

Briefing on bioenergy-related aspects of the Scottish Government's "Renewables Obligation Banding Review Supplementary Consultation", dated 5th October 2012

Background to the consultation

In September, the Scottish Government published their response to a broad consultation about future subsidies for electricity classed as renewable – Renewable Obligation Certificates (ROCs). In that response, they acknowledged – as they had done before – that biomass is a scarce, finite resource which must be used sustainably and in the most efficient way. The Scottish Government continues to emphasise that this must mean using biomass sustainably and primarily for heat, efficient CHP and especially off-grid. The consultation states:

"This proposal is designed to achieve the following policy objectives:

- *the deployment of wood-fuelled biomass in heat-only or CHP schemes; and*
- *off gas-grid, at a scale appropriate to make best use of both the available heat, and of local supply."*

Unfortunately, however, the proposal being consulted on will not achieve this aim. It contains such major loopholes that it would likely lead to the opposite – i.e. to potentially hundreds of millions of pounds in annual subsidies for burning millions of tonnes of largely imported wood in inefficient power stations.

Summary of the Consultation

The Consultation can be downloaded at www.scotland.gov.uk/Topics/Business-Industry/Energy/Obligation-12-13

Separate consultation on the same issues have been published by the UK Government (for England and Wales) and by the Northern Ireland Executive.

The Scottish Government consultation consists of four parts, with two different deadlines:

Part A is concerned with some of the details of mandatory biomass sustainability standards which the UK Government announced in 2010. The proposals are identical to those in England and Wales. They are to be introduced in October 2013 and will be the first national mandatory biomass sustainability and greenhouse gas standards worldwide. **The deadline for this part of the Consultation is 11th January.**

Part B consults on a proposed 10 MW cap on the size of electricity-only power stations which would be eligible for ROCs in future (excepting those burning biomass other than wood and those burning waste/demolition wood). This proposal is distinct from plans by the UK Government although we believe that proposed loopholes would render it almost meaningless. **Part C** consults on proposals for future subsidies for co-firing, burning 'energy crops' and coal-to-biomass power station proposals which are identical to UK Government ones. **Part D** consults on a proposed reduction in ROCs for solar PV from April 2013 – this is not discussed in our Biofuelwatch briefing. **The deadline for responding to parts B, C and D of the consultation is 16th November.**

To take part in the consultation, please send your comments to Neal D Rafferty, Renewables Routemap Team , 4th Floor, 5 Atlantic Quay, 150 Broomielaw, GLASGOW G2 8LU OR email it to: Neal.Rafferty@scotland.gsi.gov.uk . The Scottish Government is asking people to send comments together with a completed Respondents Information Form, however they have not made this available as either a Word Document or a webform, only as the last page of the pdf with the consultation itself, although we hope that this will shortly be rectified. (www.scotland.gov.uk/Resource/0040/00404106.PDF). We understand that responses will be considered without the form having been completed, provided they include your personal or organisational details/address, are marked in the title as a consultation response, and say whether or not you agree to the response and the address being made public (for individuals only – all organisational responses and details will be published).

Proposed cap on ROCs for biomass electricity-only power plants:

The Scottish Government proposes to only pay ROCs on electricity-only biomass power stations if those are less than 10 MW in size or if they burn biomass other than virgin wood (e.g. recovered wood, straw, miscanthus).

Electricity-only biomass power stations are generally 20-30% efficient. This means that for every five trees cut down, up to four are entirely wasted as uncaptured heat. It must be kept in mind that the UK as a whole is reliant on net imports for almost 80% of its consumption of wood and wood productsⁱ.

Recovered waste wood (such as demolition wood, which emits particularly high levels of toxins when burnt), straw, miscanthus and other residues and agricultural crops burnt in power stations are to be exempt from the 10 MW cap. This proposed exemption was not included in the Scottish Government ROCs announcement in September and the Consultation provides little clarity as to how it would be interpreted. We do not know what it would mean for power stations larger than 10 MW capacity which burn a mix of feedstock, including virgin wood and other types of biomass.

Separate to the proposed 10 MW cap on individual electricity-only power stations eligible for ROCs, overall ROCs for this type of bioenergy would be subject to a proposed UK-wide cap. The cap proposed by the UK Government (DECC) for this is so high that it would allow subsidies for burning 10 million tonnes of wood a year - equivalent to the UK's entire annual wood production. Crucially, the cap does not include biomass burnt in so-called Combined Heat and Power Plants with as little as 35% efficiency, nor does it include biomass burnt in coal power stations (including the possible conversion of coal power station units to biomass).

The CHP loophole:

The consultation states:

“Our intention is that such stations above 10 MW will only qualify for ROCs during any period where they are accredited as a good quality Combined Heat and Power (CHP) station. ”

What it omits to point out is that, across the UK, the definition of ‘good quality CHP’ in the context of the Renewables Obligation includes all power stations which make some use of heat (possibly only to improve heat their own turbines) and which reach a minimum efficiency level of just 35% in totalⁱⁱ. By comparison, Article 13(6) of the EU Renewable Energy Directive states:

“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.”

The Scottish Government’s proposal thus promotes biomass efficiency levels which are just half those which it is expected to promote under EU legislation.

At 35% efficiency, almost two out of three trees cut down for bioenergy will still be wasted as uncaptured heat. Such a low efficiency level would likely be attainable by most power station providers with minor technical adjustments, thus opening the door to entirely uncapped inefficient biomass power generation.

Example: Forth Energy’s Grangemouth application

The Scottish Government is currently considering an application by Forth Energy to build a 100 MW biomass power station in Grangemouth, following a Public Local Inquiry in May this year. The – strongly contested – application involves a power station which would primarily burn imported wood, with the southern US identified by the developers as a particularly likely source. At the Inquiry, the question of heat supply received significant attention. Forth Energy suggested that they could reach 70% efficiency levels by supplying heat to the Ineos oil refinery. They submitted correspondence with Ineos which suggested that there had been no advanced discussions and plans for heat supply and an expert witness opposed to the proposal identified a series of major technical hurdles which would need to be overcome – at a substantial cost – to make such heat supply possible. Forth Energy subsequently proposed a planning condition according to which they would make at least 200 MW of heat “available”. If the application was approved with that condition then Forth Energy would not actually have to supply the heat – only to make it available in principle, without investing in what could be highly expensive infrastructure for deploying it. Forth Energy would have to supply only a very small amount of heat – or even to make use of it within their own power generating process – to reach 35% efficiency and to then become eligible for £73.6 million in public subsidies (ROCs) annually.

Regardless of which level of efficiency and heat deployment Forth Energy could achieve in Grangemouth, the power station would rely on woodchips and pellets from 1.5 million harvested tonnes of wood a year and thus lead to significant additional logging and therefore carbon emissions and biodiversity destruction in regions such as the southern US and it would worsen air pollution in a Scottish town where legal air quality limits are already being regularly breached and where rates of illnesses associated with air pollution are already well above the Scottish average.

The biomass conversion loophole:

This is another potentially very major loophole contained in the Scottish Government ROCs announcement from September but not specifically mentioned in the Consultation. It is identical to a proposal by DECC for England and Wales. The UK Government (DECC) states in their own response to the ROCs consultation for England and Walesⁱⁱⁱ, as well as in the UK Bioenergy Strategy^{iv} that it wishes to prioritise incentivising the conversion of coal power station units to biomass. ‘Conversion’ in this context applies to converting an entire power station unit (not necessarily an entire power station) to burning 100% biomass – usually wood pellets. In England, several coal-to-biomass power station conversions are currently underway or planned, including Tilbury B which is the world’s biggest biomass power station and would, at full capacity, require pellets from 7.5-9 million harvested tonnes of wood every year – this is a power station that would otherwise have to be closed down around the end of 2013 under EU legislation.

As a direct result of the DECC ROCs announcement, **Drax has announced that they will convert half their units to biomass. This will require burning the equivalent of twice the UK's entire annual wood production.**

In Scotland, the only coal power station which could potentially convert, whether fully or, more realistically partly, to biomass is Longannet. It consists of four units with a generating capacity of 600 MW each and is the UK's largest coal power station after Drax. Longannet's owners, Scottish Power, have not so far announced plans to convert any unit to biomass, however under current proposals they would gain £220.8 million a year in subsidies if they were to convert one unit to biomass (requiring wood pellets made from around 6 million tonnes of harvested wood a year). Such a potential economic windfall might in future be difficult for Scottish Power to forego.

Proposed biomass sustainability standards:

The biomass greenhouse gas and sustainability standards proposed in Scotland are identical to those developed and proposed by DECC. For a detailed Biofuelwatch critique of the proposed standards, please see our report "Sustainable Biomass: A Modern Myth", especially Chapter 7^v. Please note that that report predates the publication of the Consultation Paper and that the Government no longer proposes to extend EU biofuel land-use standards to biomass. The most important concerns are:

- Standards cannot mitigate the impacts of vast and inherently unsustainable new demand being created. Burning perhaps nine times as much wood in UK power stations every year as the country produces cannot be made sustainable by imposing standards.
- Proposed greenhouse gas standards take no account of the scientific knowledge about biomass carbon debt. Two different maximum rates of greenhouse gas emissions from biomass electricity are being consulted on but the Impact Assessment^{vi} published by DECC together with the Consultation states that ALL potential sources of domestic and imported wood are assumed to meet even the lower maximum rate. This is a reflection on the deep flaws in the proposed ghg methodology.
- Indirect Land Use Change will be ignored. DECC state that this is because the European Commission has delayed their report on Indirect Land Use Change emissions from biofuels and because they consider biomass to have less indirect impacts than biofuels. They argue in the Consultation document that "the main sources of biomass for heat and power are lower value waste and residues from farming and forest management", yet this clearly will not be the case once biomass electricity production expands in the UK. Wood from whole trees, both from increased logging and from industrial tree plantations is increasingly being burnt in power stations already and there are no reasons to expect the indirect impacts to be any less serious than for biofuels.
- There will be no genuinely independent verification and auditing and no regulatory oversight to protect against potential fraud. Energy companies will be paying their own consultants to confirm whether standards have been met. Ofgem has neither the budget nor the remit to check on any claims made.
- Instead of introducing any detailed environmental standards (other than the greenhouse gas standards), such as land-use ones, for wood-based bioenergy, DECC instead proposes to extend the Government's Sustainable Wood Procurement Policy to biomass. This means that any wood consignment of which 70% is certified by the FSC or PEFC as coming from a 'sustainably managed' forest or (or tree plantation). It also covers the certification by the particularly controversial Sustainable Forestry Initiative (SFI) and Canadian Standards Authority (CSA). While there might be debate amongst NGOs about the credibility of the FSC, there is clear evidence that wood coming from illegal sources, from clearcutting of oldgrowth forests, from plantations associated with mass evictions and other human rights abuses, from plantations and logging activities linked to endangered wildlife being killed and from other clearly not 'sustainable'

sources has in the past been awarded certificates permitted under the UK Government's procurement and proposed biomass sourcing policy. No safeguards are in place to prevent certification of wood from such sources in future.

- Furthermore, FSC or PEFC certification is not even necessary – any consultant's report to say that wood was produced in accordance with such standards is sufficient.

Suggestions for responding to the consultation

There are no set consultation questions so we would suggest that groups and any individuals wishing to respond set out the main concerns with the ROCs proposals for biomass electricity as listed above in this briefing, highlighting in particular:

- + The contradictions between the Scottish Government's stated aims and the anticipated consequences of the proposal in terms of incentivising large-scale burning of (mostly imported) wood in inefficient power stations;
- + The two main loopholes, i.e. power stations with just 35% efficiency being classed as 'good quality CHP' and thus exempt from the cap as well as the potential future conversion of Longannet power station units to wood pellets being incentivised;
- + The inadequacy of the proposed greenhouse gas and sustainability standards.

At this stage, the option of withdrawing ROCs from all biomass is no longer 'on the table' as far as the Scottish Government is concerned. Biofuelwatch, Friends of the Earth Scotland, no Leith Biomass and Grangemouth Community Council support the following policy demands which we believe would make ROCs regulations compatible with the Scottish Government's stated intention:

- 1) There should be no ROCs for electricity-only biomass power stations because this is the least efficient use of biomass, a finite, scarce resource;
- 2) If Scotland is to support only small-scale highly-efficient bioenergy, then ROCs should only be available to power plants with at least 70% efficiency and at most up to 10 MW overall cap;
- 3) Co-firing of biomass or the conversion of coal power station units to biomass should not be subsidised because it involves large-scale, almost certainly import-reliant and highly inefficient burning of wood for electricity;
- 4) It should be recognised that the currently proposed biomass greenhouse gas and sustainability standards offer no credible mechanism for minimising the serious climate, environmental, social and human rights impacts of large-scale bioenergy. Those impacts are the direct result of unsustainable demand, so the demand itself – which directly depends on subsidies – must be controlled.

ⁱ Forestry Statistics 2012, Forestry Commission,

www.forestry.gov.uk/website/forstats2012.nsf/LUContentsTop?openview&RestrictToCategory=1

ⁱⁱ DECC Guidance Note 44 provides that for the purpose of ROCs, biomass CHP Schemes are classed as 'good quality' regardless of size if they demonstrate 35% overall efficiency (gross calorific value). The CHPQA Standard can be found at

https://www.chpqa.com/guidance_notes/documents/CHPQA_Standard_Issue3.pdf and Guidance Note 44 can be found at https://www.chpqa.com/guidance_notes/GUIDANCE_NOTE_44.pdf

ⁱⁱⁱ Government response to the consultation on proposals for the levels of banded support under the Renewables Obligation for the period 2013-17 and the Renewables Obligation Order 2012, DECC, July 2012, www.decc.gov.uk/assets/decc/11/consultation/ro-banding/5936-renewables-obligation-consultation-the-government.pdf

^{iv} UK Bioenergy Strategy, DECC, Defra and Department for Transport, April 2012,

www.decc.gov.uk/assets/decc/11/meeting-energy-demand/bio-energy/5142-bioenergy-strategy-.pdf

^v http://www.biofuelwatch.org.uk/2012/biomass_myth_report/

^{vi} <http://www.decc.gov.uk/assets/decc/11/consultation/ro-banding/6342-impact-assessment-biomass-electricity-and-combined.pdf>