PD CEN/TS 16214-2:2014

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Sustainability criteria for the production of biofuels and bioliquids for energy applications — Principles, criteria, indicators and verifiers

Part 2: Conformity assessment including chain of custody and mass balance

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee PTI/20, Sustainability of bioenergy.

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Sustainability criteria for the production of biofuels and bioliquids for energy applications - Principles, criteria, indicators and verifiers - Part 2: Conformity assessment including chain of custody and mass balance

Critères de durabilité pour la production de biocarburants et de bioliquides pour des applications énergétiques - Principes, critères, indicateurs et vérificateurs - Partie 2: Évaluation de la conformité, incluant chaîne de surveillance et bilan massique

Nachhaltigkeitskriterien für die Herstellung von Biokraftstoffen und flüssigen Biobrennstoffen für Energieanwendungen - Grundsätze, Kriterien, Indikatoren und Prüfer - Teil 2: Konformitätsbewertung einschließlich überwachter Lieferkette und Massenbilanz

This Technical Specification (CEN/TS) was approved by CEN on 14 October 2013 for provisional application.

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Foreword

This document (CEN/TS 16214-2:2014) has been prepared by Technical Committee CEN/TC 383 “Sustainably produced biomass for energy applications”, the secretariat of which is held by NEN.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This standard comprises the following parts:

— EN 16214-1, Sustainability criteria for the production of biofuels and bioliquids for energy applications — Principles, criteria, indicators and verifiers — Part 1: Terminology;

— CEN/TS 16214-2, Sustainability criteria for the production of biofuels and bioliquids for energy applications — Principles, criteria, indicators and verifiers — Part 2: Conformity assessment including chain of custody and mass balance;

— EN 16214-3, Sustainability criteria for the production of biofuels and bioliquids for energy applications — Principles, criteria, indicators and verifiers — Part 3: Biodiversity and environmental aspects related to nature protection purposes;

— EN 16214-4, Sustainability criteria for the production of biofuels and bioliquids for energy applications — Principles, criteria, indicators and verifiers — Part 4: Calculation methods of the greenhouse gas emission balance using a life cycle analysis approach.

This Part 2 has originally been drafted as a full standard, but due to a lack of consensus in the end it is now be proposed as a CEN/TS. This would allow the European stakeholders and economic operators to use it in harmonizing their conformity assessment without the risk of contradicting national legislation and national sustainability schemes still under development at the moment of publication of this part.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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Introduction

Directive 2009/28/EC of the European Commission on the promotion of the use of energy from renewable sources, referred to as the Renewable Energy Directive (RED, [1]), incorporates an advanced binding sustainability scheme for biofuels and bioliquids for the European market. The RED contains binding sustainability criteria for greenhouse gas savings, land with high biodiversity value, land with high carbon stock and agro-environmental practices. Several articles in the RED present requirements to European Member States and to economic operators in Europe. Non-EU countries may have different requirements and criteria on, for instance, the GHG emission reduction set-off in the framework of their own national legislation.

The sustainability criteria for biofuels are also mandated in Directive 98/70/EC relating to the quality of petrol and diesel fuels [2], via the amending Directive 2009/30/EC (as regards the specification of petrol, diesel and gas-oil and introducing a mechanism to monitor and reduce greenhouse gas emissions, [3]). Directive 98/70/EC is referred to as the Fuels Quality Directive (FQD).

Created in 2008, CEN/TC 383 initiated the elaboration of a standardization programme on sustainability criteria for biomass for energy application. After being contacted by CEN, the European Commission in return in May 2009 formally wrote to request CEN to work on standard(s) on:

— the implementation of the mass balance method of custody chain management;

— the provisions of evidence that the production of raw material has not interfered with nature protection purpose;

— the auditing by member states and by voluntary schemes using them of the information submitted by economic operators.

Both the EC and CEN agreed that these may play a role in the implementation of the EU biofuel and bioliquid sustainability scheme. In the Communication from the Commission on the practical implementation of the EU biofuels and bioliquids sustainability scheme and on counting rules for biofuels (2010/C 160/02, [4]), awareness of the CEN work is indicated.

It is widely accepted that sustainability at large encompasses environmental, social and economic aspects. The European Directives make mandatory the compliance of several sustainability criteria for biofuels and bioliquids. This European Standard has been developed with the aim to assist EU Member States and economic operators with the implementation of EU biofuel and bioliquids sustainability requirements mandated by the European Directives. This European Standard is limited to certain aspects relevant for a sustainability assessment of biomass produced for energy applications. Therefore compliance with this standard or parts thereof alone does not substantiate claims of the biomass being produced sustainably.

This Technical Specification defines requirements for the verification of compliance with the sustainability criteria for biofuels and bioliquids, in accordance with legal requirements, such as in Article 18 of the RED [1]. In particular, this Technical Specification defines requirements for an adequate standard of independent auditing of the information submitted by economic operators (Clause 5), and the implementation by economic operators, of the mass balance method of chain of custody control (Clause 6).

This Technical Specification is a tool that can be used as part of voluntary schemes, national systems or bilateral agreements.

This Technical Specification defines requirements for a mass balance system which:

a) allows consignments of raw material or biofuel or bioliquids with differing sustainability characteristics to be mixed;

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b) requires information about the sustainability characteristics and sizes of the consignments referred to in a) to remain assigned to the mixture; and

c) provides for the sum of all consignments withdrawn from the mixture to be described as having the same sustainability characteristics, in the same quantities, as the sum of all consignments added to the mixture.

Each economic operator in the chain of custody is responsible for the data supplied in the product declarations submitted to the next economic operator as detailed in 5.1. The validity of these declarations is assessed through a conformity assessment procedures carried out as described in Clause 5 of this Technical Specification.

Where applicable, the parts of this standard contain at the end an annex that informs the user of the link between the requirements in the European Directive and the requirements in the CEN Standard.

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1 Scope

This Technical Specification defines requirements for provision by economic operators of the required evidence that biofuels and bioliquids fulfil the sustainability criteria as defined in the Renewable Energy Directive [1]. This Technical Specification is applicable to the initial biomass production or to the point of collection for waste and residue and to each stage within the chain of custody. It also defines requirements on conformity assessment bodies when checking compliance with the present standard.

NOTE An example of supply chain of biofuels and bioliquids to be covered by the chain of custody is given in Figure 1. This supply chain is a simple representation, actual supply chains are typically more complex.

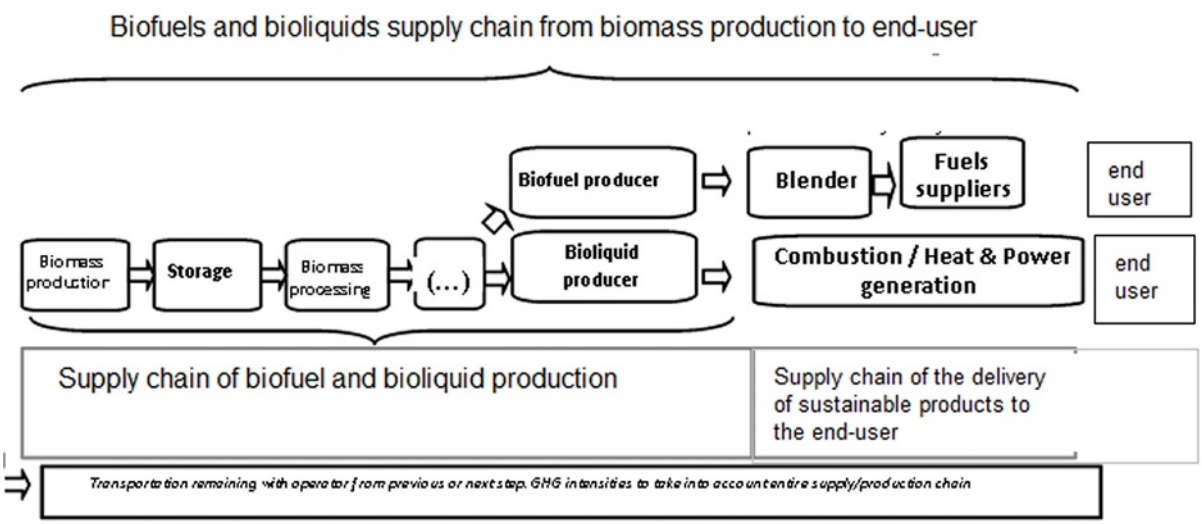

Figure 1 — Example of a supply chain of biofuels and bioliquids

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 16214-1:2012, *Sustainability criteria for the production of biofuels and bioliquids for energy applications – Principles, criteria, indicators and verifiers – Part 1: Terminology*

EN 16214-3, *Sustainability criteria for the production of biofuels and bioliquids for energy applications – Principles, criteria, indicators and verifiers – Part 3: Biodiversity and environmental aspects related to nature protection purposes*

EN 16214-4, *Sustainability criteria for the production of biofuels and bioliquids for energy applications – Principles, criteria, indicators and verifiers – Part 4: Calculation methods of the greenhouse gas emission balance using a life cycle analysis approach*

EN ISO/IEC 17000:2004, *Conformity assessment – Vocabulary and general principles (ISO/IEC 17000:2004)*

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EN ISO/IEC 17050-1, *Conformity assessment – Supplier's declaration of conformity – Part 1: General requirements (ISO/IEC 17050-1)*

EN ISO/IEC 17050-2, *Conformity assessment – Supplier's declaration of conformity – Part 2: Supporting documentation (ISO/IEC 17050-2)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO/IEC 17000:2004 and EN 16214-1:2012 apply.

4 Principle

This Technical Specification defines the requirements for the economic operators, based on the following principles:

1) Economic operators transfer the data of their consignments to the next operator through a product declaration, and need to meet the sustainability requirements as laid down in this document, and

2) Economic operators have the possibility to follow the conformity assessment procedures set out in this document (see 5.1.5).

5 Requirements for conformity assessment

5.1 Basic elements

5.1.1 In order to ensure that the sustainability criteria for biofuels and bioliquids are fulfilled different conformity assessment procedures as described in this clause shall be used.

5.1.2 Each economic operator shall issue a product declaration in accordance with 6.2 and on the basis of EN ISO/IEC 17050-1 and EN ISO/IEC 17050-2 for each consignment it delivers. The product declaration is the basis of further conformity assessment procedures.

5.1.3 The economic operator can be assessed whether it fulfils the requirements for economic operators described in 5.3.

5.1.4 When an economic operator takes delivery from an economic operator which has not been assessed according to 5.4, it shall take responsibility for the sustainability data of the delivering non-assessed operator within its own assessment scope, including verification of supplier. This may be extended to cover previous economic operators and up to the full chain of custody.

5.1.5 The economic operator shall be assessed.

NOTE This assessment may be done by a conformity assessment body in accordance with European and national legislation in this regard, the requirements of EC recognised voluntary schemes or with the requirements of a national system (see 5.5). The result of this assessment is a conformity assessment statement issued by the conformity assessment body.

5.2 Requirements for sustainability

5.2.1 The consignments taken into account for this Technical Specification shall not be made from raw material obtained from land with high biodiversity value, namely land that had one of the following statuses in or after January 2008, whether or not the land continues to have that status:

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a) primary forest and other wooded land, namely forest and other wooded land of native species, where there is no clearly visible indication of human activity and the ecological processes are not significantly disturbed;

b) areas designated:

   1) by law or by the relevant competent authority for nature protection purposes; or

   2) 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, unless evidence is provided that the production of that raw material did not interfere with those nature protection purposes;

c) highly biodiverse grassland that is:

   1) natural, namely grassland that would remain grassland in the absence of human intervention and which maintains the natural species composition and ecological characteristics and processes; or

   2) non-natural, namely grassland that would cease to be grassland in the absence of human intervention and which is species-rich and not degraded, unless evidence is provided that the harvesting of the raw material is necessary to preserve its grassland status.

5.2.2 The consignments taken into account for this Technical Specification shall not be made from raw material obtained from land with high carbon stock, namely land that had one of the following statuses in January 2008 and no longer has that status:

a) wetlands, namely land that is covered with or saturated by water permanently or for a significant part of the year;

b) continuously forested areas, namely land spanning more than one hectare with trees higher than five metres and a canopy cover of more than 30 %, or trees able to reach those thresholds *in situ*;

c) land spanning more than one hectare with trees higher than five metres and a canopy cover of between 10 % and 30 %, or trees able to reach those thresholds *in situ*, without providing that the carbon stock of the area before and after conversion is included in the GHG balance of the consignment,

The provisions of this paragraph shall not apply if, at the time the raw material was obtained, the land had the same status as it had in January 2008.

5.2.3 The consignments taken into account for this document shall not be made from raw material obtained from land that was peatland in January 2008, unless evidence is provided that the cultivation and harvesting of that raw material does not involve drainage of previously undrained soil.

5.2.4 The greenhouse gas emission saving from the use of biofuels and bioliquids taken into account for this Technical Specification shall be at least 35 %.

With effect from 1st January 2017, the greenhouse gas emission saving from the use of biofuels and bioliquids taken into account for this Technical Specification shall be at least 50 %. From 1st January 2018 that greenhouse gas emission saving shall be at least 60 % for biofuels and bioliquids produced in installations in which production started on or after 1st January 2017. In the case of biofuels and bioliquids produced by installations that were in operation on 23rd January 2008, the first subparagraph of 5.2.4 shall apply from 1st April 2013.

5.3 Requirements for economic operators

Requirements for economic operators consist of:

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a) Compliance with the land-related criteria:

   1) For raw materials for biofuel production (except for waste and residues from processing, but including residues from agriculture, aquaculture, fisheries and forestry) compliance with environmental criteria in 5.2.1 to 5.2.3. EN 16214-3 shall be used as guidance for verifying compliance as regards the exceptions from the land-use related requirements.

   2) For agricultural material cultivated within EU, compliance with requirements referred under the heading 'Environment' in part A and in point 9 of Annex II to Council regulation (EC) 73/2009 and with minimum requirements for good agricultural and environmental condition defined pursuant to Article 6(1) of that regulation [5].

b) Compliance with the mass balance requirements detailed in 6.1.

c) Compliance with the requirements for GHG emission savings according to 5.2.4. EN 16214-4 shall be used as guidance for calculating the GHG emission savings.

d) Compliance of the product declaration provided to the next economic operator in the chain of custody to 6.2.

e) Compliance of the management system to 6.3.

5.4 Competence of conformity assessment bodies

All conformity assessment bodies doing any conformity assessment work under this document shall first have demonstrated, and shall then continue to demonstrate, that they are competent to do that work.

One of the ways for conformity assessment bodies or individuals to demonstrate competence is to obtain accreditation from their national accreditation body or approval from the responsible authority from a EU Member State in accordance with such arrangements as are made by that government for implementation of the directive in that country.

5.5 Requirements for the conformity assessment process

5.5.1 General requirements

Conformity assessment shall be undertaken by an independent conformity assessment body.

The requirements that shall be included in the conformity assessment process are specified in 5.2.

Conformity assessments based on this document are open for all conformity assessment bodies fulfilling the requirements as stated in 5.4. The level of auditing recommended is a limited assurance level according to ISAE 3000 [6].

5.5.2 Conformity assessment process

5.5.2.1 General

The conformity assessment process shall consist of conducting special audits described in 5.5.2.2 and 5.5.2.3. For a checklist that may be used see Annex B.

Compliance with the sustainability requirements of this document may be demonstrated by conformity assessment processes other than those defined in 5.1. In this case, economic operators may use the following options to demonstrate compliance with:

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— Group auditing systems (see Annex A, Example 3) - in particular for farmers, producer organisations and cooperatives. Conformity assessment is done on a sample of units. Such an example is given in Annex C. Group auditing for compliance with the scheme's land related criteria is only acceptable when the areas concerned are near each other and have similar sustainability characteristics. Group auditing for the purpose of calculating greenhouse gas savings is only acceptable when the units have similar production systems and products.

— Conformity assessments of specific consignments as described in Annex D.

NOTE For ”small-holder” farmers, producer organisations and cooperatives relevant conformity assessment processes can be used, e.g. “group auditing” regarding 2.2.2 in communication 2010/C 160/01 [4].

5.5.2.2 Initial audit

This is the first procedure for assessment if the economic operator has not been assessed previously or has no valid conformity assessment statement according to this Technical Specification (initial assessment, before delivery of first consignment). The conformity assessment process will specifically check the conformity of the management system as described in 6.3 and whether the operator fulfils all the requirements set out in this Technical Specification, as described in 5.2.

5.5.2.3 Surveillance audit

This is the assessment procedures used during the surveillance visits and when the economic operator has been assessed previously and has a valid conformity assessment statement running according to this Technical Specification The conformity assessment process will verify whether the conditions for issuing the first conformity assessment statement are still in place. Furthermore, it will check the conformity of the data supplied product declarations according to this Technical Specification, the conformity of the operator according to 5.2. as well as all the data requirements as set out in 6.2. and the conformity of the mass balances with 6.1.

6 Requirements for chain of custody control - mass balance method

6.1 Basic elements for application of the mass balance method

The mass balance method shall balance the sustainability data, including GHG emission data, taken from the product declarations as defined in 6.2, of all consignments at the end of the inventory period. An example of such a mass balance is given in Annex E. The sustainability data from the proportion of compliant consignments that are not destined for use as biofuels and bioliquids shall be excluded from the mass balance calculation, to avoid allocation of sustainability data to only the bioenergy consignments portion.

When consignments with different (or no) sustainability characteristics are mixed, the separate sizes and sustainability characteristics of each consignment remain assigned to the mixture.

If a mixture is split up, any consignment taken out of it may be assigned any of the sets of sustainability characteristics (accompanied with sizes) as long as the combination of all consignments taken out of the mixture has the same sizes for each of the sets of sustainability characteristics that were in the mixture. It is necessary for appropriate arrangements to be in place to ensure that the balance is respected. The amount of compliant material going out of a mixture shall be equal to the amount of compliant material going into the mixture (provided that corresponding conversion values have been applied).

Non-compliant consignments shall not be used in calculating aggregated GHG emission saving data. When a facility operates simultaneously for production of the same material both for energy and non-energy application, the production for non-energy application is excluded from the GHG balance. When a production facility cannot distinguish the process between bio-based material for energy purpose and for other applications, the GHG impact of the production process will be deemed equal for all applications.

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