint Political Declaration of Member States and the Commission on explanatory documents of 28 September 2011, Member States have undertaken to accompany, in justified cases, the notification of their transposition measures with one or more documents explaining the relationship between the components of a directive and the corresponding parts of national transposition instruments. With regard to this Directive, the legislator considers the transmission of such documents to be justified.
- (232) Directives 98/70/EC and 2009/28/EC should therefore be amended accordingly,

HAVE ADOPTED THIS DIRECTIVE:

*Article 1*  
***Amendments to Directive 98/70/EC***

Directive 98/70/EC is amended as follows:

1. Article 7a is amended as follows:

(a) the following paragraph 6 is inserted:

'6. Fuel suppliers shall by 31 March each year report 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.

(b) in paragraph 5, the introductory phrase of the first subparagraph is replaced by the following:

'5. The Commission shall be empowered to adopt delegated acts in accordance with Article 10a concerning in particular:'

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:

'The Commission shall be empowered to adopt delegated acts in accordance with Article 10a concerning the criteria and geographic ranges to determine which grassland shall be covered by point (c) of the first subparagraph.'

3. Article 7d is amended as follows:

(a) paragraphs 3 to ~~6~~<sup>7</sup> 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 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 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.

The Commission shall be empowered to adopt delegated acts pursuant to Article 10a concerning the correction of the estimated typical and default values in Parts B and E of Annex IV.'

'6. The Commission shall be empowered to adopt delegated acts pursuant to Article 10a concerning the adaptation to technical and scientific progress of Annex V, including by the revision of the proposed crop group indirect land-use change values; the introduction of new values at further levels of disaggregation; the inclusion of additional values should new biofuel feedstocks come to market as appropriate, review the categories of which biofuels are assigned zero indirect land-use change emissions; and the development of factors for feedstocks from non-food cellulosic and ligno-cellulosic materials.'

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

'7. The Commission shall be empowered to adopt delegated acts pursuant to Article 10a concerning the adaptation to technical and scientific progress of Annex IV, including by the addition of values for further biofuel production pathways for the same or for other raw materials and by modifying the methodology laid down in Part C.'

~~(c)~~ paragraph 8 is deleted.

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 version in force of the European standards EN 228 and EN 590 respectively.'

(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 amended as follows:

'3. The Commission shall be empowered to adopt delegated acts pursuant to Article 10a concerning the revision of the limit for the MMT content of fuel specified in paragraph 2. This revision shall be done on the basis of the results of the assessment

carried out using the test methodology referred to in paragraph 1. It may be reduced to zero where justified by the risk assessment. It cannot be increased unless justified by the risk assessment.'

6. In Article 10, paragraph 1 is replaced by the following:

'1. The Commission shall be empowered to adopt delegated acts pursuant to Article 10a concerning the adaptation to technical and scientific progress of the permitted analytical methods referred to in Annexes I, II and III. '

7. The following Article 10a is inserted:

*'Article 10a*  
**Exercise of the delegation**

1. The power to adopt delegated acts is conferred on the Commission subject to the conditions laid down in this Article.

2. The delegation of power referred to in Article 7a(5), the second subparagraph of Article 7b(3), Articles 7d(5), 7d(6), 7d(7), 8a(3) and 10(1) shall be conferred for an indeterminate period of time from the date of entry into force of this Directive.

3. The delegation of powers referred to in Articles 7a(5), the second subparagraph of Article 7b(3), Articles 7d(5), 7d(6), 7d(7), 8a(3) and 10(1) may be revoked at any time by the European Parliament or by the Council. A decision of revocation shall put an end to the delegation of the power specified in that decision. It shall take effect the day following the publication of the decision in the *Official Journal of the European Union* or at a later date specified therein. It shall not affect the validity of any delegated acts already in force.

4. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.

5. A delegated act adopted pursuant to Articles 7a(5), the second subparagraph of Article 7b(3), Articles 7d(5), 7d(6), 7d(7), 8a(3) and 10(1) shall enter into force only if no objection has been expressed either by the European Parliament or the Council within a period of 2 months of notification of that act to the European Parliament and the Council or if, before the expiry of that period, the European Parliament and the Council have both informed the Commission that they will not object. That period shall be extended by 2 months at the initiative of the European Parliament or the Council.'

8. Article 11(4) is deleted.

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. A new paragraph is inserted in 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 Directives<sup>13</sup>. Substances that have been intentionally modified or contaminated to meet that definition are not covered by this category.

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 second 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) the following point (d) 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 5% the estimated share at the end of 2011, of the final consumption of energy in transport in 2020.

(iii) the following point (e) is added:

The contribution made by:

(i) biofuels produced from feedstocks listed in Part A of Annex IX shall be considered to be four times their energy content;

(ii) biofuels produced from feedstocks listed in Part B of Annex IX shall be considered to be twice their energy content;

(iii) renewable liquid and gaseous fuels of non-biological origin shall be considered to be four times their energy content.

Member States shall ensure that no raw materials are intentionally modified to be covered by categories (i) to (iii).

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<sup>13</sup> OJ L 312 of 22 November 2008, p.3.

The list of feedstock set out in Annex IX may be adapted to scientific and technical progress, in order to ensure a correct implementation of the accounting rules set out in this Directive. The Commission shall be empowered to adopt delegated acts in accordance with Article 25 (b) concerning the list of feedstock set out in Annex IX'

3. In Article 5(5), the last sentence is replaced by the following:

"The Commission shall be empowered to adopt delegated acts in accordance with Article 25 (b) concerning the adaptation of the energy content of transport fuels as set out in Annex III to scientific and technical progress."

4. In Article 6 (1) the last sentence is deleted.

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 1<sup>st</sup> 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:

'The Commission shall be empowered to adopt delegated acts in accordance with Article 25 (b) to establish the criteria and geographic ranges to determine which grassland shall be covered by point (c) of the first subparagraph.'

6. In Article 18 (4), 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) or demonstrate that consignments of biofuel or bioliquid comply with the sustainability criteria set out in Article 17(3) to (5). 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).'

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) in paragraph 5, the last sentence is replaced by the following:

'To this end, the Commission shall be empowered to adopt delegated acts in accordance with Article 25 (b).'

(c) paragraph 6 is replaced by the following:

'The Commission shall be empowered to adopt delegated acts pursuant to Article 25(b) concerning the adaptation to technical and scientific progress of Annex VIII, including the revision of the proposed crop group indirect land-use change values; the introduction of new values at further levels of disaggregation (i.e. at a feedstock level); the inclusion of additional values should new biofuel feedstocks come to market as appropriate; and the development of factors for feedstocks from non-food cellulosic and ligno-cellulosic materials.'

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

'7. The Commission shall be empowered to adopt delegated acts pursuant to Article 25 (b) concerning the adaptation of Annex V to technical and scientific progress, including by the addition of values for further biofuel production pathways for the same or for other raw materials and by modifying the methodology laid down in part C'.

(e) paragraph 8 is deleted.

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.'



10. Article 25(4) is deleted.
11. The following Article 25b is inserted:

*'Article 25 b*  
**Exercise of the delegation**

1. The powers to adopt delegated acts are conferred on the Commission subject to the conditions laid down in this Article.
  2. The delegation of power referred to in Article 3(4)(d), Article 5(5), the third subparagraph of Article 17(3)(c), Articles 19(5), 19(6) and 19(7) shall be conferred on the Commission for an indeterminate period of time from [the date of entry into force of this Directive].
  3. The delegation of power referred to in Article 3(4)(d), Article 5(5), the third subparagraph of Article 17(3)(c), Articles 19 (5), 19 (6) and 19 (7) may be revoked at any time by the European Parliament or by the Council. A decision of revocation shall put an end to the delegation of the power specified in that decision. It shall take effect the day following the publication of the decision in the *Official Journal of the European Union* or at a later date specified therein. It shall not affect the validity of any delegated acts already in force.
  4. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.
  5. A delegated act adopted pursuant to Article 3(4)(d), Article 5(5), the third subparagraph of Article 17(3)(c), Articles 19 (5), 19 (6) and 19 (7) shall enter into force only if no objection has been expressed either by the European Parliament or the Council within a period of 2 months of notification of that act to the European Parliament and the Council or if, before the expiry of that period, the European Parliament and the Council have both informed the Commission that they will not object. That period shall be extended by 2 months at the initiative of the European Parliament or the Council.'
12. Annexes are amended as set out in Annex II to this Directive.

*Article 3*  
**Review**

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. The 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 to be applied from 1st January 2021 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.

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:

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

where

$e_l$  = annualised greenhouse gas emissions from carbon stock change due to land-use change (measured as mass (grams) of CO<sub>2</sub>-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).'

(b) points 8 and 9 are deleted.

(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 <sub>2</sub> eq/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 cropland<sup>14</sup>. 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.'

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<sup>14</sup> 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:

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

where

$e_l$  = annualised greenhouse gas emissions from carbon stock change due to land-use change (measured as mass (grams) of CO<sub>2</sub>-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).'

(b) points 8 and 9 are deleted.

(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 <sub>2</sub> eq/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 cropland<sup>15</sup>. 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.'

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(3) The following Annex IX is added:

**'Annex IX**

**Part A. Feedstocks whose contribution towards the target referred to in Article 3(4) shall be considered to be four times 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.

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<sup>15</sup> 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)

- (m) Cobs
- (n) Bark, branches, leaves, saw dust and cutter shavings.

**Part B. Feedstocks whose contribution towards the target referred to in 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 consumption<sup>16</sup>.
- (c) Non-food cellulosic material.
- (d) Ligno-cellulosic material except saw logs and veneer logs.

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<sup>16</sup> OJ L 273, 10.10.2002, p. 1