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**COMMISSION STAFF WORKING DOCUMENT**

**Report on the operation of the mass balance verification method for the biofuels and bioliquids sustainability scheme in accordance with Article 18(2) of Directive 2009/28/EC**

**Accompanying document to the**

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN  
PARLIAMENT AND THE COUNCIL**

**Renewable Energy: Progressing towards the 2020 target**

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## 1. INTRODUCTION

The EU has introduced the most comprehensive and advanced binding sustainability scheme of its kind anywhere in the world. The Renewable Energy Directive<sup>1</sup> sets out sustainability criteria for biofuels and bioliquids. For biofuels, corresponding criteria are set out in the Fuel Quality Directive<sup>2</sup>. They apply to biofuels and bioliquids produced in the EU and to imported biofuels and bioliquids. The sustainability scheme became operational on 5 December 2010, the deadline for Member States to transpose the Renewable Energy Directive.

The sustainability criteria relate to greenhouse gas savings, land with high biodiversity value and land with high carbon stock. In relation to the criteria there are three elements which Member States need to ask from economic operators: these are that they submit information on the compliance with the criteria<sup>3</sup>, arrange for an adequate standard of independent auditing<sup>4</sup>, and use a mass balance system<sup>5</sup>. The mass balance system is a key element of the sustainability scheme, providing the method by which a connection is made between information or claims concerning raw materials or intermediate products and claims concerning final products. The Directives require the Commission to report by December 2010 on the operation of this method. This is the report complying with that obligation<sup>6</sup>.

## 2. THE MASS BALANCE SYSTEM

Typically, biofuels/bioliquids have a production chain with many links, from field to distribution of the fuel. Feedstock is often transformed into an intermediate product and then into a final product. It is in relation to the final product that compliance with the requirements of the Directives need to be shown. To show this, claims will need to be made about the raw material and/or intermediate products used.

The method by which a connection is made between information or claims concerning raw materials or intermediate products and claims concerning final products is known as the chain of custody. The chain of custody would normally include all the stages from the feedstock production up until the release of the fuels for consumption.

The method laid down in the Directives for the chain of custody is the mass balance method. This requires a physical link between all stages (as opposed to 'book and claim' systems where after feedstock production the sustainability information<sup>7</sup> and the raw material are traded separately from each other). However, the mass balance system does allow sustainable and other<sup>8</sup> raw materials to be mixed (as opposed to physical segregation systems, also called 'track and trace' or 'identity preservation'), as long as the combination of all consignments

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<sup>1</sup> Directive 2009/28/EC on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, OJ L 140/16 of 5.6.2009

<sup>2</sup> Directive 98/70/EC as amended by Directive 2009/30/EC

<sup>3</sup> Article 18(3) of the Renewable Energy Directive; Article 7c(3) of the Fuel Quality Directive.

<sup>4</sup> Article 18(3)

<sup>5</sup> Article 18(1)

<sup>6</sup> Article 18(2)

<sup>7</sup> E.g. in the form of a certificate

<sup>8</sup> Not complying with the sustainability criteria or lacking the evidence of compliance.

taken out of the mixture has the same sizes for each of the sets of sustainability characteristics that were in the mixture.

## **2.1. The operation of the mass balance system**

Much work has been done by Member States, industry and NGOs in order to implement the sustainability scheme. The Commission has given guidance on the mass balance system in its Communication on voluntary schemes and default values in the EU biofuels and bioliquids sustainability scheme<sup>9</sup>. However, as the sustainability scheme became operational on 5 December 2010, little information is yet available on its operation in the market.

## **2.2. Assessment of verification methods**

The Directives require the Commission to report on the operation of the mass balance verification method and on the potential for allowing for other verification methods in relation to some or all types of raw material, biofuel or bioliquids. The factors in the assessment concern the need to maintain the integrity and effectiveness of the verification system (i.e. the ability of the regime to deliver greenhouse gas and biodiversity impacts) while avoiding the imposition of an unreasonable burden on industry.<sup>10</sup>

The Directives require in particular the consideration of verification methods in which information about sustainability characteristics need not remain physically assigned to particular consignments or mixtures. Such systems are also known as 'book and claim' systems where, after feedstock production, the sustainability information and the raw material are traded separately from each other.

The Commission assessed the book and claim system and the mass balance system in 2008.<sup>11</sup> It concluded that the book and claim method has the disadvantage of lower effectiveness and that the mass balance method is effective though with somewhat higher costs for economic operators than the book and claim method. At this point in time there are no essential new elements to add to that assessment.

In terms of integrity and effectiveness, if sustainability criteria using book and claim would cover all or most of the production of a particular agricultural commodity – and thus not only the relatively small volume used for biofuels and bioliquids – the integrity and effectiveness would be high. Such voluntary sustainability criteria applying to agricultural commodities more generally, i.e. not only for the part used for biofuels and bioliquids, are progressing, in part spurred by the Directives. However, they are either only just at the point of becoming operational<sup>12</sup> or their market coverage is growing but not yet sufficiently large<sup>13</sup> to dispel the concerns about the effectiveness of the book and claim system.

In terms of administrative burden, little additional information is as yet available from the operation of the mass balance system.

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<sup>9</sup> OJ C 160, 19.6.2010, p. 1.

<sup>10</sup> Article 18(2)

<sup>11</sup> SEC(2008) 85 Vol. II, p. 148.

<sup>12</sup> e.g. the Better Sugarcane Initiative (BSI) and the Round Table on Responsible Soy (RTRS).

<sup>13</sup> e.g. the Round Table on Sustainable Palm Oil (RSPO), which covered a little over 3.4 million tons of palm oil in November 2010 compared to world production of over 45 million tons.

### **3. CONCLUSIONS**

The mass balance system is a stringent system. It is clear that it requires farmers and industries to adapt their practices. In terms of integrity and effectiveness, there is at present no potential to allow for verification methods for the biofuels and bioliquids sustainability scheme that are less stringent than the mass balance system laid down in the Directives. In line with the Directives the Commission will assess again by 2012 whether there is such potential.