



Biomass Sustainability - the EC's Verdict

June 2010

Introduction

The Renewable Energy Directive (Directive 2009/28/EC – the “**Directive**”) published in June 2009 contained sustainability criteria for the use of (i) biofuels for transport; and (ii) bioliquids for heat and electricity generation and cooling, but did not address the use of solid and gaseous biomass sources (together “**Biomass**”). This issue has been considered separately by the European Commission (the “EC”), which has reported its findings in the Biomass Sustainability Report published in February 2010 (the “**Report**”). This note summarises the key proposals of the Report, a full copy of which can be viewed at:

http://ec.europa.eu/energy/renewables/transparency_platform/doc/2010_report/com_2010_0011_3_report.pdf

Aim of the Report

There is currently an absence of EU regulation regarding Biomass sustainability, which the EC recognises may risk individual Member States developing varied and potentially incompatible sustainability criteria at a national level. Such incompatibility could, in turn, create barriers to Biomass trade between Member States, which may limit growth of the Biomass sector and significantly affect its contribution towards the 2020 target of sourcing 20% of the EU's energy needs from renewable sources.

With this in mind, the Report aims to identify recommendations for Member States to follow when developing and implementing biomass sustainability criteria to minimise the risk of policy incompatibility. Each of these recommendations is reviewed in further detail below, however, the following points should be noted:

- the Report suggests that its recommendations and any resulting sustainability criteria should not be applied to small Biomass energy generators (being <1MW thermal or 1MW electricity capacity) as this would impose an undue administrative burden. This does not negate, however, from the need to encourage small generators to maximise performance and energy efficiency; and
- the EC is not currently intending to impose binding Biomass sustainability criteria on Member States, largely due to the wide variety of Biomass feedstock making it difficult to propose a harmonised scheme at this stage.

The Report's Recommendations

The Report makes five main recommendations regarding Biomass sustainability, each of which is reviewed in turn below.

Recommendation One - *a general prohibition on the use of Biomass from land converted from forest, other high carbon stock areas and highly biodiverse areas.*

Biomass can originate from a wide range of sources including agricultural crops and residues, forestry, wood-processing industries and organic waste. Consequently, the Report recognises that there is a need to balance the encouragement of Biomass generation with the protection of ecosystem biodiversity and carbon stocks in the soil. This need is less acute with respect to Biomass sourced from European forestry as individual EU Member States have implemented comprehensive forest management governance structures, which are, in turn, linked to the (i) Common Agricultural Policy; (ii) EU Forest Strategy; and (iii) Ministerial Conference for the Protection of Forests in Europe. Such governance structures are, however, largely absent in developing countries, which are exporting increasing amounts of Biomass to the EU, thus heightening concerns that the unsustainable production of Biomass is being encouraged.

The Report therefore recommends that a general prohibition is placed on the use of Biomass from land converted from forest, other high carbon stocks and highly biodiverse areas. This prohibition would encourage developing countries to implement suitable certification schemes which would allow Biomass exporters to demonstrate their compliance with the national requirements of the importing Member State and, thus, encourage sustainable forest management.

Recommendation Two – *implementation of a common greenhouse gas calculation methodology to ensure that minimum greenhouse gas savings from Biomass are at least 35% (rising to 50% in 2017 and 60% in 2018 for new installations).*

The reduced level of greenhouse gas (GHG) emissions from the energy conversion of Biomass is widely accepted as a key benefit of its use. However, the Report recognises that there is currently an inconsistency with respect to the methodology applied to calculate the GHG performance of different forms of Biomass, which hinders accurate comparison to fossil fuel alternatives. The Report therefore seeks to rectify this by

suggesting a suitable methodology at Annex 1. This methodology is based, in part, on the Life Cycle Assessment methodology for bioliquids and biofuels outlined in the Directive, and gives regard to the conversion of the Biomass to electricity, heating or cooling (thus considering GHG emissions along the energy chain, from source to final energy). Furthermore, it allows for the allocation of appropriate fractions of the GHG emissions to heat and electricity from cogeneration.

Recommendation Three - *favouring of high energy conversion efficiencies*

The Report recognises that energy conversion efficiencies of current Biomass installations vary widely as size, feedstock, technology and end use can each have a significant impact on the conversion process. The Report therefore recommends that EU Member States should seek to maximise the efficiency of energy consumption by introducing policies which incentivise the use of Biomass installations with high energy conversion efficiencies. Such policies should, to the extent possible, be common to Biomass and fossil fuels to prevent the creation of any incentive to use fossil fuels as a means to avoid any obligation to fulfil Biomass efficiency standards.

The Report also proposes that the EC will, during the course of 2010, publish minimum efficiency and environmental requirements relating to air quality for small-scale solid-fuel boilers.

Recommendation Three - *monitoring the origin of biomass*

It is widely recognised that Biomass trade in the EU plays an important role in the development of the bio-energy sector. However, current trade statistics have large knowledge gaps which hinder the EC's ability to monitor the extent of Biomass use and any resulting effects on the areas of Biomass origin.

To address this issue, the Report recommends that Member States retain a record of the amount and origin of primary biomass used in electricity, heating and cooling installations of 1MW or above and pass any information collected to the EC to enable them to take it into account when developing future policy.

Recommendation Four - *non-application of criteria to waste*

The Report suggests that Member States do not apply sustainability criteria to waste, which must already fulfil various rules and regulations imposed by national and European legislation. The introduction of another set of criteria would therefore add an unnecessary layer of complexity, which would risk disincentivising participation and the use of waste as an alternative fuel source.

Next Steps For Member States

The Report encourages Member States to ensure that any national Biomass sustainability policy integrates the above recommendations to allow for (i) the promotion of sustainable Biomass production and use; and (ii) the development of a well functioning internal market.

Each Member State is required under the Directive to submit a national renewable action plan by June 2010, which the EC is intending to use as a key tool for identifying the extent to which Member States are intending to exploit Biomass as a renewable fuel source. The EC will consider these plans and any development of

national Biomass sustainability policies to determine whether binding measures need to be introduced at an EU level to ensure that Biomass sustainability is assured.

Conclusion

The Report has faced criticism from various environmental groups which feel that the introduction of non-binding recommendations does not provide sufficient incentive to promote and ensure Biomass sustainability. Individual EU Member States are therefore facing pressure to reject the recommendations and, instead, insist upon the introduction of mandatory standards.

With respect to the UK, the Renewable Energy Strategy published by DECC in 2009 set out certain features which they believe should be included in any sustainability criteria to ensure that bio-energy used in heat production, electricity and transport is sustainably produced. Furthermore, various provisions regarding Biomass sustainability have been included in the Renewables Obligation Order (and, by reference, the Renewable Heat Incentive), which require electricity generators to report annually to Ofgem on the form of Biomass which they are using, and to include details regarding its country of origin, any environmental standards met and land use changes.

Notwithstanding this, many commentators feel that this approach lacks both merit and strength and, therefore, the new coalition Government is likely to face increasing pressure to clarify its Biomass sustainability standards and develop a policy which is rigorous and coherent in its approach.

Burges Salmon's Renewable Energy Team

Burges Salmon has one of the most respected Renewable Energy teams in the UK and was recognised for its work in the area in 2009 when it was awarded "Energy and Infrastructure Team of the Year" at The Lawyer Awards 2009. The team advise on all types of technology including anaerobic digestion, solar, geothermal, wind, biomass and hydro. Our work has included structuring and documenting small community projects, public authority projects, direct on site generation and advising on a new generation of direct power purchase arrangements which are becoming increasingly popular.

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