

Consultation on biomass electricity and combined heat & power plants – ensuring sustainability and affordability

Part B: Value-for-Money & Affordability - closing 19th October

Please use the table below as a template to respond to the consultation. It will help us to record and take account of your views.

Also, please provide evidence for your answers where possible.

PERSONAL DETAILS	
Respondent Name: Emilia Hanna	
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Would you like this response to remain confidential? No	
If yes, please state your reasons: N/A	
Cap on dedicated biomass	
Q15.	<p>Do you agree that the proportion of their renewables obligation that suppliers can meet using new dedicated biomass generation should be capped at 19% in 2013/14, 17% in 2014/15, 14% in 2015/16 and 12% in 2016/17 (equivalent to approximately 1GW of new dedicated biomass generating capacity). Please provide evidence to support your arguments.</p> <p>Disagree: We believe that the cap should be set at zero.</p> <p>Comments and Evidence:</p> <p>To allow for approximately 1 GW of new dedicated biomass generating capacity would require far too much timber to be burned in UK power stations each year: approximately 10 million green tonnes per year. This is equivalent to the UK's current entire wood harvest, most of which is already accounted for by existing users. Targeted increases are to bring an extra 2 million tonnes of wood to market per year (Forestry Commission</p>

England, 'A Woodfuel Strategy for England') – so, even if this target were to be achieved, the UK would still have to import the vast majority of what would be burned under the cap (and ignoring what may be burned through co-firing and conversion installations).

Relying on imported biomass for dedicated new builds and subsidising it under the banner of 'renewable energy' will harm the fight against climate change, ecosystems, human rights, and communities in the UK for, inter alia, the following reasons:

Biomass increases rather than reduces greenhouse gas emissions:

Biomass is currently treated as carbon neutral, which overlooks sound scientific opinion. The European Environment Agency Scientific Committee last year warned the assumption that biomass is carbon neutral is a 'serious accounting error' and that *using biomass can result in increased carbon emissions and thereby accelerate global warming when legislation encourages its use irrespective of the source*, and recommended that governments must rectify this situation as soon as possible. (European Environment Agency Scientific Committee, 'Opinion of the EEA Scientific Committee on Greenhouse Gas Accounting in Relation to Bioenergy' (September 2011)). Government policy must reflect leading scientific opinion – but currently, the carbon debt is ignored and does not propose to be rectified through the introduction of the proposed sustainability criteria.

Biomass from imported sources is leading to the conversion of natural forests to industrial tree plantations:

Most of the biomass imported by the EU currently comes from Canada, the southern US, Eastern Europe and Russia, however both the European biomass industry and the European Parliament's Directorate General for External Policies of the Union expect that future growth in imports will primarily come from South America (especially Brazil), west and central Africa (Impact of EU Bioenergy Policies on Developing Countries, European Parliament Directorate- General for External Affairs, 2012). Countries in South America, central and west Africa, Mozambique and Indonesia are regarded as having the greatest potential for increased 'wood harvesting' for biomass.

This means that most EU imports are coming from, and will in future come from regions with high rates of forest destruction and degradation. According to a scientific study published in 2010, Brazil lost the largest total area of forest between 2000 and 2005, closely followed by Canada. However the US, followed by Canada, Brazil, Indonesia and Russia lost

the greatest percentage of forests during that period (Hansen, Matthew C.; Stehman, Stephen V.; and Potapov, Peter V. Quantification of global gross forest cover loss)

While there is much talk about using 'residues', traditional residues from sawmills, pulp mills, etc tend to be fully utilised in Europe and probably elsewhere. Additional 'residues' are generally ones that come from more harmful logging methods, such as stump, brash and deadwood removal, with serious consequences for soil fertility, soil carbon, biodiversity and future tree growth ('Woody Biomass for Energy: NGO Concerns and Recommendations' (2011)).

Moreover, across Europe and North America, bioenergy is increasingly reliant on burning wood from whole trees cut for this purpose. This results in more intensive and destructive logging, and in further expansion of monoculture tree plantations at the expense of forests and other biodiverse ecosystems, for example in the southern US.

According to Greenpeace Canada: "New biomass policies in provinces like Québec and Ontario encourage whole-tree harvesting (WTH), a technique that has been criticized by the scientific community for decades because of the ecological damage it causes through impacts on nutrient cycling. Because it is cheaper, faster and more convenient to cut an entire tree, remove its branches at the roadside, use the stem for lumber and the rest (top, branches) for bioenergy, the biomass boom encourages this destructive technique." It states, "Logging operations are moving rapidly northward, and the last remaining intact forests are vanishing at an increasing rate. The biomass boom, driven by dangerously lenient extraction policies and subsidies, will increase pressure on these forests". (Greenpeace Canada, 'Fuelling a Biomess' (2011)).

Reliance on certification schemes will not protect against such devastating environmental practices. Our recent report, 'Sustainable Biomass: A Modern Myth' (available at http://www.biofuelwatch.org.uk/2012/biomass_myth_report/) reveals that in several instances, natural forests have been converted into industrial plantations, with resulting loss in biodiversity, soil erosion, water contamination, etc, and received FSC or PEFC certificates (see in particular Chapters 4 and 6).

Human rights violations are occurring through harvesting biomass, and these violations are ignored:

There have been several well-documented instances of communities being forced off of their land in developing countries as companies take over

	<p>their land to establish industrial tree plantations for export markets. Some of these are documented in our recent report, ‘Sustainable Biomass: A Modern Myth’ (available at http://www.biofuelwatch.org.uk/2012/biomass_myth_report/). There is no guarantee that biomass entering UK markets will not be implicated with the violation of human rights and land grabbing in other countries; nor is such a guarantee proposed under the mandatory sustainability criteria.</p> <p>Conclusion</p> <p>As such, the cap legitimises the inefficient use of what is a finite resource, accelerating climate change, ecosystems destruction and the conversion of natural forests to industrial tree plantations, human rights violations overseas, and increased pollution here in the UK – problems which cannot be dealt with through the mandatory sustainability criteria (as we will expand on in our answer to Part A of this consultation).</p> <p>That this should be endorsed in the name of “renewable energy” and at the expense of bill payers’ money is all the more worrying. Instead, DECC must stop subsidising all forms of bioenergy and focus instead on energy solutions which deliver genuine carbon savings, which respect human rights and environmental norms, such as appropriately sited wind, solar, and tidal, and must also focus on promoting solutions which can achieve a reduction in our energy consumption.</p>
<p>Q16.</p>	<p>Do you agree that new dedicated biomass with good quality combined heat and power (CHP) should be outside the cap?</p> <p>Disagree: we believe the cap should be set at zero, and that this should apply to all forms of bioenergy combustion including those classified as Good Quality CHP.</p> <p>This is because “Good Quality CHP” as currently defined allows for power stations, <i>which are still extremely inefficient</i>, to receive extra subsidies. The ROC uplift for CHP power stations thus again legitimises the inefficient use of what is a finite resource, accelerating climate change, ecosystems destruction and the conversion of natural forests to industrial tree plantations, human rights violations overseas, and increased pollution here in the UK.</p> <p>Comments and Evidence:</p> <p>“Good Quality CHP” is a complete misnomer: power stations need only achieve 35% efficiency levels to qualify for the higher level of subsidies available to biomass which classifies as “Good Quality” CHP.</p> <p>For power stations to achieve this, they need therefore only supply a very</p>

nominal amount of heat: for example, the Steven's Croft power station at Lockerbie is eligible for the CHP ROC uplift and only generates 6MW heat (in contrast to 44MWe).

This definition therefore rewards power stations which are still extremely inefficient, and enables them to exempt themselves from the dedicated biomass cap. Effectively, an exemption from the cap for "Good Quality CHP" power stations combined with their extra subsidisation serves as a loophole.

Therefore, it encourages the burning of biomass – a finite and limited resource – at an unprecedented, inefficient, and wasteful scale – and the *scale* of the new demand for biomass lies at the crux of the climate change, biodiversity and human rights problems associated with burning biomass. As we will explain in answer to part A of this consultation, sustainability standards are not fit for their purpose to protect against these problems, because the real issue is that of sustainability of *scale*.

The 35% efficiency level required by GN 44 also falls far foul of the EU recommended standards. Article 12(2) of the Cogeneration Directive states in unequivocal terms:

*"Member States may calculate primary energy savings from a production of heat and electricity and mechanical energy according to Annex III(c), without using Annex II to exclude the non-cogenerated heat and electricity parts of the same process. Such a production can be regarded as high-efficiency cogeneration provided it fulfils the efficiency criteria in Annex III(a) and, **for cogeneration units with an electrical capacity larger than 25 MW, the overall efficiency is above 70 %.**"*

Article 13(6) Renewable Energy Directive states, in relevant part, *"In the case of biomass, Member States shall promote conversion technologies that achieve a conversion efficiency of at least 85 % for residential and commercial applications and **at least 70 % for industrial applications.**"*

Guidance Note 44 states,

"GN 44.9 Large CHP plants (installed generation capacity greater than 25MWe) must comply with the overall efficiency criteria required by the EC Cogeneration Directive (above 70% on Net Calorific Value). The QI formulae have been modified within the CHPQA methodology in order to ensure that Schemes who meet the QI threshold comply with this requirement (see CHPQA Standard, Issue 2, November 2007). This overall efficiency criteria can

be met by large CHP Schemes using conventional fuels.

GN 44.10 However, it has been determined that large Energy from Waste (EfW) and biomass-fuelled CHP plants over 25MWe would be unable to comply with this criteria, so would not fully qualify for ROCs regardless of the level of Good Quality output they can attain. To overcome this we have developed separate criteria in order for EfW and biomass CHP Schemes over 25MWe to be fully eligible for ROCs, as set out in this guidance.

Therefore, in order to qualify for allowances for ROCs, EfW and biomass CHP Schemes over 25MWe must demonstrate at least
35% overall efficiency (gross calorific value), and
10% Primary Energy Savings (PES) when compared with the alternative for the separate generation of electricity and heat.

This appears to be a flagrant, and by no means justified, disregard of the environmental imperatives contained in EU legislation.

Q17. What are your views on the notification process set out at paragraphs 12.25-12.28? Are there other notification or pre-accreditation options you think would work? Please set these out as fully as possible in your reply.

No response

Standard Co-firing

Q18. Do you agree that support levels for standard co-firing and co-firing of regular bioliquids should be reduced to 0.3 ROCs/MWh in 2013/14 and 2014/15, and that support levels for standard co-firing with CHP should be reduced to 0.8 ROCs in 2013/14 and 2014/15?

If not what levels would you recommend and why? Please provide evidence of the impacts of your proposal.

Disagree

Comments and Evidence:

We believe that there must be no ROCs for co-firing bioliquids or biomass with fossil fuels. This is a highly inefficient use of a scarce resource with the same impacts which have been identified in Q 15, which, furthermore, channels subsidies into high- carbon and polluting coal and oil combustion.

Energy Crops

Q19. Do you agree with our preferred option for the removal of the energy crop uplift for standard co-firing?

No response

	<p>Comments and Evidence: This is a technical question about co-firing which we would not answer since it is based on the assumption that co-firing should be subsidised.</p>
<p>Q20.</p>	<p>Do you agree that where stations are able to benefit from the transitional arrangements, the energy crop uplift for standard co-firing should be 0.5 ROCs?</p> <p>No response</p> <p>Comments and Evidence: Again, this is a technical question about co-firing which we would not answer since it is based on the assumption that co-firing should be subsidised.</p>

Please submit your response to biomass@decc.gsi.gov.uk by **19th October.**