



EN 16214: A new European standard for sustainable biofuels

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CONCAWE has been actively involved in the development of a CEN standard on sustainably produced biomass for energy applications.
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Over the past decade, biofuels have become part of the road fuel supply, driven by legislation aimed at reducing the carbon footprint of road transport. The EU has led the way, first with an indicative target for biofuels blending in 2003, and subsequently with the Renewable Energy Directive (RED) in 2009, that mandates 10% renewable energy in road transport by 2020.

The debate about the benefits of biofuels, which was originally focused on their ability to reduce greenhouse gas (GHG) emissions, has progressively broadened to include concerns about the potential direct and indirect impact of their large-scale production on environmentally sensitive areas, biodiversity and societal costs. Some of these concerns have been recognised by European legislators, for example in the RED which limits where biofuels can be grown and still qualify for RED compliance blending targets.

European standards, developed by multi-stakeholder teams through the European Committee for Standardisation (CEN), have long been used to underpin EU-wide legislation with fit-for-purpose specifications and test methods. For road fuels, CEN specifications for gasoline (EN 228) and diesel fuel (EN 590) were developed more than 20 years ago and have been continuously updated to keep pace with changing emissions legislation and vehicle developments. Similar standards for bio-derived blending components have also been developed. These Europe-wide specifications are very important to ensure that the same procedures, test methods and limit values are used in all Member States, guaranteeing that consumers can drive their vehicles anywhere in Europe with confidence that the fuels they buy will be fully compatible and of consistently high quality.

In addition to its renewable energy mandates, the RED also includes guidance on the compliance requirements for bio-derived blending components. Although biofuel sustainability criteria and some calculation rules were included in the RED, a useable standard practice was not, and is clearly needed to provide biofuel producers and fuel suppliers with a pragmatic guide to the RED's biofuel sustainability expectations. For the same reasons described above for road fuel specifications, CEN is an appropriate forum for developing such a standard practice.

EN 16214: sustainably produced biomass for energy applications

In 2008, following a proposal from the Dutch National Standardisation Body, CEN created a new Technical Committee (CEN/TC383) to develop a standard practice on sustainability criteria for biomass. Although the scope of the original proposal was quite broad, the CEN stakeholders agreed early on that the standard should be fully compatible with the RED expectations and should not include any additional requirements. This was seen as essential in order to quickly develop a practical tool to help all economic operators comply with the RED. Accordingly, the standard practice being developed by CEN applies to biofuels and bioliquids and their production chains but it does not apply to solid biomass when used as a fuel.

CONCAWE has been actively involved from the very beginning as a liaison organisation and has contributed to the TC383 discussions by providing technical support to the working groups developing this standard.

What is the EN 16214 standard?

The new standard, titled 'Sustainably produced biomass for energy applications—Principles, criteria, indicators and verifiers for biofuels and bioliquids', has been developed in four separate but connected parts:

Part 1 on **Terminology** defines important terms used in the other three parts including those for biomass 'residues' and 'co-products'. These definitions are essential in order to complete the GHG calculations required by the RED.

Part 2 on **Conformity assessment including chain of custody and mass balance** provides a practical scheme to complete an assessment of a bio-product's conformity with the RED. This includes requirements for economic operators and also auditors who will be responsible for checking the compliance of these economic operators. This part of the standard also specifies a 'chain of custody' as required by the RED, to ensure that auditable information is collected at each step in the bio-product manufacturing and fuel blending process and is passed along to the next economic operator in the chain for compliance purposes.



Part 3 on *Biodiversity and environmental aspects* provides guidance on agricultural areas where limits on the cultivation and harvesting of biomass apply.

Part 4 on *Calculation methods of the GHG emission balance using a life cycle analysis* clarifies many aspects of the GHG balance methodology that is included in the RED. This part provides a detailed and practical guide to GHG calculations for use by all economic operators.

Parts 1 to 3 of EN 16214 went to public enquiry in early 2011. Part 4 is currently under public enquiry and is expected to be published in 2012. Parts 2 and 3 of this standard have now been endorsed by the European Commission. A similar status is expected for Part 4 as soon as the CEN approval process has been completed.

Benefits and applicability of the EN 16214 standard

The uniform and consistent application of the RED legislation in all 27 European countries is essential to provide a level playing field for all economic operators.

The RED provides a comprehensive legal framework for the assessment of biofuels. This is, however, a complex piece of legislation involving many requirements for which there is limited practical experience. There are also many areas where interpretations can vary and where guidance to economic operators is highly desirable.

By clarifying the more complex aspects of the RED and by providing detailed guidance, EN 16214 is expected to play an important role in ensuring that the RED's expectations are successfully and consistently implemented across EU Member States. This pan-European standard practice will also make it more likely that RED expectations can be met in a cost-effective way.

While this standard was being developed, a number of existing and new certification schemes for bio-products were submitted to the European Commission for recognition as 'voluntary schemes', conforming to the RED requirements. At least seven such schemes have been accepted by the EC as covering all or at least some aspects of the RED requirements, and many

more schemes are being reviewed. These 'voluntary schemes', however, vary considerably in scope and have been developed from quite diverse starting points.

EN 16214, on the other hand, is expected to provide all of the elements that are needed to set up and audit a certification scheme for sustainably-produced biofuels and bioliquids. The four parts of the EN 16214 standard address terminology, chain of custody, biodiversity and GHG calculations. This means that the voluntary schemes that have already been recognised by the European Commission can benchmark themselves against EN 16214—and they are encouraged to do so!—in order to demonstrate that they are in full compliance with a pan-European standard practice.

A complementary international standard?

Of course, extending a European standard's approach to other parts of the world would help to ensure that common practices are increasingly used in the future for importing and exporting bio-products. Such an approach would encourage trade in bio-products that are properly certified as meeting accepted sustainability criteria and have been audited for the protection of economic operators in the chain of custody.

Through the encouragement of Brazil and Germany, the International Standards Organisation (ISO) endorsed a new work item in 2008 on 'sustainability criteria for bioenergy' and formed a new ISO Technical Committee (TC248). Work is ongoing within this committee, with a view to publishing a new ISO standard in 2014.

The objectives and scope of the ISO standard are, however, quite different from those of EN 16214. While the EN standard does not cover aspects beyond the RED, the ISO standard is expected to be more generic, setting out the ground rules for developing and applying sustainability criteria for bioenergy.

Nonetheless, complementary CEN and ISO standards can be expected to go a long way to satisfying immediate RED and economic operator expectations while encouraging future trade in sustainably produced bio-products.

