

Dear Mr Rafferty,

**Re: Renewables Obligation Banding Review Supplementary Consultation – Biofuelwatch Response to Part A**

In our consultation response we wish to focus entirely on proposed sustainability standards for biomass and not on those proposed for biogas.

***Biofuelwatch believes that sustainability standards cannot be an effective tool for preventing deforestation, human rights abuses or increased carbon emissions as well as other serious negative impacts from large-scale and especially from import-reliant bioenergy.*** Most crucially, standards cannot address the 'sustainability of demand', i.e. the fact that the most serious impacts are driven by demand and related price developments, not by individual companies' sourcing decisions. ***We therefore consider that meeting the aims of ensuring the sustainability of biomass used for energy in Scotland can only be met if the loopholes contained in the Scottish Government's ROCs proposals published in September 2012 are closed, i.e. if ROCs are withdrawn from biomass co-firing and coal-to-biomass conversions and from all power stations above 10 MW, including those which currently qualify at 'good quality CHP' (i.e. ones with 35% efficiency and over).***

Evidence related in particular to EU biofuel policies shows that the most serious impacts tend to be indirect impacts, caused by the scale of the fast-growing demand for biofuels and by displacement of other agricultural activities or crop uses. This is confirmed by a large number of studies and reports about biofuels and indirect land use change, many of which are listed here: [www.transportenvironment.org/what-we-do/what-science-says-0](http://www.transportenvironment.org/what-we-do/what-science-says-0). Although the studies listed on that page relate to liquid biofuels (given that the development of global biomass markets lags several years behind that of a global biofuel market), the indirect impacts of solid biomass are very similar. They involve rapidly growing competition for wood with existing industries and markets such as the paper and wood panel industries and well as likely competition for land for new tree or other 'energy crop' plantations. A European Parliament report on bioenergy in the EU confirms this:

*"It is also important to note that due to "leakage effects" in markets through a) the competition between woody bioenergy and other uses for woody biomass and b) competition between market demand for woody biomass in the EU and other regions/countries, the range of indirect impacts due to biomass plantations is even greater than the direct impacts of woody biomass production for export to the EU's bioenergy sector.*"<sup>1</sup>

In this context, we would like to point out that the UK Bioenergy Strategy is largely based on the assumption that between 100 and 500 million hectares of land worldwide will be converted to new 'energy crops' by 2030, i.e. of land-conversion on a vast scale.<sup>2</sup> Nobody has proposed any credible means of preventing such land-conversion from

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<sup>1</sup> Impact of EU bioenergy policies on developing countries, Directorate General for External Policies of the European Union, EU Parliament, March 2012,

[www.ecologic.eu/files/attachments/Publications/2012/2610\\_21\\_bioenergy\\_lot\\_21.pdf](http://www.ecologic.eu/files/attachments/Publications/2012/2610_21_bioenergy_lot_21.pdf)

<sup>2</sup> Paragraph 3.18, UK Bioenergy Strategy, [www.decc.gov.uk/assets/decc/11/meeting-energy-demand/bio-energy/5142-bioenergy-strategy-.pdf](http://www.decc.gov.uk/assets/decc/11/meeting-energy-demand/bio-energy/5142-bioenergy-strategy-.pdf)

resulting in further destruction of biodiverse as well as carbon-rich ecosystems, in further land-grabbing leading to increased hunger and human rights abuses, water and soil depletion and other serious effects.

The excessively high existing demand for wood and wood products, including paper, in regions such as the EU is already one of the main underlying causes of global forest loss<sup>3</sup>. The emerging global biomass market most closely resembles the existing and expanding paper market. Nobody has as yet devised any way of preventing even the worst direct impacts from our excessive use of paper, such as the almost total destruction of Sumatra's lowland rainforests as well as forest destruction and large-scale evictions for monoculture tree plantations in many other parts of the world, including Russia, Canada, Tasmania and Brazil – in many cases the same regions where wood pellet production for export to the EU is now being promoted or has already commenced. Although the UK's overall wood-based biomass use for energy is still only a small fraction of what is forecast under the UK Bioenergy Strategy, the UK is already reliant on net imports for 80% of all the wood it uses<sup>4</sup>. Additional demand from larger biomass power stations, biomass co-firing or the conversion of coal power stations units to biomass thus depends on will further increase our dependence on wood imports and, at least indirectly, the serious negative impacts in terms of land-conversion to plantations, more destructive logging techniques and intensities and logging of hitherto unlogged natural forests.

Below we point out some of the specific problems with the biomass sustainability standards proposed.

### **Flawed carbon accounting:**

The greenhouse gas accounting methodology proposed by DECC contradicts key science-based principles laid out in the UK Bioenergy Strategy. According to Principle 1 of the Bioenergy Strategy<sup>5</sup>:

*"Policies that support bioenergy should deliver genuine carbon reductions that help meet UK carbon emissions objectives to 2050 and beyond. This assessment should look – to the best degree possible – at carbon impacts for the whole system, including indirect impacts such as ILUC, where appropriate, and any changes to carbon stores."*

The policy also states:

*"A large proportion of biomass used for bioenergy also has multiple alternative uses. For example, trees harvested predominately for bioenergy could be used for paper, furniture or construction materials (in practice trees often provide material for both products and bioenergy). Alternatively, trees could be left in the forest to complete their natural lives. These different uses have different carbon implications, depending on whether the carbon contained by trees remains locked in solid material or is released to the atmosphere through energy conversion, composting, rotting or some other means of disposal." (para 2.7)*

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<sup>3</sup> See for example Getting to the Roots, Global Forest Coalition, December 2010, [www.globalforestcoalition.org/wp-content/uploads/2010/11/Report-Getting-to-the-roots1.pdf](http://www.globalforestcoalition.org/wp-content/uploads/2010/11/Report-Getting-to-the-roots1.pdf)

<sup>4</sup> Forestry Commission Statistics 2012, [www.forestry.gov.uk/website/forstats2012.nsf/LUCContents/35053FAF3CAE1BB5802573550054ABD7](http://www.forestry.gov.uk/website/forstats2012.nsf/LUCContents/35053FAF3CAE1BB5802573550054ABD7)

<sup>5</sup> <http://www.decc.gov.uk/assets/decc/11/meeting-energy-demand/bio-energy/5142-bioenergy-strategy-.pdf>, Page 18

All of those principles are being ignored by the proposed methodology. Furthermore, this methodology ignores that fast growing scientific evidence about the carbon debt of biomass energy. This carbon debt is caused by the fact that biomass combustion results in a significant carbon spike, with CO<sub>2</sub> smokestack emissions being around 50% higher than those from coal combustion per unit of electricity. That carbon debt can only be repaid when new trees, surrounded vegetation and disturbed soils have re-absorbed all of the carbon emitted during combustion, which will take decades or centuries, even if escalating climate change and the increased pressures on forests worldwide do not prevent such regrowth and re-sequestration altogether. A list of scientific studies and reports about the biomass carbon debt can be found at [www.biofuelwatch.org.uk/resources-on-biomass/](http://www.biofuelwatch.org.uk/resources-on-biomass/) . Here are some examples of those findings:

+ An analysis of the DECC Bioenergy Strategy by Professor Timothy Searchinger, a worldwide expert in modelling full life-cycle bioenergy carbon impacts shows that according to DECC's own figures, replacing coal with biomass sourced from whole conifer trees will result in a 49% greenhouse gas emissions increase over 40 years (1557g/KWh) and an 80% increase over 20 years (1879g/KWh). Those figures were confirmed to Professor Searchinger by DECC;<sup>6</sup>

+ "Carbon debt and carbon sequestration parity in forest bioenergy production", Stephen Mitchell et al: A peer-reviewed article which compared CO<sub>2</sub> saved from replacing fossil fuels with bioenergy with the carbon which would have been sequestered by forests had trees not been logged for that bioenergy. It concludes: "*Many of our combinations of forest productivity, biomass longevity and harvesting regimes required more than 100 years to achieve C Sequestration Parity, even when the bioenergy conversion factor was set at near maximal level.*" (<http://ncfp.files.wordpress.com/2012/05/carbon-debt-paper.pdf>);

+ "Using ecosystem CO<sub>2</sub> measurements to estimate the timing and magnitude of greenhouse gas mitigation potential of forest bioenergy" by Pierre Bernier and David Pare (<http://onlinelibrary.wiley.com/doi/10.1111/j.1757-1707.2012.01197.x/abstract;jsessionid=9FC6009664EEB6337DB3688B268AC1CF.d02t04>): A peer-reviewed study which , focussing on wood sourced from Canada, concludes: "*Forest bioenergy opportunities may be hindered by a long greenhouse gas (GHG) payback time*";

+ "Large-scale bioenergy from additional harvest of forest biomass is neither sustainable nor greenhouse gas neutral", Ernst Detlef Schulze et al (<http://onlinelibrary.wiley.com/doi/10.1111/j.1757-1707.2012.01169.x/abstract>): Another peer-reviewed study which concludes: "*Large-scale production of bioenergy from forest biomass is neither sustainable nor GHG neutral*";

+ Biomass Supply and Carbon Accounting for Southeastern Forests, Southern Environmental Law Center in partnership with Biomass Energy Resource Center, Forest Guild and National Wildlife Federation ([www.southernenvironment.org/uploads/fck/file/biomass/biomass-carbon-study-021412-FINAL.pdf](http://www.southernenvironment.org/uploads/fck/file/biomass/biomass-carbon-study-021412-FINAL.pdf)): This report relates to biomass sourced from the Southeastern US, i.e. from one of the main sourcing regions for pellets for the UK. It finds that the carbon payback time from burning wood sourced from that region will be 35-50 years for electricity generation (50 years for lower efficiency levels).

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<sup>6</sup> [http://www.rspb.org.uk/Images/Searchinger\\_comments\\_on\\_bioenergy\\_strategy\\_SEPT\\_2012\\_tcm9-329780.pdf](http://www.rspb.org.uk/Images/Searchinger_comments_on_bioenergy_strategy_SEPT_2012_tcm9-329780.pdf)

+ Opinion of the European Environment Agency Scientific Committee on Greenhouse Gas Accounting in Relation to Bioenergy (<http://www.eea.europa.eu/about-us/governance/scientific-committee/sc-opinions/opinions-on-scientific-issues>): This states for example:

*"Clearing or cutting forests for bioenergy crops releases large stores of carbon into the atmosphere and may reduce ongoing carbon sequestration if the forest would otherwise continue to grow. Regrowing forests or planting bioenergy crops will absorb carbon that offsets the emissions from their combustion over time, but it may take decades for this carbon absorption to reach the level of the lost carbon storage and foregone carbon sequestration of the forest...Merely keeping carbon stocks stable ignores the additional carbon sequestration that would occur in the absence of wood harvest for bioenergy (the counterfactual) and therefore does not make bioenergy carbon neutral.<sup>7</sup> For this reason, sustainable forestry in the traditional sense does not necessarily mean that bioenergy produced from a forest is carbon neutral".*

Ignoring the carbon debt of biomass means that CO<sub>2</sub> emissions will be increased for at least one or two generation at a time when climate scientists are warning that CO<sub>2</sub> levels must be brought down rapidly if we are to have any hope of avoiding the worst impacts of climate change. A bioenergy policy which allows for such CO<sub>2</sub> increases also conflicts with the aims and objectives of the Climate Change (Scotland) Act.

Specific ghg trajectories, which Scottish Government is consulting on, are of little relevance when the methodology for accounting for bioenergy greenhouse gas emissions is so deeply flawed.

This is illustrated further by the fact that the Impact Assessment published by DECC together with their parallel consultation states that ALL potential sources of domestic and imported wood are assumed to meet even the lower maximum ghg rate<sup>7</sup> – a reflection on the deep flaws in the proposed methodology highlighted above. In this context it is important to note that imports of wood pellets and investment in those by energy companies in the UK increasingly rely on pellets made from whole trees, as shown in a report by Dogwood Alliance regarding pellets from the southern US (the world's biggest pellet producing region).<sup>8</sup>

### **Lack of any credible verification and auditing:**

No independent verification or auditing of company claims about meeting the greenhouse gas or the sustainable procurement criteria is foreseen. Ofgem has neither the budget nor remit of auditing reports submitted by energy companies. Instead, the standards rely on 'verification' by consultants chosen and paid by energy companies. Those include consultancy firms which have been found to have certified in violation of standards for example for the Forest Stewardship Council or under the Clean Development Mechanism. Detailed evidence of those flaws in verification and auditing and the implications is provided in our report Sustainable Biomass: A Modern Myth.<sup>9</sup> Various recent UK and international scandals have shown the dangers of relying on standards in the absence of effective regulatory oversight – such as the Libor fixing scandal, the PIP breast implant scandal and the Winterbourne care home scandal in England. In the case of the proposed biomass sustainability standards, regulatory oversight is not just defective but entirely absent.

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<sup>7</sup> [www.decc.gov.uk/assets/decc/11/consultation/ro-banding/6342-impact-assessment-biomass-electricity-and-combined.pdf](http://www.decc.gov.uk/assets/decc/11/consultation/ro-banding/6342-impact-assessment-biomass-electricity-and-combined.pdf)

<sup>8</sup> [www.dogwoodalliance.org/wp-content/uploads/2012/11/Whole-Tree-Wood-Pellet-Production-Report.pdf](http://www.dogwoodalliance.org/wp-content/uploads/2012/11/Whole-Tree-Wood-Pellet-Production-Report.pdf)

<sup>9</sup> [http://www.biofuelwatch.org.uk/2012/biomass\\_myth\\_report/](http://www.biofuelwatch.org.uk/2012/biomass_myth_report/)

## **Why the Government Public Procurement Policy on Timber does not assure sustainability of supplies:**

DECC and the Scottish Government proposals include no separate sustainability standards, apart from the greenhouse gas standards discussed above. Instead, all wood used for biomass will simply have to comply with the Government Public Procurement Policy on Timber. Under that policy, all wood certified by a range of voluntary certification schemes – including not just the Forest Stewardship Council (FSC) but also the PEFC, the Sustainable Forestry Initiative (SFI) and the Canadian Standards Authority (CSA) will be accepted as 'sustainable'. Also accepted will be all wood that comes under an EU FLEGT agreement with a third country. Furthermore, in the absence of either, energy companies can simply produce a letter from their own chosen consultant stating that wood accords with voluntary certification standards. There is strong and growing evidence that voluntary certification scheme cannot guarantee that wood does not come for example from plantations for which people have been evicted, including through brutal human rights violations, from clearcutting of oldgrowth forests, from illegal plantations or illegal logging, that it is not associated with significant biodiversity destruction and killing of wildlife. Here are some examples of certificates which would be accepted as demonstrating compliance with proposed biomass standards:

+ FSC-certification of plantations in South Africa where as many as 2,000 baboons have been shot in two years<sup>10</sup>;

+ FSC-certification of clearcutting of primary forests with high biodiversity value and ancient trees, some of them 600 years old in Russian Karelia<sup>11</sup>;

+ FSC certification of wood from Cameroon: According to a 2011 publication by the Centre for International Forestry Research (CIFOR): "A FSC certificate today does not necessarily mean that the timber has been sustainably harvested and that future harvests, and the forests from which they come, will be maintained tomorrow".<sup>12</sup> CIFOR found that seven of ten FSC certified forests in Cameroon were being over-exploited and depleted;

+ FSC certification of eucalyptus plantations belonging to Veracel Celulose in Bahia, Brazil: This certificate was awarded despite an Open Letter by 347 organisations denouncing violations by Veracel. Three months later, a federal court in Brazil fined Veracel and ordered it to cut and remove eucalyptus on 96,000 hectares and to reforest it with trees native to clearcut Atlantic Forest. Nearly 900 legal cases against Veracel were reported in November 2010, several of them criminal courts. The FSC certificate for Veracel remains in place;<sup>13</sup>

+ Ongoing FSC certification of eucalyptus plantations by New Forest Company in Uganda which Oxfam showed was responsible for the eviction of around 22,500 people for those plantations;<sup>14</sup>

+ Ongoing chain of Custody certification by the PEFC for four pulp mills belonging to Asia Pulp and Paper (APP) in Sumatra. According to the Rainforest Action Network, APP is one of "Indonesia's most destructive corporations. . . [APP's pulp and paper] comes from clear cutting rainforests and replacing them with monoculture acacia pulp wood plantations grown on these cleared rainforest and peatlands."<sup>15</sup> Note that under the Public Procurement Policy for Timber, 30% of wood can come from sources stated to meet Chain of Custody certification rather than forestry management

<sup>10</sup> [www.geosphere.co.za/articles/fsc\\_baboons.htm](http://www.geosphere.co.za/articles/fsc_baboons.htm)

<sup>11</sup> <http://spok-karelia.ru/wp-content/uploads/2011/09/Complaint-against-Swedwood-Karelia.pdf>

<sup>12</sup> <http://blog.cifor.org/2847/the-timber-may-be-certified-but-is-it-sustainable/>

<sup>13</sup> [www.fsc-watch.org/archives/2012/10/08/Veracel\\_Sustainable](http://www.fsc-watch.org/archives/2012/10/08/Veracel_Sustainable) and M. Kröger, "Veracel faces legal battles and risks profitability: logging bans threaten the supply of eucalyptus in the pulp mill; lawsuits mount to a closure risk," March 2011.

<sup>14</sup> [www.fsc-watch.org/archives/2011/10/20/Oxfam\\_report\\_22\\_500](http://www.fsc-watch.org/archives/2011/10/20/Oxfam_report_22_500)

<sup>15</sup> <http://ran.org/app-and-april-indonesia%E2%80%99s-leaders-climate-and-rainforest-destruction>

certification, hence those 30% could come from a source such as APP and still meet the policy;

+ A 2011 report by nine NGOs, including Greenpeace examined 14 PEFC-certified forests and plantations (not including APP's certificate referred to above). In 12 of these, practices which caused biodiversity and habitat destruction were certified. In 3 cases, the rights of Indigenous Peoples were violated. In 8 cases, forests had been converted to tree plantations. In seven cases, harmful impacts to soil and water were documented. In four cases, concerns over toxic chemicals were identified. In only 2 out of the 14 cases did the NGOs find evidence of any positive changes at all;<sup>16</sup>

+ A 2010 investigation of the SFI, one of the certification schemes approved under the Public Procurement Policy for Timber, carried out by Forest Ethics showed : "*SFI standards are not sufficient to exclude illegally logged fibre from outside North America. The standards do not require any old growth to be protected anywhere. Roadless wildlands are not mentioned in SFI's standards. And SFI hides behind inadequate national laws that do not provide the protection required by international standards for workers' and indigenous peoples' rights*".<sup>17</sup>

Furthermore, as discussed above, even wood that is not certified at all will pass the policy as long as an energy company's consultant signs a form stating that it should.

### **Summary:**

The proposed sustainability and greenhouse gas standards are deeply flawed. They ignore scientific findings and science-based key principles in the UK Bioenergy Strategy in relation to biomass carbon impacts, they lack any credible verification and auditing system and automatically class wood as sustainable if it has been certified by a range of voluntary certification scheme which have been shown not to provide any guarantees that particular sources of wood are not associated with serious negative direct impacts (such as human rights violations, clearcutting of old growth forests, destruction of high biodiversity forests, etc.).

However, given that the most serious impacts of large-scale biomass imports will almost certainly be indirect impacts, resulting from the scale of the new demand across the EU, we believe that 'enhanced' standards cannot ensure the sustainability of biomass. Sustainability depends on the sustainability of demand. The Scottish Government has a unique opportunity to set an example and align ROCs eligibility with its stated objectives of focussing on appropriately-scaled use of sustainable biomass, depending on local resources, mainly for heat and high-efficiency CHP. This will require closing the loopholes, i.e. ensuring that no ROCs are available for biomass co-firing, coal-to-biomass conversion nor to any power plants above 10 MW and that smaller ones should only be subsidised if they achieve at least 70% efficiency levels.

Yours sincerely,

Almuth Ernsting  
Biofuelwatch

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<sup>16</sup> [www.greenpeace.de/fileadmin/gpd/user\\_upload/themen/waelder/On The Ground 2011.pdf](http://www.greenpeace.de/fileadmin/gpd/user_upload/themen/waelder/On_The_Ground_2011.pdf)

<sup>17</sup> <http://forestethics.org/sites/forestethics.huang.radicaldesigns.org/files/SFI-Certified-Greenwash-Report-ForestEthics.pdf>